

**B . B . Dikshit Librar**  
**AIIMS**  
**New Delhi**

List of publications of AIIMS, New Delhi  
for the month of June, 2018  
[Source: [www.pubmed.com](http://www.pubmed.com)].

1: Agarwal K, Sharma U, Mathur S, Seenu V, Parshad R, Jagannathan NR. Study of lipid metabolism by estimating the fat fraction in different breast tissues and in various breast tumor sub-types by in vivo (1)H MR spectroscopy. *Magn Reson Imaging*. 2018 Jun;49:116-122. doi: 10.1016/j.mri.2018.02.004. Epub 2018 Feb 14. PubMed PMID: 29454110.

**PURPOSE:** To evaluate the utility of fat fraction (FF) for the differentiation of different breast tissues and in various breast tumor subtypes using in vivo proton (1H) magnetic resonance spectroscopy (MRS).

**METHODS:** 1H MRS was performed on 68 malignant, 35 benign, and 30 healthy volunteers at 1.5T. Malignant breast tissues of patients were characterized into different subtypes based on the differences in the expression of hormone receptors and the FF was calculated. Further, the sensitivity and specificity of FF to differentiate malignant from benign and from normal breast tissues of healthy volunteers was determined using receiver operator curve (ROC) analysis.

**RESULTS:** A significantly lower FF of malignant (median 0.12; range 0.01-0.70) compared to benign lesions (median 0.28; range 0.02-0.71) and normal breast tissue of healthy volunteers (median 0.39; range 0.06-0.76) was observed. No significant difference in FF was seen between benign lesions and normal breast tissues of healthy volunteers. Sensitivity and specificity of 75% and 68.6%, respectively was obtained to differentiate malignant from benign lesions. For the differentiation of malignant from healthy breast tissues, 76% sensitivity and 74.5% specificity was achieved. Higher FF was seen in patients with ER-/PR- status as compared to ER+/PR+ patients. Similarly, FF of HER2neu+ tumors were significantly higher than in HER2neu- breast tumors.

**CONCLUSION:** The results showed the potential of in vivo 1H MRS in providing insight into the changes in the fat content of different types of breast tissues and in various breast tumor subtypes.

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DOI: 10.1016/j.mri.2018.02.004  
PMID: 29454110

2: Aggarwal B, Jain V. Obesity in Children: Definition, Etiology and Approach. *Indian J Pediatr*. 2018 Jun;85(6):463-471. doi: 10.1007/s12098-017-2531-x. Epub 2017 Nov 25. Review. PubMed PMID: 29177599.

Childhood obesity is an important public health issue worldwide. Urbanization, sedentary lifestyle and change in food habits are the chief reasons behind this pandemic. In a small proportion of children, obesity is the result of endocrine, syndromic or monogenic causes. The present paper summarizes the methods, definitions and cut-offs for identification of obesity in children. We have briefly reviewed the various techniques used for estimation of body fat in children and the cut-offs for defining obesity based on body fat percentage, and the reference curves based on body mass index and waist circumference. The etiology of obesity in children, including individual behaviors, macro- and micro-environmental influences, and endocrine causes have been discussed, and an approach to etiological assessment of obese children has been presented. Special emphasis has been laid on clinical pointers that suggest the presence of syndromic, endocrine or monogenic forms of obesity, such as, short stature, dysmorphism, neurocognitive impairment and early age at onset.

DOI: 10.1007/s12098-017-2531-x  
PMID: 29177599

3: Agrawal M, Jain N, Borkar SA. Unusual Clinical Presentation and Magnetic Resonance Imaging Findings in Supratentorial Epidermoid Cyst. *World Neurosurg*.

2018 Sep;117:229-230. doi: 10.1016/j.wneu.2018.05.200. Epub 2018 Jun 2. PubMed PMID: 29870837.

Epidermoid cysts in the lateral temporal lobe presenting with seizures are rare accounting for <5% of all intracranial epidermoid cysts. Preoperative diagnosis can be further confounded by unusual imaging as presented in this case, thus leading to the wrong preoperative diagnosis of the case as a neoplastic pathology.

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DOI: 10.1016/j.wneu.2018.05.200  
PMID: 29870837

4: Anand S, Yadav DK, Sharma S, Varshney A. Acute torsion of a wandering spleen: a paediatric emergency. *BMJ Case Rep.* 2018 Jun 27;2018. pii: bcr-2018-225496. doi: 10.1136/bcr-2018-225496. PubMed PMID: 29950372.

5: Animesh R, Vyas S. Chest CT Scan Signs: A Few Noteworthy Additions. *Chest.* 2018 Jun;153(6):1516-1517. doi: 10.1016/j.chest.2018.03.014. PubMed PMID: 29884272.

6: Arora R, Kumar R, Agarwal A, Reeta KH, Gupta YK. Comparison of three different extracts of *Centella asiatica* for anti-amnesic, antioxidant and anticholinergic activities: in vitro and in vivo study. *Biomed Pharmacother.* 2018 Sep;105:1344-1352. doi: 10.1016/j.biopha.2018.05.156. Epub 2018 Jun 27. PubMed PMID: 30021372.

*Centella asiatica* (CA) has been used by Ayurvedic medical practitioners in India for almost 3000 years. The neuropharmacological properties of CA and its constituents have been studied extensively. Anti-oxidant, free radical scavenging and cholinergic modulatory activities are the reported mechanisms of action for its efficacy in memory disorders. Its medicinal values are mainly attributed to the presence of several triterpenes, namely asiatic acid, madecassic acid, asiaticoside, and madecassoside. The present study was aimed to investigate the role of these triterpenes content in CA extract on the antioxidant, cholinesterase modulation and anti-amnesic properties. The fractions of CA extract enriched for (CAE-EF) and depleted/freed of (CAE-FF) triterpenes contents were compared with methanolic extract (CAE). Both in vitro and in vivo methods for evaluation of antioxidant and anticholinergic activities were used. In vitro, free radical scavenging assays (ABTS, DPPH, NO, NORAC, and ORAC) and cholinesterase (AChE and BuChE) inhibition assays were used. For evaluation of anti-amnesic effect, scopolamine induced amnesia in rats, as the acute model of memory loss was used. Following behavioural assessments (MWM, PA, EPM), biomarkers of oxidative stress (reduced GSH, MDA and SOD activity) and cholinesterase (AChE and BuChE) status were also estimated in cerebral cortex and hippocampus of rat brain. The methanolic extract (CAE) was found to perform best among all three fractions for in vitro free radical scavenging, cholinesterase inhibition, improvement of scopolamine-induced amnesia and also in vivo antioxidant effect and cholinesterase inhibitory activities. Interestingly triterpenes free fraction (CAE-FF) showed better antioxidant activity than triterpenes enriched fraction (CAE-EF) along with comparable anti-amnesic effect. This indicates that triterpenes are not solely responsible for antioxidant activity, cholinesterase inhibitory and anti-amnesic effect of CA.

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PMID: 30021372

7: Arora S, Damle NA, Passah A, Yadav MP, Ballal S, Aggarwal V, Gupta Y, Kumar P, Tripathi M, Bal C. Incidental Detection of Parathyroid Adenoma on Somatostatin Receptor PET/CT and Incremental Role of (18)F-Fluorocholine PET/CT in MEN1 Syndrome. *Nucl Med Mol Imaging*. 2018 Jun;52(3):238-242. doi: 10.1007/s13139-018-0520-2. Epub 2018 May 2. PubMed PMID: 29942404; PubMed Central PMCID: PMC5995772.

Multiple endocrine neoplasia type 1 (MEN1) syndrome is characterized by combined occurrence of tumors of endocrine glands including the parathyroid, the pancreatic islet cells, and the anterior pituitary gland. Parathyroid involvement is the most common manifestation and usually the first clinical involvement in MEN1 syndrome, followed by gastroentero-pancreatic neuroendocrine tumors (NETs). Here we present a case where the patient initially presented with metastatic gastric NET and a single parathyroid adenoma was detected incidentally on 68Ga-DOTANOC PET/CT done as part of post 177Lu-DOTATATE therapy (PRRT) follow-up. Further 18F-fluorocholine PET/CT showed four adenomas for which the patient subsequently underwent subtotal parathyroidectomy.

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PMID: 29942404

Conflict of interest statement: Compliance with Ethical Standards Saurabh Arora, Nishikant Avinash Damle, Averilicia Passah, Madhav Prasad Yadav, Sanjana Ballal, Vivek Aggarwal, Yashdeep Gupta, Praveen Kumar, Madhavi Tripathi, and Chandrasekhar Bal declare that they have no conflict of interest. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

8: Arora U, Kedia S, Garg P, Bopanna S, Jain S, Yadav DP, Goyal S, Gupta V, Sahni P, Pal S, Dash NR, Madhusudhan KS, Sharma R, Makharia G, Ahuja V. Colonic Crohn's Disease Is Associated with Less Aggressive Disease Course Than Ileal or Ileocolonic Disease. *Dig Dis Sci*. 2018 Jun;63(6):1592-1599. doi: 10.1007/s10620-018-5041-4. Epub 2018 Apr 2. PubMed PMID: 29611078.

**BACKGROUND:** The literature on disease characteristics of colonic Crohn's disease (CD) is sparse, especially from Asia, where the burden of inflammatory bowel disease is on the rise. The present study aims to describe the disease characteristics of colonic CD, and compare it with that of ileal/ileocolonic disease.

**METHODS:** This retrospective study included adult patients of CD (diagnosed by standard criteria, follow-up duration >6 months) on follow-up between August 2004 and January 2016. The disease location was classified by Montreal classification. The data were recorded on demographic characteristics, smoking status, disease phenotype, disease course, treatment received, hospitalization and surgeries.

**RESULTS:** Of 406 CD patients, 123 had colonic [mean age (at onset) 30.4±13.2 years, 59.3% males] and 265 had ileal/ileocolonic disease [mean age (at onset) 32.9±13.8 years, 61.5% males] while 18 patients had isolated upper GI disease. The frequency of inflammatory behavior (B1 phenotype; 61.8 vs. 46.4%, p=0.003), perianal disease (23.6 vs. 4.5%, p<0.001), and extra-intestinal

manifestation (42.3 vs. 30.2%,  $p=0.019$ ) was higher in colonic than ileal/ileocolonic CD. Though not statistically significant, requirement of at least one course of steroid was lower in colonic CD (72.7 vs. 84.2%,  $p=0.098$ ). Although there was no difference in the frequency of hospitalization (30.1 vs. 27.1%,  $p=0.45$ ), the overall requirement for surgery was significantly lower in colonic CD (17.1 vs. 26.1%,  $p=0.032$ ) and patients with colonic disease had a lower cumulative probability of first surgery in the first 10 years of follow-up [Hazard ratio 0.556 (95% CI 0.313-0.985),  $p=0.045$ ].

CONCLUSION: Colonic CD was associated with less aggressive disease behavior and lower requirement of surgery as compared to ileal/ileocolonic CD.

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PMID: 29611078 [Indexed for MEDLINE]

9: Bagchi S, Subbiah AK, Bhowmik D, Mahajan S, Yadav RK, Kalaivani M, Singh G, Dinda A, Kumar Agarwal S. Low-dose Rituximab therapy in resistant idiopathic membranous nephropathy: single-center experience. *Clin Kidney J.* 2018 Jun;11(3):337-341. doi: 10.1093/ckj/sfx105. Epub 2017 Oct 11. PubMed PMID: 29942496; PubMed Central PMCID: PMC6007352.

Background: Persistent significant proteinuria has been associated with increased risk of progression to end-stage kidney disease in patients with idiopathic membranous nephropathy (IMN). Rituximab (RTX) therapy has given encouraging results in IMN, but most of the studies have used a higher dose, which is limited by the high cost as well as a potential increased risk of infections. Our study aimed to assess the efficacy and safety of low-dose RTX in patients with immunosuppression-resistant IMN.

Methods: A total of 21 patients with treatment-resistant IMN treated with RTX from 2015 to 2016 at our center were included in the study. They received two doses of RTX (500mg each) infusion 7 days apart. CD19 count was performed after 4 weeks. A single dose of RTX was repeated after 4-6 weeks if CD19 count was not depleted.

Results: The mean standard deviation age of patients was  $33.3 \pm 12.3$  years and 33.3% were females. Mean proteinuria before RTX therapy was  $6.2 \pm 2.2$  g/day, serum creatinine was  $0.9 \pm 0.3$  mg/dL and estimated glomerular filtration rate (eGFR) was  $95.8 \pm 26.9$  mL/min/1.73 m<sup>2</sup>. All the patients were non-responders to prior immunosuppressive treatment. Twenty (95.2%) patients achieved targeted CD19 depletion with two doses of RTX. One patient required one additional RTX dose due to inadequate B-cell suppression. A total of 13 (61.9%) patients achieved remission with RTX therapy: 4 (19.0%) complete and 9 (42.9%) partial remission. Patients who did not respond to RTX had a significantly lower baseline eGFR compared with those who achieved remission ( $P=0.022$ ). One patient developed respiratory tract infection following RTX during the follow-up, which responded to a course of oral antibiotics. During median follow-up of 13.1

(10-23.9) months, four (19%) patients had deterioration in renal function and one patient relapsed after achieving partial remission. Renal survival was significantly better in patients who responded to RTX therapy as compared with those who did not achieve remission ( $P=0.0037$ ).

Conclusion: Low-dose RTX therapy is effective and safe in immunosuppression-resistant IMN.

DOI: 10.1093/ckj/sfx105

PMCID: PMC6007352

PMID: 29942496

10: Balhara YPS, Verma K, Bhargava R. Screen time and screen addiction: Beyond

gaming, social media and pornography- A case report. *Asian J Psychiatr.* 2018 Jun;35:77-78. doi: 10.1016/j.ajp.2018.05.020. Epub 2018 May 26. PubMed PMID: 29803121.

11: Bansal P, Khoiwal K, Malhotra N, Dadhwal V, Sharma A, Deka D. The Role of GnRH Analogues in Improving Outcome in Women Undergoing Superovulation and Intrauterine Insemination after Surgical Correction of Mild Endometriosis: A Randomized Controlled Trial. *Eurasian J Med.* 2018 Jun;50(2):105-110. doi: 10.5152/eurasianjmed.2018.17379. Epub 2018 Jun 1. PubMed PMID: 30002577; PubMed Central PMCID: PMC6039146.

**Objective:** Treatment with laparoscopic surgery, gonadotropin-releasing hormone analog (GnRHa) therapy, superovulation (SO), and intrauterine insemination (IUI) have individual benefits in improving fertility outcomes in women with endometriosis. The aim of the study was to evaluate the role of GnRHa in improving outcome in women undergoing SO and IUI after surgical correction of mild endometriosis.

**Materials and Methods:** This was a randomized controlled trial conducted in the Department of Obstetrics and Gynecology, All India Institute of Medical Sciences, New Delhi, India, over a period of 2 years and 6 months. Ninety women who were diagnosed with mild endometriosis on laparoscopy using the revised American Society for Reproductive Medicine criteria were included in the study. The patients in the study group (n=45) received a single dose of 3.75 mg GnRHa subcutaneously within 48 h of the surgery, and those in the control group (n=45) did not receive GnRHa. Thereafter, patients in both arms received SO and IUI from the next menstrual cycle. Four patients in the study group and three patients in the control group were lost to follow-up before the first cycle of ovulation induction. Primary outcomes measured in our study were live birth rates and clinical pregnancy rate. Secondary outcome measures were number of follicles >18 mm, endometrial thickness, dose and days of gonadotropin stimulation.

**Results:** Baseline characteristics, such as age and body mass index, were comparable in both groups. The SO and IUI cycles were comparable between the two groups with regard to the secondary outcome parameters. Pregnancy rate in the first cycle was 17.1% in the study group and 19.1% in the control group (p=0.81). The overall pregnancy rate was similar in both groups (study group=21.9%, control group=23.8%; p=1). As no patient had miscarriage or any other complication during pregnancy, live birth rate was similar to the clinical pregnancy rate.

**Conclusion:** Adding GnRHa for the suppression of mild endometriosis has shown no significant improvement in the surgical management of women undergoing SO and IUI.

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PMID: 30002577

**Conflict of interest statement:** Conflict of Interest: Authors have no conflict of interest to declare.

12: Bhatla N, Nene BM, Joshi S, Esmay PO, Poli URR, Joshi G, Verma Y, Zomawia E, Pimple S, Prabhu PR, Basu P, Muwonge R, Hingmire S, Sauvaget C, Lucas E, Pawlita M, Gheit T, Jayant K, Malvi SG, Siddiqi M, Michel A, Butt J, Sankaran S, Kannan TPRA, Varghese R, Divate U, Willhauck-Fleckenstein M, Waterboer T, Müller M, Sehr P, Kriplani A, Mishra G, Jadhav R, Thorat R, Tommasino M, Pillai MR, Sankaranarayanan R; Indian HPV vaccine study group. Are two doses of human papillomavirus vaccine sufficient for girls aged 15-18 years? Results from a cohort study in India. *Papillomavirus Res.* 2018 Jun;5:163-171. doi: 10.1016/j.pvr.2018.03.008. Epub 2018 Mar 22. PubMed PMID: 29578097; PubMed Central PMCID: PMC6047463.

Extending two-dose recommendations of HPV vaccine to girls between 15 and 18 years will reduce program cost and improve compliance. Immunogenicity and vaccine targeted HPV infection outcomes were compared between 1795 girls aged 15-18 years receiving two (1-180 days) and 1515 girls of same age receiving three (1-60-180 days) doses. Immunogenicity outcomes in 15-18 year old two-dose recipients were also compared with the 10-14 year old three-dose (N=2833) and two-dose (N=3184) recipients. The 15-18 year old two-dose recipients had non-inferior L1-binding antibody titres at seven months against vaccine-targeted HPV types compared to three-dose recipients at 15-18 years and three-dose recipients at 10-14 years of age. Neutralizing antibody titres at 18 months in 15-18 year old two-dose recipients were non-inferior to same age three-dose recipients for all except HPV 18. The titres were inferior to those in the 10-14 year old three-dose recipients for all targeted types. Frequency of incident infections from vaccine-targeted HPV types in the 15-18 year old two-dose recipients was similar to the three dose recipients. None of the girls receiving two or three doses had persistent infection from vaccine-targeted types. These findings support that two doses of HPV vaccine can be extended to girls aged 15-18 years.

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PMCID: PMC6047463

PMID: 29578097

13: Bhatt SP, Misra A, Gulati S, Singh N, Pandey RM. Lower vitamin D levels are associated with higher blood glucose levels in Asian Indian women with pre-diabetes: a population-based cross-sectional study in North India. *BMJ Open Diabetes Res Care*. 2018 Jun 15;6(1):e000501. doi: 10.1136/bmjdr-2017-000501. eCollection 2018. PubMed PMID: 29942523; PubMed Central PMCID: PMC6014203.

**Background:** Asian Indian women are predisposed to develop obesity, metabolic syndrome and vitamin D deficiency. Relationship of vitamin D deficiency with blood glucose levels has not been explored in Asian Indian women with pre-diabetes.

**Objective:** We evaluated the associations of serum 25-hydroxy vitamin D (25(OH)D) concentrations among adult women with the pre-diabetes residing in North India (Delhi).

**Methods:** This cross-sectional population-based study involved 797 women with pre-diabetes aged 20-60 years. Blood pressure, body mass index (BMI), fasting blood glucose (FBG), extent of sun exposure and serum 25(OH)D levels were assessed. For purpose of analysis, serum 25(OH)D levels (nmol/L) were categorized in quintiles as follows: 0-21.5 (first quintile), 21.51-35.60 (second quintile), 35.61-46.50 (third quintile), 46.51-62.30 (fourth quintile) and >62.31 (fifth quintile).

**Result:** The prevalence (%) of vitamin D deficiency, insufficiency and sufficiency was 68.6, 25.9 and 5.5, respectively. Mean age ( $p=0.004$ ), systolic ( $p=0.05$ ) and diastolic ( $p=0.04$ ) blood pressure, weight ( $p=0.03$ ), BMI ( $p=0.04$ ) and FBG ( $p=0.02$ ) were significantly higher in subjects with vitamin D deficiency as compared with those with vitamin D insufficiency and sufficiency. Unadjusted mean values of FBG were significantly decreased in fourth ( $p=0.02$ ) and fifth quintiles ( $p=0.030$ ) of 25(OH)D levels as compared with second quintile. Furthermore, after adjusting for age and family income FBG levels were significantly increased in first quintile (compared with fourth ( $p=0.012$ ) and fifth ( $p=0.018$ ) quintiles) and second quintile (compared with fourth ( $p=0.003$ ) and fifth ( $p=0.004$ ) quintiles) of 25(OH)D levels, respectively.

**Conclusion:** Lower vitamin D levels are associated with higher blood glucose values in Asian Indian women with pre-diabetes. These findings need confirmation

in case-control and prospective studies.

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Conflict of interest statement: Competing interests: None declared.

14: Bhattacharjee S, Maitra S, Baidya DK. Comparison between ultrasound guided technique and digital palpation technique for radial artery cannulation in adult patients: An updated meta-analysis of randomized controlled trials. *J Clin Anesth.* 2018 Jun;47:54-59. doi: 10.1016/j.jclinane.2018.03.019. Epub 2018 Mar 22. PubMed PMID: 29574288.

**STUDY OBJECTIVE:** Possible advantages and risks associated with ultrasound guided radial artery cannulation in-comparison to digital palpation guided method in adult patients are not fully known. We have compared ultrasound guided radial artery cannulation with digital palpation technique in this meta-analysis.

**DESIGN:** Meta-analysis of randomized controlled trials.

**SETTING:** Trials conducted in operating room, emergency department, cardiac catheterization laboratory.

**PATIENTS:** PubMed and Cochrane Central Register of Controlled Trials (CENTRAL) were searched (from 1946 to 20th November 2017) to identify prospective randomized controlled trials in adult patients.

**INTERVENTION:** Two-dimensional ultrasound guided radial artery catheterization versus digital palpation guided radial artery cannulation.

**MEASUREMENTS:** Overall cannulation success rate, first attempt success rate, time to cannulation and mean number of attempts to successful cannulation. Odds ratio (OR) and standardized mean difference (SMD) or mean difference (MD) with 95% confidence interval (CI) were calculated for categorical and continuous variables respectively.

**RESULTS:** Data of 1895 patients from 10 studies have been included in this meta-analysis. Overall cannulation success rate was similar between ultrasound guided technique and digital palpation [OR (95% CI) 2.01 (1.00, 4.06);  $p=0.05$ ].

Ultrasound guided radial artery cannulation is associated with higher first attempt success rate of radial artery cannulation in comparison to digital palpation [OR (95% CI) 2.76 (1.86, 4.10);  $p<0.001$ ]. No difference was seen in time to cannulate [SMD (95% CI) -0.31 (-0.65, 0.04);  $p=0.30$ ] and mean number of attempt [MD (95% CI) -0.65 (-1.32, 0.02);  $p=0.06$ ] between USG guided technique with palpation technique.

**CONCLUSION:** Radial artery cannulation by ultrasound guidance may increase the first attempt success rate but not the overall cannulation success when compared to digital palpation technique. However, results of this meta-analysis should be interpreted with caution due presence of heterogeneity.

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15: Bhattacharjee S, Maitra S, Baidya DK. A comparison between video laryngoscopy and direct laryngoscopy for endotracheal intubation in the emergency department: A meta-analysis of randomized controlled trials. *J Clin Anesth.* 2018 Jun;47:21-26. doi: 10.1016/j.jclinane.2018.03.006. Epub 2018 Mar 14. PubMed PMID: 29549828.

**STUDY OBJECTIVES:** Direct laryngoscopy is the most commonly used modality for



endotracheal intubation in the emergency department. Video laryngoscopy may improve glottic view during laryngoscopy and intubation success rate in such patients. This meta-analysis has been designed to compare clinical efficacy of video laryngoscopy with direct laryngoscopy for endotracheal intubation in the emergency department.

DESIGN: Meta-analysis of randomized controlled trial.

SETTING: Randomized controlled trials comparing video laryngoscopy and direct laryngoscopy for endotracheal intubation in adult patients in emergency department. PubMed (1946 to 20th October 2017) and The Cochrane Library databases (CENTRAL) were searched for potentially eligible trials on 20th October 2017.

PATIENTS: Adult patients presenting in the emergency department.

INTERVENTIONS: Video laryngoscopy & direct laryngoscopy for intubation in emergency department.

MEASUREMENT: Primary outcome was 'first intubation success rate' and secondary outcomes were overall intubation success rate, in-hospital mortality and oesophageal intubation rate.

MAIN RESULTS: Data of 1250 patients from 5 randomized controlled trials have been included in this study. Video laryngoscopy offers no advantage over direct laryngoscopy in terms of first intubation success rate (odds ratio 1.28, 95% CI 0.70, 2.36;  $p=0.42$ ), overall intubation success rate (OR 1.26, 95% CI 0.53, 3.01;  $p=0.6$ ) or in-hospital mortality (OR 1.25, 95% CI 0.8, 1.95;  $p=0.32$ ). However, oesophageal intubation rate is lower with the use of video laryngoscopy (OR 0.09, 95% CI 0.01, 0.7;  $p=0.02$ ).

CONCLUSION: Use of video laryngoscopy for emergency endotracheal intubation in adult patients is associated with reduced oesophageal intubation over direct laryngoscopy. However, no benefit was found in terms of overall intubation success.

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PMID: 29549828

16: Bhattacharjee S, Soni KD, Maitra S. Recruitment maneuver does not provide any mortality benefit over lung protective strategy ventilation in adult patients with acute respiratory distress syndrome: a meta-analysis and systematic review of the randomized controlled trials. *J Intensive Care*. 2018 Jun 26;6:35. doi: 10.1186/s40560-018-0305-9. eCollection 2018. PubMed PMID: 29983985; PubMed Central PMCID: PMC6019312.

Background: Clinical benefits of recruitment maneuver in ARDS patients are controversial. A number of previous studies showed possible benefits; a large recent study reported that recruitment maneuver and PEEP titration may even be harmful. This meta-analysis was designed to compare the clinical utility of recruitment maneuver with low tidal volume ventilation in adult patients with ARDS.

Methods: Randomized controlled trials comparing recruitment maneuver and lung protective ventilation strategy with lung protective strategy ventilation protocol alone in adult patients with ARDS has been included in this meta-analysis. PubMed and Cochrane Central Register of Controlled Trials were searched from inception to 10 November 2017 to identify potentially eligible trials. Pooled risk ratio (RR) and standardized mean difference (SMD) were calculated for binary and continuous variables respectively.

Results: Data of 2480 patients from 7 randomized controlled trials have been included in this meta-analysis and systemic review. Reported mortality at the longest available follow-up [RR (95% CI) 0.93 (0.80, 1.08);  $p=0.33$ ], ICU mortality [RR (95% CI) 0.91 (0.76, 1.10);  $p=0.33$ ] and in-hospital mortality [RR (95% CI) 0.95 (0.83, 1.08);  $p=0.45$ ] were similar between recruitment maneuver

group and standard lung protective ventilation group. Duration of hospital stay [SMD (95% CI) 0.00 (-0.09, 0.10); p =0.92] and duration of ICU stays [SMD (95% CI) 0.05 (-0.09, 0.19); p =0.49] were also similar between recruitment maneuver group and standard lung protective ventilation group. Risk of barotrauma was also similar.

Conclusion: Use of recruitment maneuver along with co-interventions such as PEEP titration does not provide any benefit in terms of mortality, length of ICU, and hospital stay in ARDS patients.

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PMID: 29983985

Conflict of interest statement: Not applicableNot applicableThe authors declare that they have no competing interests.Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

17: Biradar B, Sharma A, Malhi AS, Kumar S. Unilateral pulmonary vein atresia: diagnostic dilemma unfolded on imaging. *BMJ Case Rep.* 2018 Jun 21;2018. pii: bcr-2017-224154. doi: 10.1136/bcr-2017-224154. PubMed PMID: 29930182.

Unilateral pulmonary vein atresia is a rare entity, usually congenital in origin. It is thought to result from failure of incorporation of common pulmonary vein to left atrium. Patients often present with recurrent chest infections and haemoptysis during infancy or early childhood. Associated anomalies are commonly present in these cases. Pulmonary angiography is generally used for definitive diagnosis; however, characteristic imaging findings on latest multislice CT can be virtually diagnostic.

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Conflict of interest statement: Competing interests: None declared.

18: Biswas A, Das S, Kapoor M, Shamsudheen KV, Jayarajan R, Verma A, Seth S, Bhargava B, Scaria V, Sivasubbu S, Rao VR. Familial Hypertrophic Cardiomyopathy - Identification of cause and risk stratification through exome sequencing. *Gene.* 2018 Jun 20;660:151-156. doi: 10.1016/j.gene.2018.03.062. Epub 2018 Mar 21. PubMed PMID: 29572196.

BACKGROUND: Hypertrophic Cardiomyopathy (HCM) with variable clinical presentations and heterogeneity is the common cause of sudden cardiac death. Genetic diagnosis is challenging in these complex diseases but exome sequencing as a genetic diagnostic tool provides explainable results.

METHODS: In a familial Hypertrophic Cardiomyopathy with multigenerational inheritance with apparent phenotype, had a history of sudden death and severe arrhythmia followed by implantation of Implantable cardioverter defibrillator (ICD). Exome sequencing (100×) trailed by effective filtering steps for exome variants on the basis of different parameters, segregated variants are prioritized for the disease and further clinical relevance are evaluated for the variants.

RESULTS: A rare causal variant in troponin-T gene (TNNT2, NM\_000364.3;c.274C>T;p.Arg92Trp) is identified, shared by only affected members, absent in unaffected members and also in 200 unrelated control

chromosomes. TNNT2 mutation act as a driver mutation but mutations in other disease-related genes, KCNMB1, LPL, APOE and other biochemical factors provides risk stratification within affected family members.

CONCLUSION: This study contributes to the role of "rare variants" in complex disease phenotypes and heterogeneity within family and the necessity of whole exome targeted approaches in complex cardiomyopathy, which are known to harbor private mutations.

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19: Bradshaw CJ, Bandi AS, Muktar Z, Hasan MA, Chowdhury TK, Banu T, Hailemariam M, Ngu F, Croaker D, Bankol R, Sholadoye T, Olaomi O, Ameh E, Di Cesare A, Leva E, Ringo Y, Abdur-Rahman L, Salama R, Elhalaby E, Perera H, Parsons C, Cleeve S, Numanoglu A, Van As S, Sharma S, Lakhoo K. International Study of the Epidemiology of Paediatric Trauma: PAPSA Research Study. *World J Surg.* 2018 Jun;42(6):1885-1894. doi: 10.1007/s00268-017-4396-6. PubMed PMID: 29282513; PubMed Central PMCID: PMC5934465.

OBJECTIVES: Trauma is a significant cause of morbidity and mortality worldwide. The literature on paediatric trauma epidemiology in low- and middle-income countries (LMICs) is limited. This study aims to gather epidemiological data on paediatric trauma.

METHODS: This is a multicentre prospective cohort study of paediatric trauma admissions, over 1 month, from 15 paediatric surgery centres in 11 countries. Epidemiology, mechanism of injury, injuries sustained, management, morbidity and mortality data were recorded. Statistical analysis compared LMICs and high-income countries (HICs).

RESULTS: There were 1377 paediatric trauma admissions over 31 days; 1295 admissions across ten LMIC centres and 84 admissions across five HIC centres. Median number of admissions per centre was 15 in HICs and 43 in LMICs. Mean age was 7 years, and 62% were boys. Common mechanisms included road traffic accidents (41%), falls (41%) and interpersonal violence (11%). Frequent injuries were lacerations, fractures, head injuries and burns. Intra-abdominal and intra-thoracic injuries accounted for 3 and 2% of injuries. The mechanisms and injuries sustained differed significantly between HICs and LMICs. Median length of stay was 1 day and 19% required an operative intervention; this did not differ significantly between HICs and LMICs. No mortality and morbidity was reported from HICs. In LMICs, in-hospital morbidity was 4.0% and mortality was 0.8%.

CONCLUSION: The spectrum of paediatric trauma varies significantly, with different injury mechanisms and patterns in LMICs. Healthcare structure, access to paediatric surgery and trauma prevention strategies may account for these differences. Trauma registries are needed in LMICs for future research and to inform local policy.

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PMCID: PMC5934465

PMID: 29282513 [Indexed for MEDLINE]

20: Bychkov A, Keelawat S, Agarwal S, Jain D, Jung CK, Hong S, Lai CR, Satoh S, Kakudo K. Impact of non-invasive follicular thyroid neoplasm with papillary-like nuclear features on the Bethesda system for reporting thyroid cytopathology: a multi-institutional study in five Asian countries. *Pathology.* 2018 Jun;50(4):411-417. doi: 10.1016/j.pathol.2017.11.088. Epub 2018 Apr 7. PubMed PMID: 29631726.

Several Western studies showed that the recent introduction of non-invasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP) significantly decreased risk of malignancy for cytological diagnostic categories. We aimed to determine the impact of NIFTP on risk of malignancy within a cohort of thyroid nodules from Asian countries, and to compare distribution of diagnostic categories between NIFTP and invasive encapsulated follicular variant of papillary thyroid carcinoma (eFV-PTC). Consecutive thyroid fine-needle aspirates from six institutions were retrospectively analysed. Histopathology slides with a diagnosis of eFV-PTC were reviewed and reclassified into invasive eFV-PTC and NIFTP. The risk of malignancy was calculated with and without NIFTP. Of 11,372 thyroid nodules, 2044 had available surgical follow-up. NIFTP was diagnosed in 59 cases, which constituted 2.9% of all excised nodules, and 5.3% of malignant nodules. Preoperative cytological diagnoses for NIFTP were non-diagnostic (10.2%), benign (18.6%), atypia of undetermined significance/follicular lesion of undetermined significance (22.0%), follicular neoplasm/suspicious for follicular neoplasm (FN/SFN) (32.2%), suspicious for malignancy (SM) (11.9%), and malignant (5.1%). The only category which showed a relative reduction in risk of malignancy after reclassification of more than 20%, was FN/SFN (24.4%). There was a significantly higher prevalence of benign cytology in NIFTP ( $p = 0.04$ ) and SM/malignant in invasive eFV-PTC ( $p = 0.05$ ). A majority of NIFTP cases were classified in indeterminate categories, which decreased the corresponding risk of malignancy. However, the magnitude of NIFTP impact was much lower than in the Western reports. Asian countries may not experience significant effects of NIFTP reclassification on the practice of thyroid cytopathology.

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 PMID: 29631726 [Indexed for MEDLINE]

21: Chandra PS, Singh P, K R, Agarwal D, Tandon V, Kale SS, Sarkar C. Long term outcome of treatment of vertebral body hemangiomas with direct ethanol injection and short segment stabilization. *Spine J.* 2018 Jun 8. pii: S1529-9430(18)30240-7. doi: 10.1016/j.spinee.2018.05.015. [Epub ahead of print] PubMed PMID: 29890263.

**BACKGROUND:** Vertebral body (VH) hemangiomas with myelopathy are difficult to manage.

**OBJECTIVE:** To evaluate the role of intra-operative ethanol embolization, surgical decompression and instrumented short segment fusion in VH with myelopathy and long-term outcome (>24 months).

**METHODS:** Prospective study: Symptomatic VH with cord compression with myelopathy. Excluded: pathological fractures, and/or deformity or multi-level pathologies. Surgery consisted of intra-operative bilateral pedicular absolute alcohol (<1% hydrated ethyl alcohol) injection, laminectomy and cord decompression at the level of pathology followed by a short segment instrumented fusion using pedicle screws.

**RESULTS:** 33 patients (Mean 26.9 + 13.2, range: 10-68 years, 18 females).

**CLINICAL FEATURES:** myelopathy all (5 paraplegic), sphincter involvement (13), and mid back/ lower pain (7). Pre-operative American Spinal Injury Association (ASIA) scores: A(7), B(11), C(6), D(8) and E(1). Majority had single vertebral involvement (30), 3 multiple level. Six underwent surgery earlier (1 alcohol embolization here). Mean surgical time: 124+39 minutes, average blood: 274+80 cc. Mean amount of absolute alcohol injected: 14.6+5.7 cc. (2 requiring 20 & 25 cc). Immediate embolization achieved in all, allowing laminectomy and soft-tissue hemangioma removal easily. Post-surgery, 1 patient had transient deterioration, rest all patients improved (sphincters improved in 9) at a follow up ranging

28-103 months (mean 47.6±22.3). Follow-up ASIA scores: E(26), D(4), B(2) & C(1). All patients showed evidence of bone sclerosis and relief of cord compression on follow-up imaging.

CONCLUSIONS: This is largest study in literature showing excellent improvement, low re-operation rates following ethanol embolization and short segment fixation.

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PMID: 29890263

22: Chauhan S, Sen S, Sharma A, Kashyap S, Tandon R, Bajaj MS, Pushker N, Vanathi M, Chauhan SS. p16(INK4a) overexpression as a predictor of survival in ocular surface squamous neoplasia. *Br J Ophthalmol*. 2018 Jun;102(6):840-847. doi: 10.1136/bjophthalmol-2017-311276. Epub 2018 Mar 6. PubMed PMID: 29511060.

AIMS: To evaluate the expression and methylation status of the p16INK4a gene in early and advanced American Joint Committee on Cancer (AJCC) stages of ocular surface squamous neoplasia (OSSN) and to correlate its association with clinicopathological features and survival.

METHODS: Sixty-four (35 early and 29 advanced AJCC stage) patients with OSSN formed part of this study and were followed up for 36-58 (mean 48±3.6) months. Immunohistochemical expression of the p16INK4a protein and methylation status of the p16INK4a gene were determined by methylation-specific PCR.

RESULTS: Overexpression of p16INK4a was observed in 18/64 (28%) and hypermethylation in 35/64 (54.7%) OSSN cases. A gradual significant increase in the expression of p16INK4a (0%-48%, P=0.03) and decrease in its methylation (75%-16%, P=0.001) was observed with disease progression from early to advanced tumour stage. Overexpression of p16INK4a was significantly associated with palpebral location and diffuse growth pattern in both early and advanced T stage. Hypermethylation of p16INK4a was significantly associated with history of longer sunlight exposure in both early and advanced T stage of OSSN cases. In advanced T stage, p16INK4a overexpression was associated with reduced disease-free survival (P=0.02) and poor prognosis (HR, 0.2; P=0.03).

CONCLUSIONS: OSSN patients presenting at an advanced AJCC stage with p16INK4a overexpression may require more aggressive treatment. Epigenetic inactivation of the p16INK4a gene due to sunlight exposure could be responsible for pathogenesis of OSSN.

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Conflict of interest statement: Competing interests: None declared.

23: Chuang L, Berek J, Randall T, McCormack M, Schmeler K, Manchanda R, Rebbeck T, Jeng CJ, Pyle D, Quinn M, Trimble E, Naik R, Lai CH, Ochiai K, Denny L, Bhatla N. Collaborations in gynecologic oncology education and research in low- and middle- income countries: Current status, barriers and opportunities. *Gynecol Oncol Rep*. 2018 Jun 9;25:65-69. doi: 10.1016/j.gore.2018.05.005. eCollection 2018 Aug. Review. PubMed PMID: 29928684; PubMed Central PMCID: PMC6008286.

Eighty-five percent of the incidents and deaths from cervical cancer occur in low and middle income countries. In many of these countries, this is the most common cancer in women. The survivals of the women with gynecologic cancers are hampered

by the paucity of prevention, screening, treatment facilities and gynecologic oncology providers. Increasing efforts dedicated to improving education and research in these countries have been provided by international organizations. We describe here the existing educational and research programs that are offered by major international organizations, the barriers and opportunities provided by these collaborations and hope to improve the outcomes of cervical cancer through these efforts.

DOI: 10.1016/j.gore.2018.05.005

PMCID: PMC6008286

PMID: 29928684

24: Dabla S, Puri I, Dash D, Vasantha PM, Tripathi M. Predictors of Seizure-Related Injuries in an Epilepsy Cohort from North India. *J Epilepsy Res.* 2018 Jun 30;8(1):27-32. doi: 10.14581/jer.18005. eCollection 2018 Jun. PubMed PMID: 30090759; PubMed Central PMCID: PMC6066697.

**Background and Purpose:** To identify predictors of seizure-related injury (SRI) and death in people with epilepsy (PWE) in a North Indian cohort.

**Methods:** This ambispective cohort study included PWE registered in an epilepsy clinic in Delhi between May 2010 and December 2011. Five hundred twenty-six patients were enrolled and followed for 25 months. Patients were categorized into two groups based on SRI/no SRI during the study period. We analyzed various factors to identify predictors of SRI and death.

**Results:** Of 526 patients, 355 (67.5%) reported having no SRIs and 171 (32.5%) had sustained an SRI. Among patients with SRI, 72.5% were male; 62% of those with no SRI were male. The injury type included soft tissue (60%), head trauma (20%), dental trauma (10%), orthopedic (10%), and burns (5%). On univariate analysis, factors predicting SRI occurrence were male gender, abnormal birth history ( $p < 0.01$ ), abnormal mental status ( $p < 0.01$ ), seizure duration ( $p < 0.04$ ), daytime seizures ( $p < 0.05$ ), dependence on a caregiver ( $p < 0.008$ ), and uncontrolled seizures ( $p < 0.001$ ), history of cluster seizures or status epilepticus ( $p < 0.001$ ), occurrence of generalized tonic-clonic seizures (GTCS), and use of  $>3$  antiepileptic drugs ( $p < 0.008$ ). On multiple logistic regression analysis, male gender, uncontrolled seizures, history of cluster seizures or status epilepticus, and GTCS were significant risk factors. Sixteen deaths occurred in our cohort, and 13 fit the definition of probable sudden unexpected death in epilepsy (SUDEP). Most patients with SUDEP had an unwitnessed event (69.2%). The only significant factor in predicting death was uncontrolled seizures.

**Conclusions:** Male gender, occurrence of GTCS, uncontrolled seizures, and history of cluster seizures or status epilepticus predicted SRI occurrence in PWE.

Precautions should be taken by caregivers of patients with these risk factors, to prevent injury.

DOI: 10.14581/jer.18005

PMCID: PMC6066697

PMID: 30090759

25: Dar HY, Shukla P, Mishra PK, Anupam R, Mondal RK, Tomar GB, Sharma V, Srivastava RK. *Lactobacillus acidophilus* inhibits bone loss and increases bone heterogeneity in osteoporotic mice via modulating Treg-Th17 cell balance. *Bone Rep.* 2018 Feb 5;8:46-56. doi: 10.1016/j.bonr.2018.02.001. eCollection 2018 Jun. PubMed PMID: 29955622; PubMed Central PMCID: PMC6019967.

Osteoporosis is one of the most important but often neglected bone disease associated with aging and postmenopausal condition leading to bone loss and fragility. Probiotics have been associated with various immunomodulatory properties and have the potential to ameliorate several inflammatory conditions

including osteoporosis. *Lactobacillus acidophilus* (LA) was selected as probiotic of choice in our present study due its common availability and established immunomodulatory properties. In the present study, we report for the first time that administration of LA in ovariectomized (ovx) mice enhances both trabecular and cortical bone microarchitecture along with increasing the mineral density and heterogeneity of bones. This effect of LA administration is due to its immunomodulatory effect on host immune system. LA thus skews the Treg-Th17 cell balance by inhibiting osteoclastogenic Th17 cells and promoting anti-osteoclastogenic Treg cells in ovx mice. LA administration also suppressed expression of osteoclastogenic factors (IL-6, IL-17, TNF- $\alpha$  and RANKL) and increased expression of anti-osteoclastogenic factors (IL-10, IFN- $\gamma$ ). Taken together the present study for the first time clearly demonstrates the therapeutic potential of LA as an osteo-protective agent in enhancing bone health (via tweaking Treg-Th17 cell balance) in postmenopausal osteoporosis.

DOI: 10.1016/j.bonr.2018.02.001

PMCID: PMC6019967

PMID: 29955622

26: Das A, Yadav CS, Gamanagatti S, Pandey RM, Mittal R. Arthroscopic and 3D CT Scan Evaluation of Femoral Footprint of the Anterior Cruciate Ligament in Chronic ACL Deficient Knees. *J Knee Surg.* 2018 Jun 13. doi: 10.1055/s-0038-1660515. [Epub ahead of print] PubMed PMID: 29898471.

The outcome of single-bundle anterior cruciate ligament (ACL) reconstruction depends largely on the anatomic placement of bone tunnel. The lateral intercondylar ridge (LIR) and bifurcate ridge (BR) are useful bony landmarks for femoral tunnel placement. The purpose of our study was to compare the bony landmarks of ACL footprint on femur by three-dimensional computed tomography (3D CT) scan and arthroscopy in chronic ACL-deficient knees. Fifty patients above 18 years of age who were diagnosed of having ACL tear were selected for the study. All the cases were more than 6 months old since the injury. Preoperative 3D CT scan of the affected knee was obtained for each of them. They underwent single-bundle anatomic ACL reconstruction. Measurements were done on the preoperative 3D CT and arthroscopy to quantify the position of the LIR and BR. The proximodistal distance of lateral femoral condyle was 21.41+/-2.5 mm on CT scan and 22.02+/-2.02mm on arthroscopy. On preoperative 3D CT scan, the midpoint of the LIR was found to be located at a mean distance of 11.17 $\pm$ 2.11mm from the proximal margin of the lateral femoral condyle. On arthroscopy, it was at 10.18+/-1.52mm from the proximal margin the lateral femoral condyle. The "bifurcate ridge"(BR) was not visible in any of the cases during arthroscopy or CT scan. We concluded that LIR is an easily identifiable bony landmark on arthroscopy in all cases. It can also be identified on CT scans. BR is not identified both on arthroscopy and CT scans in chronic ACL tears. The arthroscopic measurements of bony landmarks are quite close to those of CT scan. Midpoint of LIR is at 52.185% of the proximodistal distance on CT scan evaluation and it is at 46.21% on arthroscopic evaluation.

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PMID: 29898471

Conflict of interest statement: None.

27: de Silva C, Mukherjee A, Jat KR, Lodha R, Kabra SK. Pulmonary Hemorrhage in

Children: Etiology, Clinical Profile and Outcome. Indian J Pediatr. 2018 Jun 14. doi: 10.1007/s12098-018-2725-x. [Epub ahead of print] PubMed PMID: 29948735.

**OBJECTIVE:** To describe etiology, clinical profile, treatment and outcome of children with pulmonary hemorrhage.

**METHODS:** A chart review of children with pulmonary hemorrhage attending Pediatric Pulmonology services of a tertiary care hospital in North-India was done.

**RESULTS:** Data of 44 children (mean age  $59.2 \pm 32.1$  mo; 28 boys) were included for the study. Possible idiopathic pulmonary hemosiderosis 16 (36.4%), post infectious complications 11 (25%), immune mediated disorders 8 (18.2%), cardiac and vascular disorders 7 (15.9%), and airway pathologies 2 (4.5%) were the etiologies of pulmonary hemorrhage. Treatment options like medications, bronchial artery embolization and surgical resections were offered according to the etiology. Children with idiopathic pulmonary hemosiderosis and those with immune mediated diseases were treated with systemic steroids and steroid sparing agents; the latter group took longer time to respond and had more relapses.

**CONCLUSIONS:** Identification of main etiological categories of pulmonary hemorrhage in children could be useful to plan investigations and management of wide range of causes in more practical way.

DOI: 10.1007/s12098-018-2725-x  
PMID: 29948735

28: Desai MP, Sharma R, Riaz I, Sudhanshu S, Parikh R, Bhatia V. Newborn Screening Guidelines for Congenital Hypothyroidism in India: Recommendations of the Indian Society for Pediatric and Adolescent Endocrinology (ISPAE) - Part I: Screening and Confirmation of Diagnosis. Indian J Pediatr. 2018 Jun;85(6):440-447. doi: 10.1007/s12098-017-2575-y. Epub 2018 Jan 30. PubMed PMID: 29380252.

The Indian Society for Pediatric and Adolescent Endocrinology has formulated locally relevant Clinical Practice Guidelines for newborn screening, diagnosis and management of primary congenital hypothyroidism (CH). **RECOMMENDATIONS:** Screening should be done for every newborn using cord blood, or postnatal blood, ideally at 48 to 72 h of age. On this screen sample, neonates with TSH >20 mIU/L serum units (or >34 mIU/L for samples taken between 24 to 48 h of age) should be recalled for confirmation. For screen TSH >40 mIU/L, immediate confirmatory venous T4/FT4 and TSH, and for milder elevation of screen TSH, a second screening TSH at 7 to 10 d of age, should be taken. Preterm and low birth weight infants should undergo screening at 48-72 h postnatal age. Sick babies should be screened at least by 7 d of age. Venous confirmatory TSH >20 mIU/L before age 2 wk and >10 mIU/L after age 2 wk, with low T4 (<10 µg/dL) or FT4 (<1.17 ng/dL) indicate primary CH and treatment initiation. Imaging is recommended by radionuclide scintigraphy and ultrasonography after CH is biochemically confirmed but treatment should not be delayed till scans are performed. Levothyroxine is commenced at 10 to 15 µg/kg in the neonatal period. Serum T4/FT4 is measured at 2 wk and TSH and T4/FT4 at 1 mo, then 2 monthly till 6 mo, 3 monthly from 6 mo-3 y and every 3-6 mo thereafter. Babies with the possibility of transient congenital hypothyroidism should be re-evaluated at age 3 y, to assess the need for lifelong therapy.

DOI: 10.1007/s12098-017-2575-y  
PMID: 29380252

29: Dhole B, Gupta S, Venugopal SK, Kumar A. Triiodothyronine stimulates VEGF expression and secretion via steroids and HIF-1 $\alpha$  in murine Leydig cells. Syst Biol Reprod Med. 2018 Jun;64(3):191-201. doi: 10.1080/19396368.2018.1433248. Epub 2018 Feb 8. PubMed PMID: 29417848.



Leydig cells are the principal steroidogenic cells of the testis. Leydig cells also secrete a number of growth factors including vascular endothelial growth factor (VEGF) which has been shown to regulate both testicular steroidogenesis and spermatogenesis. The thyroid hormone, T3, is known to stimulate steroidogenesis in Leydig cells. T3 has also been shown to stimulate VEGF production in a variety of cell lines. However, studies regarding the effect of T3 on VEGF synthesis and secretion by the Leydig cells were lacking. Therefore, we investigated the effect of T3 on VEGF synthesis and secretion in a mouse Leydig tumour cell line, MLTC-1. The effect of T3 was compared with that of LH/cAMP and hypoxia, two known stimulators of Leydig cell functions. The cells were treated with T3, 8-Br-cAMP (a cAMP analogue), or CoCl<sub>2</sub> (a hypoxia mimetic) and VEGF secreted in the cell supernatant was measured using ELISA. The mRNA levels of VEGF were measured by quantitative RT-PCR. In the MLTC-1 cells, T3, 8-Br-cAMP, and CoCl<sub>2</sub> stimulated VEGF mRNA levels and the protein secretion. T3 also increased steroid secretion as well as HIF-1 $\alpha$  protein levels, two well-established upstream regulators of VEGF. Inhibitors of steroidogenesis as well as HIF-1 $\alpha$  resulted in inhibition of T3-stimulated VEGF secretion by the MLTC-1 cells. This suggested a mediatory role of steroids and HIF-1 $\alpha$  protein in T3-stimulated VEGF secretion by MLTC-1 cells. The mediation by steroids and HIF-1 $\alpha$  were independent of each other. ABBREVIATIONS: 8-Br-cAMP: 8-bromo - 3', 5' cyclic adenosine monophosphate; CoCl<sub>2</sub>: cobalt chloride; HIF-1 $\alpha$ : hypoxia inducible factor -1 $\alpha$ ; LH: luteinizing hormone; T3: 3, 5, 3'-L-triiodothyronine; VEGF: vascular endothelial growth factor.

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30: Drewes AM, Campbell CM, Ceyhan GO, Delhaye M, Garg PK, van Goor H, Laquente B, Morlion B, Olesen SS, Singh VK, SjÅgren P, Szigethy E, Windsor JA, Salvetti MG, Talukdar R. Pain in pancreatic ductal adenocarcinoma: A multidisciplinary, International guideline for optimized management. *Pancreatology*. 2018 Jun;18(4):446-457. doi: 10.1016/j.pan.2018.04.008. Epub 2018 Apr 22. Review. PubMed PMID: 29706482.

Abdominal pain is an important symptom in most patients with pancreatic ductal adenocarcinoma (PDAC). Adequate control of pain is often unsatisfactory due to limited treatment options and significant variation in local practice, emphasizing the need for a multidisciplinary approach. This review contends that improvement in the management of PDAC pain will result from a synthesis of best practice and evidence around the world in a multidisciplinary way. To improve clinical utility and evaluation, the evidence was rated according to the GRADE guidelines by a group of international experts. An algorithm is presented, which brings together all currently available treatment options. Pain is best treated early on with analgesics with most patients requiring opioids, but neurolytic procedures are often required later in the disease course. Celiac plexus neurolysis offers medium term relief in a substantial number of patients, but other procedures such as splanchnicectomy are also available. Palliative chemotherapy also provides pain relief as a collateral benefit. It is stressed that the assessment of pain must take into account the broader context of other physical and psychological symptoms. Adjunctive treatments for pain, depression and anxiety as well as radiotherapy, endoscopic therapy and neuromodulation may be required in selected patients. There are few comparative studies to help define which combination and order of these treatment options should be applied. New pain therapies are emerging and could for example target neural transmitters. However, until better methods are available, management of pain should be individualized in a multidisciplinary setting to ensure optimal care.

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PMID: 29706482

31: First MB, Rebello TJ, Keeley JW, Bhargava R, Dai Y, Kulygina M, Matsumoto C, Robles R, Stona AC, Reed GM. Do mental health professionals use diagnostic classifications the way we think they do? A global survey. *World Psychiatry*. 2018 Jun;17(2):187-195. doi: 10.1002/wps.20525. PubMed PMID: 29856559; PubMed Central PMCID: PMC5980454.

We report on a global survey of diagnosing mental health professionals, primarily psychiatrists, conducted as a part of the development of the ICD-11 mental and behavioural disorders classification. The survey assessed these professionals' use of various components of the ICD-10 and the DSM, their attitudes concerning the utility of these systems, and usage of "residual" (i.e., "other" or "unspecified") categories. In previous surveys, most mental health professionals reported they often use a formal classification system in everyday clinical work, but very little is known about precisely how they are using those systems. For example, it has been suggested that most clinicians employ only the diagnostic labels or codes from the ICD-10 in order to meet administrative requirements. The present survey was conducted with clinicians who were members of the Global Clinical Practice Network (GCPN), established by the World Health Organization as a tool for global participation in ICD-11 field studies. A total of 1,764 GCPN members from 92 countries completed the survey, with 1,335 answering the questions with reference to the ICD-10 and 429 to the DSM (DSM-IV, DSM-IV-TR or DSM-5). The most frequent reported use of the classification systems was for administrative or billing purposes, with 68.1% reporting often or routinely using them for that purpose. A bit more than half (57.4%) of respondents reported often or routinely going through diagnostic guidelines or criteria systematically to determine whether they apply to individual patients. Although ICD-10 users were more likely than DSM-5 users to utilize the classification for administrative purposes, other differences were either slight or not significant. Both classifications were rated to be most useful for assigning a diagnosis, communicating with other health care professionals and teaching, and least useful for treatment selection and determining prognosis. ICD-10 was rated more useful than DSM-5 for administrative purposes. A majority of clinicians reported using "residual" categories at least sometimes, with around 12% of ICD-10 users and 19% of DSM users employing them often or routinely, most commonly for clinical presentations that do not conform to a specific diagnostic category or when there is insufficient information to make a more specific diagnosis. These results provide the most comprehensive available information about the use of diagnostic classifications of mental disorders in ordinary clinical practice.

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32: Garg B, Manhas V, Vardhan A, Srivastava DN, Das CJ, Vibha D, Gupta V, Malhotra R, Kotwal P. Thumb Opposition Recovery Following Surgery for Severe Carpal Tunnel Syndrome: A Clinical, Radiological, and Electrophysiological Pilot Study. *J Hand Surg Am*. 2018 Jun 19. pii: S0363-5023(17)31438-7. doi: 10.1016/j.jhssa.2018.05.004. [Epub ahead of print] PubMed PMID: 29934085.

PURPOSE: To objectively assess recovery of thumb opposition in patients with carpal tunnel syndrome (CTS) after open carpal tunnel release and to evaluate

electrophysiological and magnetic resonance (MR) neurography findings as predictors of thumb opposition recovery.

**METHODS:** A total of 22 patients with severe CTS and thenar atrophy were included in this study. A detailed clinical, electrophysiological, and MR neurography evaluation was done both before and after surgery at 6 months to assess thumb opposition recovery.

**RESULTS:** The median duration of symptoms was 12 months (interquartile range, 12-20 months). The compound muscle action potential of the abductor pollicis brevis (CMAP-APB) also showed statistically significant improvement of  $0.5 \pm 0.2$  mV after surgery. Tip-tip pulp pinch strength increased from  $1.2 \pm 0.4$  to  $2.0 \pm 0.4$  kg at 6-month follow-up, lateral pulp pinch strength increased from  $1.9 \pm 0.6$  to  $2.8 \pm 0.9$  kg at 6-month follow-up, and 3-point pulp pinch also improved from  $1.9 \pm 0.5$  to  $2.8 \pm 0.9$  at final follow-up. On MR neurogram, the proportion of patients with abnormal median nerve morphology decreased from 81.8% to 68.2%, abnormal thenar branch morphology decreased from 63.6% to 36.4% and denervation edema decreased from 59.1% to 13.6%.

**CONCLUSIONS:** Patients suffering from severe CTS with thenar atrophy and detectable CMAP-APB showed promising improvement following open carpal tunnel release.

**TYPE OF STUDY/LEVEL OF EVIDENCE:** Prognostic IV.

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PMID: 29934085

33: Garg B, Batra S, Dixit V. Solitary anterior osteochondroma of cervical spine: An unusual cause of dysphagia and review of literature. *J Clin Orthop Trauma*. 2018 Jun;9(Suppl 2):S5-S7. doi: 10.1016/j.jcot.2017.12.010. Epub 2017 Dec 29. PubMed PMID: 29928094; PubMed Central PMCID: PMC6008636.

34: Garland SM, Pitisuttithum P, Ngan HYS, Cho CH, Lee CY, Chen CA, Yang YC, Chu TY, Twu NF, Samakoses R, Takeuchi Y, Cheung TH, Kim SC, Huang LM, Kim BG, Kim YT, Kim KH, Song YS, Lalwani S, Kang JH, Sakamoto M, Ryu HS, Bhatla N, Yoshikawa H, Ellison MC, Han SR, Moeller E, Murata S, Ritter M, Sawata M, Shields C, Walia A, Perez G, Luxembourg A. Efficacy, Immunogenicity, and Safety of a 9-Valent Human Papillomavirus Vaccine: Subgroup Analysis of Participants From Asian Countries. *J Infect Dis*. 2018 Jun 5;218(1):95-108. doi: 10.1093/infdis/jiy133. PubMed PMID: 29767739; PubMed Central PMCID: PMC5989602.

**Background:** A 9-valent human papillomavirus-6/11/16/18/31/33/45/52/58 (9vHPV) vaccine extends coverage to 5 next most common oncogenic types (31/33/45/52/58) in cervical cancer versus quadrivalent HPV (qHPV) vaccine. We describe efficacy, immunogenicity, and safety in Asian participants (India, Hong Kong, South Korea, Japan, Taiwan, and Thailand) from 2 international studies: a randomized, double-blinded, qHPV vaccine-controlled efficacy study (young women aged 16-26 years; NCT00543543; Study 001); and an immunogenicity study (girls and boys aged 9-15 years; NCT00943722; Study 002).

**Methods:** Participants (N = 2519) were vaccinated at day 1 and months 2 and 6. Gynecological samples (Study 001 only) and serum were collected for HPV DNA and antibody assessments, respectively. Injection-site and systemic adverse events (AEs) were monitored. Data were analyzed by country and vaccination group.

**Results:** 9vHPV vaccine prevented HPV-31/33/45/52/58-related persistent infection with 90.4%-100% efficacy across included countries. At month 7,  $\geq 97.9\%$  of participants seroconverted for each HPV type. Injection-site AEs occurred in 77.7%-83.1% and 81.9%-87.5% of qHPV and 9vHPV vaccine recipients in Study 001, respectively, and 62.4%-85.7% of girls/boys in Study 002; most were mild to

moderate.

Conclusions: The 9vHPV vaccine is efficacious, immunogenic, and well tolerated in Asian participants. Data support 9vHPV vaccination programs in Asia.

Clinical Trials Registration: NCT00543543; NCT00943722.

DOI: 10.1093/infdis/jiy133

PMCID: PMC5989602

PMID: 29767739

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36: George J, Sankaramangalam KP, Sinha A, Hari P, Dinda AK, Bagga A. Lupus Nephritis in Indian Children: Flares and Refractory Illness. *Indian Pediatr.* 2018 Jun 15;55(6):478-481. PubMed PMID: 29978813.

**OBJECTIVE:** To evaluate the incidence of flares and treatment resistance in children with lupus nephritis and their association with renal outcomes.

**METHODS:** We retrospectively reviewed the case records of 34 children treated for lupus nephritis (Class II-IV) at a single center. Patients were followed for a minimum of five years to evaluate treatment response, onset of flares, and renal survival. Regression analyses were performed to identify the factors associated with treatment refractoriness, incidence of flares and renal survival.

**RESULTS:** The incidence of flares was 0.16 episodes/person/year. Eight patients (23.5%) were refractory to treatment. The five-year renal survival was 79%.

Multiple episodes of flares ( $P=0.028$ ) and therapy refractoriness ( $P=0.003$ ) were associated with poor renal survival.

**CONCLUSIONS:** Prevention and aggressive management of renal flares is expected to prevent progression to end stage renal disease in lupus nephritis.

PMID: 29978813 [Indexed for MEDLINE]

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**BACKGROUND:** Angiogenesis, the formation of new blood vessels from pre-existing vasculature is essential in a number of physiological processes such as embryonic development, wound healing as well as pathological conditions like, tumor growth and metastasis. Hyaluronic acid (HA), a high molecular weight polysaccharide, major component of extracellular matrix is known to associate with malignant phenotypes in melanomas and various other carcinomas. Hyaluronic acid binding protein 1 (HABP1) has been previously reported to trigger enhanced cellular proliferation in human liver cancer cells upon its over-expression. In the present study, we have identified the HA mediated cellular behaviour of liver endothelial cells during angiogenesis.

**METHODS:** Endothelial cells have been isolated from perfused liver of mice. Cell proliferation was studied using microwell plates with tetrazole dye. Cell migration was evaluated by measuring endothelial monolayer wound repair as well as through transwell migration assay. Alterations in proteins and mRNA expression were estimated by immunoblotting and quantitative real time PCR using Applied Biosystems. The paraformaldehyde fixed endothelial cells were used for immunofluorescence staining and F-actin detection with conjugated antibodies. The images were captured by using Olympus fluorescence microscope (IX71).

**RESULTS:** We observed that administration of HA enhanced cell proliferation, adhesion, tubular sprout formation as well as migration of liver endothelial cells (ECs). The effect of HA in the rearrangement of the actins confirmed HA-mediated cytoskeleton re-organization and cell migration. Further, we confirmed enhanced expression of angiogenic factors like VEGF-A and VEGFR1 in endothelial cells upon HA treatment. HA supplementation led to elevated expression of HABP1 in murine endothelial cells. It was interesting to note that, although protein levels of  $\beta$ -catenin remained unaltered, but translocation of this protein from membrane to nucleus was observed upon HA treatment, suggesting its role not only in vessel formation but also its involvement in angiogenesis signalling.

**CONCLUSIONS:** The elucidation of molecular mechanism (s) responsible for HA mediated regulation of endothelial cells and angiogenesis contributes not only to our understanding the mechanism of disease progression but also offer new avenues for therapeutic intervention.

DOI: 10.1186/s12885-018-4532-1

PMCID: PMC5996548

PMID: 29890947

38: Ghosh A, Singh T, Singla V, Bagga R, Srinivasan R, Khandelwal N. Read-out segmented echo planar diffusion imaging of the female pelvis-utility in endometrial carcinoma-a preliminary experience. *Br J Radiol.* 2018 Oct;91(1090):20180018. doi: 10.1259/bjr.20180018. Epub 2018 Jun 5. PubMed PMID: 29750540.

**OBJECTIVE::** Susceptibility artefacts from bones and bowel, geometric distortion makes diffusion imaging of the pelvis difficult. We discuss the difficulties of single-shot-echo-planar (ss-ep) DWI and evaluate a new diffusion-weighted imaging (DWI) technique-readout segmented echo planar (rs-ep) DWI in endometrial carcinoma and discuss the imaging physics.

**METHODS::** Institute review board approval was obtained and five consecutive patients underwent both rs-ep and ss-ep-DWI of the female pelvis and two radiologists compared the images. ROIs were drawn on the endometrium on the b400 images-signal to noise was calculated and compared using F test.

**RESULTS::** The rs-ep-DWI had less imaging artefacts, less bowel-related susceptibility and geometric distortion compared to ss-ep-DWI. There was statistically significant greater SNR in ss-ep-DWI compared to rs-ep-DWI. This resulted in increased graininess of the readout segmented diffusion images. Artefacts in SS-EPI-DTI may make fibre tracking fallacious and rs-ep DTI may have fewer artefacts.

**CONCLUSION::** rs-ep-DWI is a new imaging arsenal in imaging of the female pelvis in general; however further reduction in imaging time and improvement in signal to noise may be desirable.

**ADVANCES IN KNOWLEDGE::** rs-ep-DWI affords lesser imaging artefacts from susceptibility and geometric distortion; at a higher time dividend and may find a place in oncological imaging.

DOI: 10.1259/bjr.20180018

PMID: 29750540 [Indexed for MEDLINE]

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Diabetes Mellitus. *Cureus*. 2018 Jun 9;10(6):e2772. doi: 10.7759/cureus.2772. PubMed PMID: 30109165; PubMed Central PMCID: PMC6084697.

Diabetes mellitus is associated with a variety of musculoskeletal (MSK) manifestations affecting the hand, which can significantly affect a patient's quality of life. While a great deal of attention is paid to the chronic microvascular complications of diabetes, the MSK complications are often ignored in clinical practice. It is important to diagnose them as their presence has been found to correlate with chronic microvascular complications of diabetes especially retinopathy. We describe a case of a young male with long-standing type 1 diabetes mellitus and chronic microvascular complications, who presented to us with several manifestations of diabetic hand syndrome.

DOI: 10.7759/cureus.2772

PMCID: PMC6084697

PMID: 30109165

Conflict of interest statement: The authors have declared that no competing interests exist.

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**BACKGROUND AND AIMS:** Programmed death ligand 1 (PD-L1), an immune check point inhibitor, is known to be expressed in several malignancies and is being considered as a prognostic factor and a potential immunotherapeutic target. The aim of this study was to characterize PD-L1 expression in thymomas and to determine correlation with clinicopathological features and previously published studies in the literature.

**METHODS:** Tissue microarrays were prepared from selected blocks of thymomas and immunohistochemistry (IHC) for PD-L1 was performed. Cases were considered as PD-L1 positive or negative depending on whether the percentage of stained thymic epithelial cells were <25 or >25%. Results were compared clinically and with previously published studies using Google and Pubmed search engines.

**RESULTS:** Of 84 cases of thymoma, 69 (82.1%) revealed PD-L1 positivity in >25% cells. 94.23% of type B thymoma subtypes (B1/B2/B3) were PD-L1 positive ( $P < 0.001$ ). There was no correlation of PD-L1 with age, gender, myasthenia gravis, the tumor size or stage of disease. Nine studies were available in the literature; most of which showed PD-L1 expression in higher stage and B subtype however percentage positivity varied from 53.7% to over 90%.

**CONCLUSIONS:** PD-L1 expression is frequent in type B (B1/B2/B3) thymomas. It can

be easily evaluated by IHC even on small biopsies in unresectable cases, thereby enabling improved clinical evaluation as well as prognostic stratification of patients. It will serve as a potential indicator for benefit from anti-PD-L1 antibody immunotherapy in thymomas.

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DOI: 10.1016/j.anndiagpath.2018.03.012

PMID: 29661720

43: Gulla KM, Balaji A, Mukherjee A, Jat KR, Sankar J, Lodha R, Kabra SK. course of illness after Viral Infection in Indian Children with Cystic Fibrosis. *J Trop Pediatr*. 2018 Jun 9. doi: 10.1093/tropej/fmy033. [Epub ahead of print] PubMed PMID: 29893951.

**Objective:** To study the clinical impact of respiratory viral infection in children with cystic fibrosis (CF).

**Design:** Retrospective cohort study.

**Setting:** Tertiary care referral centre for CF in India.

**Participants/patients:** Children with CF attending a pediatric chest clinic.

**Methods:** Case records of the children with CF who had a pulmonary exacerbation with documented acute respiratory viral infection between October 2013 and December 2014 (Group I) and an equal number of controls (Group II) with pulmonary exacerbation in absence of acute respiratory viral infection were reviewed.

**Outcome measures:** The two groups were compared for the following outcomes over a period of 12-18 months: bacterial colonization, antibiotics usage, pulmonary exacerbations, numbers of outpatient visits, hospitalization and oxygen therapy and spirometric parameters.

**Results:** In total, 46 children [23 each with viral infection (Group I) and without viral infection (Group II)] of age 7-264 months were enrolled; baseline clinical status and pulmonary function tests were comparable. Mean (SD) follow-up duration in those who had viral infection and who had no viral infection was 15.7 (7.1) and 17.5 (5.4) months, respectively. On follow-up, children with viral infection (Group I) had adverse outcome in form of greater worsening of Shwachman clinical scores, number of pulmonary exacerbations requiring antibiotic usage [4 (2.1%)] and [2.8 (1.7%)], need for intravenous antibiotics 30.4% vs. 8.7%, hospitalization rates 31.8% vs. 4.3% and mortality 30.4% vs. 4.7%, respectively. **Conclusion:** Acute viral infection in children with CF affected course of illness on follow-up, including frequent and severe pulmonary exacerbations requiring hospitalization, intravenous antibiotics, decline in CF scores and increased mortality over next 12-18 months.

DOI: 10.1093/tropej/fmy033

PMID: 29893951

44: Gupta R, Dahiya M, Kumar L, Shekhar V, Sharma A, Ramakrishnan L, Sharma OD, Begum A. Prevalence of Monoclonal Gammopathy of Undetermined Significance in India-A Hospital-based Study. *Clin Lymphoma Myeloma Leuk*. 2018 Sep;18(9):e345-e350. doi: 10.1016/j.clml.2018.06.005. Epub 2018 Jun 12. PubMed PMID: 29980412.

**BACKGROUND:** We sought to determine the prevalence of monoclonal gammopathy of undetermined significance (MGUS) in a hospital-based cohort in India.

**PATIENTS AND METHODS:** From March 2015 to May 2015, 3429 patients (age range, 40-88 years) were enrolled in the present study. Of the 3429 enrolled patients, 2354 (68.6%) were men and 1075 (31.4%) were women. Serum samples were collected from all patients and analyzed using serum protein electrophoresis (SPEP). The positive SPEP samples were subjected to immunofixation. The patients with

positive results for both SPEP and immunofixation were registered in the oncology department and investigated further for plasma cell dyscrasias.

**RESULTS:** Of the 3429 study patients, 49 (1.43%) were found to have MGUS, and multiple myeloma was diagnosed in another 6 (0.17%). The prevalence rate of MGUS in patients aged 40 to 49, 50 to 59, 60 to 69, and 70 to 80 years was 0.83%, 1%, 2.62%, and 1.75%, respectively. Of the 49 MGUS patients, 5 (10.2%) were in the high-intermediate risk category using the Mayo Clinic criteria for risk stratification. At 30 months of follow-up, 1 patient in the high-intermediate category had developed multiple myeloma.

**CONCLUSION:** To the best of our knowledge, the present study is the first systematic study on the prevalence of MGUS in an Indian population. The overall prevalence of MGUS was 1.43% in the evaluated Indian cohort, lower than that reported for white and black populations. The incidental detection of 6 subjects with multiple myeloma of 3429 screened subjects in our study was high compared with the reported incidence of multiple myeloma in India of only 1.9 per 100,000 persons. This finding indicates the need to create awareness about myeloma-related symptoms and screening studies in appropriate age groups, at least in the hospital-based setting.

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DOI: 10.1016/j.clml.2018.06.005

PMID: 29980412

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A 60-year-old man presented with recurrent abdominal pain and weight loss for 6 months. Abdominal imaging showed a large vascular lesion in the head and neck of pancreas suggestive of arteriovenous malformation (AV malformation). Endoscopic ultrasound was done which showed features of AV malformation with no evidence of pancreatic malignancy. Surgery was planned for definitive treatment of malformation. Digital subtraction angiography with angioembolization was done prior to surgery to reduce vascularity of the lesion. He recovered after a pylorus preserving pancreaticoduodenectomy. Histopathology of the resected specimen confirmed the pancreatic AV malformation. There has been no recurrence at 2 years of follow-up.

DOI: 10.1007/s12328-018-0825-9

PMID: 29404916 [Indexed for MEDLINE]

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**BACKGROUND:** Steroid-resistant nephrotic syndrome (SRNS) is a frequent cause of CKD. The discovery of monogenic causes of SRNS has revealed specific pathogenetic



pathways, but these monogenic causes do not explain all cases of SRNS.

**METHODS:** To identify novel monogenic causes of SRNS, we screened 665 patients by whole-exome sequencing. We then evaluated the *in vitro* functional significance of two genes and the mutations therein that we discovered through this sequencing and conducted complementary studies in podocyte-like *Drosophila* nephrocytes.

**RESULTS:** We identified conserved, homozygous missense mutations of GAPVD1 in two families with early-onset NS and a homozygous missense mutation of ANKFY1 in two siblings with SRNS. GAPVD1 and ANKFY1 interact with the endosomal regulator RAB5. Coimmunoprecipitation assays indicated interaction between GAPVD1 and ANKFY1 proteins, which also colocalized when expressed in HEK293T cells. Silencing either protein diminished the podocyte migration rate. Compared with wild-type GAPVD1 and ANKFY1, the mutated proteins produced upon ectopic expression of GAPVD1 or ANKFY1 bearing the patient-derived mutations exhibited altered binding affinity for active RAB5 and reduced ability to rescue the knockout-induced defect in podocyte migration. Coimmunoprecipitation assays further demonstrated a physical interaction between nephrin and GAPVD1, and immunofluorescence revealed partial colocalization of these proteins in rat glomeruli. The patient-derived GAPVD1 mutations reduced nephrin-GAPVD1 binding affinity. In *Drosophila*, silencing *Gapvdl* impaired endocytosis and caused mistrafficking of the nephrin ortholog.

**CONCLUSIONS:** Mutations in GAPVD1 and probably in ANKFY1 are novel monogenic causes of NS. The discovery of these genes implicates RAB5 regulation in the pathogenesis of human NS.

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DOI: 10.1681/ASN.2017121312

PMCID: PMC6065084 [Available on 2019-08-01]

PMID: 29959197

48: Jain D, Sukumar S, Mohan A, Iyer VK. Programmed death-ligand 1 immunoexpression in matched biopsy and liquid-based cytology samples of advanced stage non-small cell lung carcinomas. *Cytopathology*. 2018 Jun 25. doi: 10.1111/cyt.12605. [Epub ahead of print] PubMed PMID: 29938855.

**OBJECTIVE:** Programmed death-ligand 1 (PD-L1) immunohistochemistry (IHC) is essential in patients of advanced non-small-cell lung cancer to determine eligibility for immunotherapy. PD-L1 IHC assays have been clinically validated only on formalin-fixed paraffin-embedded tissue; however, lung cancer is frequently diagnosed on cytology. PD-L1 immunocytochemistry (ICC) has shown high concordance of immunoexpression between cytology samples and paired small biopsies. Feasibility of liquid-based cytology (LBC) smears for PD-L1 ICC has not been analysed previously.

**METHODS:** PD-L1 ICC and IHC (clone SP263) were performed on paired LBC smears and small biopsies, respectively, in patients with advanced non-small-cell lung cancer. Cases with fewer than 100 viable tumour cells on LBC smear/biopsy were excluded from analysis. PD-L1 was interpreted positive when 25% or more tumour cells showed membranous and/or cytoplasmic protein expression of any intensity greater than background staining.

**RESULTS:** A total of 26 patients, harbouring adenocarcinomas (50%) and squamous cell carcinomas (50%), had available bronchial brushings/washings processed as LBC smears and concurrently obtained endobronchial biopsies. PD-L1 IHC was interpreted positive in 46% (12/26) biopsies. PD-L1 ICC was interpreted positive in 35% (9/26) LBC smears, all of which were IHC-positive. No IHC-negative case was positive on cytology. The overall concordance between LBC smears and small biopsies was 88.4%.

**CONCLUSION:** PD-L1 ICC can be performed on LBC processed smears, with certain challenges in interpretation inherent to LBC smears and their processing methods.

Nevertheless, they represent a potential resource for ICC, especially when alternate histology material is not available. Future studies are required to validate the predictive value of PD-L1 ICC on LBC smears.

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PMID: 29938855

49: Jajoo M, Manchanda V, Chaurasia S, Sankar MJ, Gautam H, Agarwal R, Yadav CP, Aggarwal KC, Chellani H, Ramji S, Deb M, Gaiind R, Kumar S, Arya S, Sreenivas V, Kapil A, Mathur P, Rasaily R, Deorari AK, Paul VK; Investigators of the Delhi Neonatal Infection Study (DeNIS) collaboration, New Delhi, India. Alarming rates of antimicrobial resistance and fungal sepsis in outborn neonates in North India. *PLoS One*. 2018 Jun 28;13(6):e0180705. doi: 10.1371/journal.pone.0180705. eCollection 2018. PubMed PMID: 29953451; PubMed Central PMCID: PMC6023165.

**BACKGROUND:** There is a paucity of data on the epidemiology of sepsis in outborn neonates being referred to level-3 units in low- and middle-income countries (LMIC). The objective of the present study was to evaluate the prevalence of sepsis and outcomes of outborn neonates with sepsis, and to characterize the pathogen profile and antimicrobial resistance (AMR) patterns of common isolates in them.

**METHODS:** In this prospective observational cohort study (2011-2015), a dedicated research team enrolled all neonates admitted to an outborn level-3 neonatal unit and followed them until discharge/death. Sepsis work-up including blood culture(s) was performed upon suspicion of sepsis. All the isolates were identified and tested for antimicrobial susceptibility. Gram-negative pathogens resistant to any three of the five antibiotic classes (extended-spectrum cephalosporins, carbapenems, aminoglycosides, fluoroquinolones, and piperacillin-tazobactam) were labeled multi-drug resistant.

**RESULTS:** Of the total of 2588 neonates enrolled, culture positive sepsis and total sepsis-i.e. culture positive and/or culture negative sepsis-was diagnosed in 13.1% (95% CI 11.8% to 14.5%) and 54.7% (95% CI 52.8% to 56.6%), respectively. The case fatality rates were 23.4% and 11.0% in culture-positive and total sepsis, respectively. Sepsis accounted for two-thirds of total neonatal deaths (153/235, 63.0%). Bacterial isolates caused about three-fourths (296/401; 73.8%) of the infections. The two common pathogens-Klebsiella pneumoniae (n = 50, 12.5%) and Acinetobacter baumannii (n = 46, 11.5%)-showed high degree of multi-drug resistance (78.0% and 91.3%, respectively) and carbapenem resistance (84.0% and 91.3%, respectively). About a quarter of infections were caused by Candida spp. (n = 91; 22.7%); almost three-fourths (73.7%) of these infections occurred in neonates born at or after 32 weeks' gestation and about two-thirds (62.1%) in those weighing 1500 g or more at birth.

**CONCLUSIONS:** In this large outborn cohort, we report high burden of sepsis, high prevalence of systemic fungal infections, and alarming rates of antimicrobial resistance among bacterial pathogens.

DOI: 10.1371/journal.pone.0180705

PMCID: PMC6023165

PMID: 29953451

Conflict of interest statement: The authors have declared that no competing interests exist.

50: Jana M, Gupta AK. Expanding Applications of Prenatal MR Imaging: Detection of Complex Multisystem Anomalies Made Easy. *Indian J Pediatr*. 2018 Sep;85(9):716-717. doi: 10.1007/s12098-018-2726-9. Epub 2018 Jun 15. Review.

PubMed PMID: 29948737.

51: Jose A, Nagori SA, Agarwal B, Roychoudhury A. Closed technique for naso-orbito-ethmoid fracture management: Technical note. *J Stomatol Oral Maxillofac Surg.* 2018 Jun;119(3):242-244. doi: 10.1016/j.jormas.2017.12.004. Epub 2017 Dec 12. PubMed PMID: 29246757.

Trauma to the naso-orbito-ethmoid region invariably results in detachment of medial canthal tendon. The shape of medial canthus is of important esthetic and functional concern. Accurate reposition of the medial canthus is important to achieve normal form and function. The various available techniques advocate open approach leaving an obvious scar in the esthetically prominent region. This technique intends to address these fractures through a closed approach with the possibility to make finer adjustments as and when required. We report the experience of treating 4 naso-orbito-ethmoid fractures with a new innovative technique with predictable results.

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DOI: 10.1016/j.jormas.2017.12.004  
PMID: 29246757

52: Kakkar A, Sakthivel P, Mahajan S, Thakar A. Nasopharyngeal Papillary Adenocarcinoma as a Second Head and Neck Malignancy. *Head Neck Pathol.* 2018 Jun 19. doi: 10.1007/s12105-018-0944-0. [Epub ahead of print] PubMed PMID: 29923095.

Nasopharyngeal adenocarcinomas are rare tumours, and include neoplasms arising from the nasopharyngeal surface epithelium as well as those of minor salivary gland origin, each of which is distinct from the other. The former encompasses nasopharyngeal papillary adenocarcinoma (NPAC), also known as low grade NPAC and thyroid-like NPAC, an extremely unusual malignancy bearing histomorphological similarity to papillary thyroid carcinoma, and displaying indolent clinical behaviour. We report the case of a 41-year-old lady who developed NPAC as a second malignancy five-and-a-half years after being diagnosed and treated for a diffuse astrocytoma in the frontal lobe. In addition, we discuss the differential diagnosis, as well as raise certain pathogenetic considerations with regard to this unique neoplasm.

DOI: 10.1007/s12105-018-0944-0  
PMID: 29923095

53: Kakkar A, Antony VM, Irugu DVK, Adhikari N, Jain D. NUT Midline Carcinoma: A Series of Five Cases, Including One with Unusual Clinical Course. *Head Neck Pathol.* 2018 Jun;12(2):230-236. doi: 10.1007/s12105-017-0858-2. Epub 2017 Sep 25. PubMed PMID: 28948459; PubMed Central PMCID: PMC5953880.

NUT midline carcinomas (NMCs) are rare, poorly differentiated tumors with aggressive biological behavior and a characteristic molecular signature. Availability of NUT antibody has facilitated diagnosis of NMC without molecular testing. We report a series of head and neck NMCs diagnosed using NUT IHC at our institute, including one case with an unusual course. Immunohistochemistry for NUT was performed in nasal and sinonasal tumors with diagnoses of undifferentiated carcinoma, poorly differentiated squamous cell carcinoma and malignant neoplasm, not otherwise specified, to identify cases of NMC. Clinicopathological features were reviewed. Five cases of NMC were identified, accounting for 9.6% of poorly differentiated/undifferentiated carcinomas of the sinonasal region. These patients had a sex ratio of 2:3, and ranged in age from of 10 to 31 years (mean: 25.2 years). Patient 4 had previously been diagnosed

with basal cell carcinoma arising in left nasolacrimal duct, and inverted papilloma of nasal cavity. She presented to us with a left lacrimal fossa mass extending into nasal cavity, which was diagnosed as NMC. NMC is a rare neoplasm, the awareness of which is imperative for pathologists to identify cases in which NUT IHC should be ordered. NUT IHC should be performed in all cases of a poorly differentiated carcinoma, particularly those with foci of squamous differentiation, irrespective of patient age and unusual tumor location, as seen in one of our cases. Although considered a highly aggressive and lethal neoplasm, NMC can have a more prolonged clinical course on occasion.

DOI: 10.1007/s12105-017-0858-2

PMCID: PMC5953880

PMID: 28948459 [Indexed for MEDLINE]

54: Kapil R, Gupta A. Anemia, Iron Deficiency and Iodine Deficiency among Nepalese School Children: Correspondence. *Indian J Pediatr.* 2018 Jun;85(6):487-488. doi: 10.1007/s12098-017-2581-0. Epub 2018 Jan 4. PubMed PMID: 29302864.

55: Karthikeyan G, Guilherme L. Acute rheumatic fever. *Lancet.* 2018 Jul 14;392(10142):161-174. doi: 10.1016/S0140-6736(18)30999-1. Epub 2018 Jun 29. Review. Erratum in: *Lancet.* 2018 Sep 8;392(10150):820. PubMed PMID: 30025809.

Acute rheumatic fever is caused by an autoimmune response to throat infection with *Streptococcus pyogenes*. Cardiac involvement during acute rheumatic fever can result in rheumatic heart disease, which can cause heart failure and premature mortality. Poverty and household overcrowding are associated with an increased prevalence of acute rheumatic fever and rheumatic heart disease, both of which remain a public health problem in many low-income countries. Control efforts are hampered by the scarcity of accurate data on disease burden, and effective approaches to diagnosis, prevention, and treatment. The diagnosis of acute rheumatic fever is entirely clinical, without any laboratory gold standard, and no treatments have been shown to reduce progression to rheumatic heart disease. Prevention mainly relies on the prompt recognition and treatment of streptococcal pharyngitis, and avoidance of recurrent infection using long-term antibiotics. But evidence for the effectiveness of either approach is not strong. High-quality research is urgently needed to guide efforts to reduce acute rheumatic fever incidence and prevent progression to rheumatic heart disease.

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DOI: 10.1016/S0140-6736(18)30999-1

PMID: 30025809 [Indexed for MEDLINE]

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57: Kedia S, Jain S, Goyal S, Bopanna S, Yadav DP, Sachdev V, Sahni P, Pal S, Dash NR, Makharia G, Travis SPL, Ahuja V. Potential of Fecal Calprotectin as an Objective Marker to Discriminate Hospitalized Patients with Acute Severe Colitis from Outpatients with Less Severe Disease. *Dig Dis Sci.* 2018 Oct;63(10):2747-2753. doi: 10.1007/s10620-018-5157-6. Epub 2018 Jun 8. PubMed PMID: 29948556.

BACKGROUND: Acute severe colitis (ASC) is conventionally diagnosed by Truelove

and Witts' criteria which are non-specific and can be affected by other pathologic conditions. Fecal calprotectin (FCP) is a gut-specific marker of inflammation which can predict short-term outcomes in patients with ASC. We aimed to define the role of FCP in the diagnosis of ASC.

**METHODS:** This prospective observational cohort study included adult patients (>18 years) with ulcerative colitis (UC) for whom FCP was measured and was under follow-up from April 2015 to December 2016. Patients were divided into two cohorts: (1) all consecutive hospitalized patients with ASC as defined by Truelove and Witts' criteria; (2) outpatients with active UC (defined by Mayo score) who did not fulfill Truelove and Witts' criteria. FCP levels were compared between the two cohorts, and a cutoff for FCP to diagnose ASC was determined.

**RESULTS:** Of 97 patients, 49 were diagnosed with ASC (mean age: 36.1±11.9 years, 36 males) and 48 with active UC (mean age: 37.9±12.4 years, 25 males). Median FCP levels were significantly higher in patients with ASC [1776(952-3123) vs 282(43-568) µg/g,  $p < 0.001$ ] than mild to moderately active UC (n=48) or moderately active UC [n=35, 1776(952-3123) vs 332(106-700) µg/g,  $p < 0.001$ ]. A FCP cutoff of 782 µg/g of stool had excellent diagnostic accuracy, with an area under the curve of 0.92(95% CI 0.87-0.97), sensitivity of 84% and specificity of 88% to differentiate ASC from active UC.

**CONCLUSION:** FCP could differentiate ASC from mild to moderate patients with UC, but requires validation before clinical use.

DOI: 10.1007/s10620-018-5157-6

PMID: 29948556 [Indexed for MEDLINE]

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59: Kedia S, Madhusudhan KS, Sharma R, Bopanna S, Yadav DP, Goyal S, Jain S, Das P, Dattagupta S, Makharia G, Ahuja V. Combination of increased visceral fat and long segment involvement: Development and validation of an updated imaging marker for differentiating Crohn's disease from intestinal tuberculosis. *J Gastroenterol Hepatol*. 2018 Jun;33(6):1234-1241. doi: 10.1111/jgh.14065. Epub 2018 Feb 26. PubMed PMID: 29205485.

**BACKGROUND AND AIM:** Computed tomographic (CT) features (long segment, ileocaecal area involvement, and lymph nodes > 1 cm) have demonstrated good specificity but poor sensitivity, while visceral to subcutaneous fat ratio on CT (VF/SC > 0.63) has moderate sensitivity and specificity in differentiating Crohn's disease (CD) and intestinal tuberculosis (ITB). This study aims to develop and validate an updated model incorporating CT features and VF/SC to improve the diagnostic accuracy of imaging in differentiating CD/ITB.

**METHODS:** Computed tomographic features and VF/SC were documented in two cohorts (development [n = 59, follow-up: January 2012 to November 2014] and validation [n = 69, follow-up: December 2014 to December 2015]) of CD/ITB patients diagnosed by standard criteria. Patients with normal CT were excluded. Features significantly different between CD/ITB were incorporated into a model.

**RESULTS:** In both the cohorts, necrotic lymph nodes were exclusive for ITB (23.1% vs 0% and 43.3% vs 0%), while long segment involvement (57.6% vs 7.7%,  $P < 0.001$ , and 52.6% vs 16.1%,  $P < 0.001$ ) and VF/SC ratio > 0.63 (72.7% vs 19.2%,  $P < 0.001$ , and 81.6% vs 25.8%,  $P < 0.001$ ) were significantly more common in CD. A risk score of 2, based upon long segment involvement and VF/SC ratio > 0.63, had an excellent specificity of 100% and 100% and sensitivity of 54% and 50% for CD in development and validation cohorts, respectively. Based upon these features, in 43% patients with the diagnostic dilemma of CD/ITB, a definite diagnosis based

only on imaging could be made.

CONCLUSION: Necrotic lymph nodes are exclusive for ITB, and the combination of long segment involvement and VF/SC ratio > 0.63 is exclusive for CD, and these features can make a definite diagnosis in 43% patients with a CD/ITB dilemma.

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PMID: 29205485 [Indexed for MEDLINE]

60: Khan AA, Mangalaparthy KK, Advani J, Prasad TSK, Gowda H, Jain D, Chatterjee A. Data from quantitative proteomic analysis of lung adenocarcinoma and squamous cell carcinoma primary tissues using high resolution mass spectrometry. Data Brief. 2018 Jun 22;19:1631-1637. doi: 10.1016/j.dib.2018.06.035. eCollection 2018 Aug. PubMed PMID: 30229035; PubMed Central PMCID: PMC6141215.

Lung cancer is the leading cause of preventable death globally and is broadly classified into adenocarcinoma and squamous cell carcinoma. In this study, we carried out mass spectrometry based quantitative proteomic analysis of lung adenocarcinoma and squamous cell carcinoma primary tissue by employing the isobaric tags for relative and absolute quantitation (iTRAQ) approach. Proteomic data analyzed using SEQUEST algorithm resulted in identification of 25,998 peptides corresponding to 4342 proteins of which 610 proteins were differentially expressed ( $\geq 2$ -fold) between adenocarcinoma and squamous cell carcinoma. These differentially expressed proteins were further classified by gene ontology for their localization and biological processes. Pathway analysis of differentially expressed proteins revealed distinct alterations in networks and pathways in both adenocarcinoma and squamous cell carcinoma. We identified a subset of proteins that show inverse expression pattern between lung adenocarcinoma and squamous cell carcinoma. Such proteins may serve as potential markers to distinguish between the two subtypes. Mass spectrometric data generated in this study was submitted to the ProteomeXchange Consortium (<http://proteomecentral.proteomexchange.org>) via the PRIDE partner repository with the dataset identifier PXD008700.

DOI: 10.1016/j.dib.2018.06.035

PMCID: PMC6141215

PMID: 30229035

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Pallidotomy is a surgical procedure done widely for Parkinson's disease and various dystonias refractory to medical treatment. The technique involves radiofrequency (RF) thermal coagulation of globus pallidus internus, either unilaterally or bilaterally. The technique has been shown to produce good success. However, the involvement of nearby vital structures can result in new post-operative complications. We encountered a case of delayed emergence from anaesthesia associated with bilateral mydriasis and visual field defects in a

patient after bilateral RF thermal lesioning.

DOI: 10.4103/ija.IJA\_27\_18

PMCID: PMC6004752

PMID: 29962530

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

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**BACKGROUND:** Preoperative fasting in children can cause anxiety, which may ultimately lead to postoperative emergence delirium. However, no data are available whether duration of preoperative fasting correlates with postoperative emergence delirium.

**AIMS:** The aim of this study was to identify if there is any correlation between the duration of preoperative fasting and emergence delirium in children undergoing ophthalmic examination under anesthesia.

**METHODS:** In this prospective observational study, 100 children between the age group 2-6 years of American Society of Anesthesiologists physical status I or II, scheduled for examination of the eye under general anesthesia with sevoflurane were recruited. Data regarding preoperative fasting was recorded and presence of emergence delirium was assessed by the Pediatric Anesthesia Emergence Delirium (PAED) scale at 5 minute interval till 30 minutes from the time of leaving the operation theater. No premedication was used in any patients but parental presence was allowed in all of them.

**RESULTS:** Mean (standard deviation) duration of fasting to clear liquid was 6.3 (1.7) hrs. Twenty-four children (24%) had at least 1 recorded PAED score >10 at any time point in the postoperative period. PAED scores at 15 and 25 minutes were significantly correlated with duration of fasting ( $r^2$  [95% CI] = .24 [0.04, 0.41],  $P = .02$ , Pearson's correlation and  $r^2$  [95% CI] = .23 [0.04, 0.41],  $P = .02$ , Pearson's correlation, respectively). No correlation has been found between duration of fasting and blood glucose level ( $r^2$  [95% CI] = -.05 [-0.24, 0.15],  $P = .65$ , Pearson's correlation) between fasting blood glucose and PAED score at any time point.

**CONCLUSION:** Increased preoperative fasting duration may be a risk factor for postoperative emergence delirium in children undergoing ophthalmic examination under general anesthesia.

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DOI: 10.1111/pan.13381

PMID: 29752842

65: Khatri K, Tiwari V, Khan SA, Nath D, Mridha AR, Raje A. Nora's lesion of 2nd metacarpal treated by wide excision, autologous fibular grafting and metacarpophalangeal joint replacement: A rare case report. *J Clin Orthop Trauma*. 2018 Jun;9(Suppl 2):S58-S62. doi: 10.1016/j.jcot.2017.08.014. Epub 2017 Aug 24. PubMed PMID: 29928108; PubMed Central PMCID: PMC6008605.

Bizarre paroxysmal osteochondromatous proliferation (BPOP) is a rare benign neoplastic lesion predominantly affecting small bones of the hand and known for its recurrence after local excision. We describe a rare case of BPOP involving second metacarpal of the dominant hand which was treated using a novel technique. Wide excision and reconstruction with non-vascularised fibular autograft was performed along with metacarpophalangeal joint replacement. At a follow up of two years, there was no evidence of recurrence and patient had good functional outcome. Hence this modality of treatment could be considered in dealing such cases of BPOP involving the small bones of hand.

DOI: 10.1016/j.jcot.2017.08.014

PMCID: PMC6008605 [Available on 2019-06-01]

PMID: 29928108

66: Khullar B, Balyan R, Oswal N, Jain N, Sharma A, Abdin MZ, Bagga A, Bhatnagar S, Wadhwa N, Natchu UCM, George A, Rath S, Bal V, Sopory S. Interaction of CD80 with Neph1: a potential mechanism of podocyte injury. *Clin Exp Nephrol*. 2018 Jun;22(3):508-516. doi: 10.1007/s10157-017-1489-3. Epub 2017 Oct 11. PubMed PMID: 29022109.

**BACKGROUND:** The induction of CD80 on podocytes has been shown in animal models of podocyte injury and in certain cases of nephrotic syndrome. In a lipopolysaccharide (LPS)-induced mouse model of albuminuria, we have recently shown a signalling axis of LPS-myeloid cell activation-TNF $\alpha$  production-podocyte CD80 induction-albuminuria. Therefore, in this report, we investigated the cellular and molecular consequences of TNF $\alpha$  addition and CD80 expression on cultured podocytes.

**METHODS:** A murine podocyte cell line was used for TNF $\alpha$  treatment and for over-expressing CD80. Expression and localization of various podocyte proteins was analysed by reverse transcriptase-polymerase chain reaction, western blotting and immunofluorescence. HEK293 cells were used to biochemically characterize interactions.

**RESULTS:** Podocytes treated with LPS in vitro did not cause CD80 upregulation but TNF $\alpha$  treatment was associated with an increase in CD80 levels, actin derangement and poor wound healing. Podocytes stably expressing CD80 showed actin derangement and co-localization with Neph1. CD80 and Neph1 interaction was confirmed by pull down assays of CD80 and Neph1 transfected in HEK293 cells.

**CONCLUSION:** Addition of TNF $\alpha$  to podocytes causes CD80 upregulation, actin reorganization and podocyte injury. Overexpressed CD80 and Neph1 interact via their extracellular domain. This interaction implies a mechanism of slit diaphragm disruption and possible use of small molecules that disrupt CD80-Neph1 interaction as a potential for treatment of nephrotic syndrome associated with CD80 upregulation.

67: Kilambi R, Singh AN, Madhusudhan KS, Pal S, Saxena R, Shalimar, Dash NR, Sahni P. Portal hypertension and hypersplenism in extrahepatic portal venous obstruction: Are they related? *Indian J Gastroenterol*. 2018 Jun 23. doi: 10.1007/s12664-018-0864-7. [Epub ahead of print] PubMed PMID: 29936618.

**BACKGROUND AND AIMS:** Portal hypertension (PHT) due to extrahepatic portal venous obstruction (EHPVO) is common in developing countries. Hypersplenism is a near-constant feature of EHPVO, but its significance, unlike in cirrhotics, is unknown. We aimed to study the relationship between hypersplenism and the severity of PHT in patients with EHPVO.

**METHODS:** This prospective study was done at a tertiary care center from January 2014 to August 2015. All patients with EHPVO who underwent a splenectomy and a shunt or devascularization were included. Data regarding clinical profile,



preoperative parameters, and intraoperative details were recorded. The correlation was studied between hypersplenism and the intraoperatively measured portal pressures and markers of PHT.

**RESULTS:** Of the 40 patients studied (mean [SD] age 22.4 [8.4] years), hematological hypersplenism was present in 39 (97.5%). The mean (SD) hemoglobin, total leukocyte counts (TLC), and platelet counts were 9.9 (2.4) g/dL, 2971 (1239) cells/mm<sup>3</sup>, and 66,400 (32047) cells/mm<sup>3</sup>, respectively. The mean (SD) sonographic spleen volume (SV), splenic weight, and intraoperative portal pressure were 1084.7 (553.9) cm<sup>3</sup>, 1088.7 (454.7) g, and 35.6 (5.1) mmHg, respectively. The TLC and platelet counts correlated inversely with the portal pressure. Additionally, the platelet counts correlated negatively with eradicated variceal status, SV, and weight; hemoglobin with SV and weight; and TLC with SV. Multivariate analysis showed the platelet counts were an independent predictor of portal pressures and platelet counts  $\leq 53,500$  cells/mm<sup>3</sup> indicated significantly high portal pressures.

**CONCLUSIONS:** The platelet counts showed a significant inverse correlation with portal pressures in patients with EHPVO and may be used as surrogate markers of PHT. A platelet count  $\leq 53,500$  cells/mm<sup>3</sup> is predictive of significantly high pressures.

68: Konanki R, Gulati S, Prasad K, Saini L, Pandey RM, Paul VK. Comparison of telephone with face to face consultation for follow up of Neurocysticercosis. *Epilepsy Res.* 2018 Sep;145:110-115. doi: 10.1016/j.eplepsyres.2018.06.005. Epub 2018 Jun 12. PubMed PMID: 29936301.

**OBJECTIVES:** There is significant scarcity of specialists to provide care for children with epilepsy in many parts of the world. Telemedicine is a potential future option. This study was planned to estimate the diagnostic accuracy of telephone consultation to identify Critical Clinical Events (breakthrough seizures, drug non-compliance, drug adverse events, features of raised intracranial pressure, and other disease-related events), compared to the Face-to-Face consultation (gold standard), in children with Neurocysticercosis (NCC) and symptomatic seizures, following the completion of cysticidal therapy. **METHODS:** Children aged 2-15 years attending a tertiary health care facility with a diagnosis of NCC and symptomatic seizures were enrolled after completion of the cysticidal therapy. The parents were contacted by a Pediatric Neurology Resident on Telephone before the scheduled hospital visit. Subsequently, all the children were seen directly in hospital the next day by another Pediatric Neurology Resident. The information was noted on a structured questionnaire. The diagnostic accuracy of telephone consultation for identifying the Critical Clinical Events was estimated using Face-to-Face consultation as the gold standard.

**RESULTS:** A total of 1145 potential events were evaluated. Of these, the face-to-face consultation identified 56 events that would need hospital visit for detailed evaluation (breakthrough seizures in 19, drug non-compliance in 15, adverse drug events in 11, features of raised intracranial pressure in 8, and other disease-related events in 3), and 1089 events that did not require hospital consultation. The sensitivity, specificity, positive and negative predictive values of telephone consultation were 89.28% (78.12-95.96), 97.61% (96.52-98.43), 65.79% (54.01-76.30), and 99.43% (98.78-99.79) respectively. The likelihood ratios when telephone consultation was positive and negative were 37.3 and 0.11 respectively.

**SIGNIFICANCE:** Telephone consultation is an acceptable mode of follow-up for children with mild Neurocysticercosis and symptomatic seizures after completion of cysticidal therapy.

69: Krishna SN, Chauhan S, Bhoi D, Kaushal B, Hasija S, Sangdup T, Bisoi AK. Bilateral Erector Spinae Plane Block for Acute Post-Surgical Pain in Adult Cardiac Surgical Patients: A Randomized Controlled Trial. *J Cardiothorac Vasc*

Anesth. 2018 Jun 4. pii: S1053-0770(18)30383-5. doi: 10.1053/j.jvca.2018.05.050. [Epub ahead of print] PubMed PMID: 30055991.

**OBJECTIVES:** To examine the analgesic efficacy of bilateral erector spinae plane (ESP) block compared with conventional treatment for pain after cardiac surgery in adult patients.

**DESIGN:** A prospective, randomized, controlled, single-blinded study.

**SETTING:** Single-center tertiary teaching hospital.

**PARTICIPANTS:** One hundred and six adult patients undergoing elective cardiac surgery with cardiopulmonary bypass.

**INTERVENTIONS:** Patients were randomized into 2 groups. Patients in group 1 (ESP block group, n=53) received ultrasound-guided bilateral ESP block with 3 mg/kg of 0.375% ropivacaine before anesthesia induction at the T6 transverse process level. Patients in group 2 (paracetamol and tramadol group, n=53) received paracetamol (1 gm every 6 hours) and tramadol (50 mg every 8 hours) intravenously in the postoperative period. The primary study outcome was to evaluate pain at rest using an 11-point numeric rating scale (NRS). Mann-Whitney U test was used for comparing NRS scores.

**MEASUREMENTS AND MAIN RESULTS:** The postoperative pain level after extubation and duration of analgesia during which NRS was < 4 of 10 was compared between the groups. The median pain score at rest after extubation in group 1 was 0 of 10 until hour 6, 3 of 10 at hour 8, and 4 of 10 at hours 10 and 12 postextubation. These were significantly less in comparison with group 2 (p=0.0001). Patients in group 1 had a significantly higher mean duration of analgesia (8.98 ± 0.14 hours), during which NRS was < 4 of 10, compared with group 2 (4.60 ± 0.12 hours) (p=0.0001).

**CONCLUSION:** ESP block safely provided significantly better pain relief at rest for longer duration as compared to intravenous paracetamol and tramadol.

70: Kumar A, Nayak S, Pathak P, Purkait S, Malgulawar PB, Sharma MC, Suri V, Mukhopadhyay A, Suri A, Sarkar C. Identification of miR-379/miR-656 (C14MC) cluster downregulation and associated epigenetic and transcription regulatory mechanism in oligodendrogliomas. *J Neurooncol.* 2018 Jun 21. doi: 10.1007/s11060-018-2840-6. [Epub ahead of print] PubMed PMID: 29931616; PubMed Central PMCID: PMC6061222.

**INTRODUCTION:** Although role of individual microRNAs (miRNAs) in the pathogenesis of gliomas has been well studied, their role as a clustered remains unexplored in gliomas.

**METHODS:** In this study, we performed the expression analysis of miR-379/miR-656 miRNA-cluster (C14MC) in oligodendrogliomas (ODGs) and also investigated the mechanism underlying modulation of this cluster.

**RESULTS:** We identified significant downregulation of majority of the miRNAs from this cluster in ODGs. Further data from The Cancer Genome Atlas (TCGA) also confirmed the global downregulation of C14MC. Furthermore, we observed that its regulation is maintained by transcription factor MEF2. In addition, epigenetic machinery involving DNA and histone-methylation are also involved in its regulation, which is acting independently or in synergy. The post-transcriptionally regulatory network of this cluster showed enrichment of key cancer-related biological processes such as cell adhesion and migration. Also, there was enrichment of several cancer related pathways viz PIK3 signaling pathway and glioma pathways. Survival analysis demonstrated association of C14MC (miR-487b and miR-409-3p) with poor progression free survival in ODGs.

**CONCLUSION:** Our work demonstrates tumor-suppressive role of C14MC and its role in pathogenesis of ODGs and therefore could be relevant for the development of new therapeutic strategies.

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We present a case of tube endothelial touch where a suture technique for repositioning of the Ahmed glaucoma valve was performed. Advantage of this technique is that it is minimally invasive and anterior chamber stability is maintained during the procedure.

72: Kumar H, Gupta A, Gupta V. A microinvasive technique for management of corneal edema secondary to glaucoma drainage device tube-corneal touch. *Indian J Ophthalmol.* 2018 Jun;66(6):861-862. doi: 10.4103/ijo.IJO\_987\_17. PubMed PMID: 29786005; PubMed Central PMCID: PMC5989519.

73: Kumar J, Singh A, Seth R, Xess I, Jana M, Kabra SK. Prevalence and Predictors of Invasive Fungal Infections in Children with Persistent Febrile Neutropenia Treated for Acute Leukemia - A Prospective Study. *Indian J Pediatr.* 2018 Jun 29. doi: 10.1007/s12098-018-2722-0. [Epub ahead of print] PubMed PMID: 29956075.

**OBJECTIVE:** To ascertain the prevalence of invasive fungal infections (IFI), predictors of IFI, identify etiological species and outcome (mortality/discharge) in persistent febrile neutropenia in children with acute leukemia.

**METHODS:** It was a prospective, observational study conducted from January 2013 through June 2014 in a tertiary care centre in New Delhi. Children between 1 and 12 y of age, on chemotherapy for acute leukemia with persistent febrile neutropenia (> 96 h) were enrolled. These children were not on any antifungal prophylaxis. Diagnosis of IFI was based on European Organization for Research and Treatment of Cancer and Mycoses Study Group (EORTC/MSG) criteria. Prevalence and outcome was reported in mean±95% CI form and etiological species were presented in the form of the frequency distribution.

**RESULTS:** Three hundred nineteen episodes involving 187 children of febrile neutropenia were screened and 74 were enrolled. Prevalence of IFI was 22.97% (13.99-34.21). Positive cases were further classified into proven 3(17.6%), probable 11(64.8%) and possible 3(17.6%) according to EORTC/MSG criteria. On multivariate analysis, abnormal CXR and clinical sinusitis were important predictors of IFI. Most common fungi isolated was *Aspergillus* sp. followed by *Candida* sp. Mortality rate was 9.45% (3.89-18.52).

**CONCLUSIONS:** Thus, prevalence of IFI is very high in children with persistent febrile neutropenia who are not on antifungal prophylaxis. Abnormal chest x- ray and clinical sinusitis are important predictors of IFI.

DOI: 10.1007/s12098-018-2722-0

PMID: 29956075

74: Kumar S, Singh S, Chadda RK, Verma R, Kumar N. The Effect of Low-Frequency Repetitive Transcranial Magnetic Stimulation at Orbitofrontal Cortex in the Treatment of Patients With Medication-Refractory Obsessive-Compulsive Disorder: A Retrospective Open Study. *J ECT.* 2018 Jun;34(2):e16-e19. doi: 10.1097/YCT.0000000000000462. PubMed PMID: 29053484.

**OBJECTIVE:** Obsessive-compulsive disorder (OCD) is a chronic debilitating psychiatric disorder, with significant proportion of patients failing to respond with current first-line treatments. The present study assesses the safety and effectiveness of low-frequency repetitive transcranial magnetic stimulation (LF-rTMS) over left-orbitofrontal cortex (Lt-OFC) as a potential augmentation strategy in treatment of patients with medication-refractory OCD in real-world clinical setting. The present report also aims to examine the factors affecting response to rTMS and the durability of effects produced by rTMS over 1 month of

follow-up period.

**METHODS:** Retrospective review and analysis of clinical case files of 25 patients with medication-refractory OCD, all of whom had received 20 sessions of LF-rTMS over Lt-OFC as part of routine clinical care. A reduction of 25% and 35% in Yale-Brown Obsessive Compulsive Scale scores was used to determine the proportion of partial and complete responders, respectively.

**RESULTS:** There was a significant decrease in mean Yale-Brown Obsessive Compulsive Scale score at the end of 20 sessions of rTMS compared with baseline ( $7.04 \pm 5.07$ ;  $P < 0.001$ ), with no further significant change during the subsequent 1-month follow-up period ( $0.20 \pm 1.38$ ;  $P = 0.47$ ). Thirteen patients (52%) met criteria for partial response, of which 11 patients (44%) showed complete response. Furthermore, higher number of failed medication trials was found to be significantly associated with greater chances of nonresponse to rTMS treatment.

**CONCLUSIONS:** There is a role of applying LF-rTMS over Lt-OFC as an augmentation strategy in ameliorating clinical symptoms among patients with medication-refractory OCD.

75: Kumar V, Gupta K, Soneja M, Biswas A. Intravenous immunoglobulin for severe thrombocytopenia in secondary dengue. *BMJ Case Rep.* 2018 Jun 27;2018. pii: bcr-2018-224542. doi: 10.1136/bcr-2018-224542. PubMed PMID: 29950498.

A 30-year-old woman with severe dengue presented on the sixth day of her illness with life-threatening thrombocytopenia, refractory to multiple platelet transfusions. Dengue IgM antibody and the non-structural-1 antigen tests as of day 3 were negative. The IgG antibody against the same was positive, suggesting a past episode of dengue. Since she had a history of menorrhagia prior to the current illness, a working diagnosis of idiopathic thrombocytopenic purpura was made, for which intravenous immunoglobulin (IVIg) was administered that led to a rapid rise in the platelet count with no adverse events. Subsequently, dengue IgM antibody repeated on day 6 came back positive, confirming dengue. This case report re-emphasises the potential use of IVIg in patients with severe thrombocytopenia in dengue.

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76: Kumar V, Kumawat D, Dhakal S. Leukemic retinopathy and foveal infiltrates. *Int Ophthalmol.* 2018 Jun;38(3):1301-1303. doi: 10.1007/s10792-017-0562-y. Epub 2017 May 19. PubMed PMID: 28527028.

The authors describe leukemic retinopathy with foveal leukemic infiltrates as the presenting feature of chronic myeloid leukemia. Spectral domain optical coherence tomography (SD-OCT) features of leukemic foveal infiltrates are presented. Though the retinopathy resolved with remission of disease, visual recovery was not complete due to loss of ellipsoid zone on SD-OCT.

77: Kusuma YS, Kaushal S, Garg R, Babu BV. Birth preparedness and determinants of birth place among migrants living in slums and slum-like pockets in Delhi, India. *Sex Reprod Healthc.* 2018 Jun;16:160-166. doi: 10.1016/j.srhc.2018.04.004. Epub 2018 Apr 9. PubMed PMID: 29804761.

**OBJECTIVE:** The objective of this paper is to report birth preparedness and place of birth and its determinants among recent- and settled- migrant households living in slums of Delhi.

**METHODS:** In a cross-sectional survey, 458 migrant mothers with a child aged below one year of age were identified. Socio-demographic details, data on the place of childbirth, antenatal care (ANC) and birth preparedness in terms of planning for home birth or hospital birth, transport, saving money, knowledge of danger signs

were collected through interviewer-administered pretested questionnaire. Logistic regression was carried out for the determinants of hospital birth.

**RESULTS:** The present study migrants are characterised by younger ages, low educational attainment, low incomes and represented by socioeconomically disadvantaged communities. They mainly relied on government healthcare services for maternal care. ANC seeking was not satisfactory with 16% of women with no ANC; 46% receiving 1-3 visits; and only 23% of women reported health worker visited them at home. 59% of the births took place at hospitals. Having ANC visits (Adjusted Odds Ratio (AOR) for having 4 or more ANC visits=5.252), planning for hospital birth (AOR=6.114), plan for transport (AOR=1.989), mass media exposure (listening to radio; AOR=2.871) and knowledge of danger signs (AOR=3.872) resulted in significant chances of hospital birth.

**CONCLUSION:** Migrant women are at the risk of utilizing the services to a less extent. The health systems need to take measures to mitigate the disadvantage due to migration through specific strategies to make them inclusive and outreach to the poor migrants.

78: Lohchab M, Prakash G, Arora T, Maharana P, Jhanji V, Sharma N, Vajpayee RB. Surgical management of peripheral corneal thinning disorders. *Surv Ophthalmol*. 2018 Jun 8. pii: S0039-6257(18)30049-3. doi: 10.1016/j.survophthal.2018.06.002. [Epub ahead of print] Review. PubMed PMID: 29886126.

The peripheral corneal thinning disorders are associated with degenerative, autoimmune, or infective causes. Corneal thinning can subsequently affect the visual acuity either by inducing severe astigmatism or by progressive involvement of the central cornea. In addition to this, the integrity of the eye is at risk. Medical management is necessary to address the underlying inflammatory or infectious causes; however, most of the cases require surgical intervention for tectonic support or for visual rehabilitation in patients with severe astigmatism. Preoperative investigations help in mapping the corneal curvature and thickness, thereby facilitating planning of treatment. Routine corneal transplantation techniques do not yield good results in peripheral corneal thinning disorders. Various surgical modifications have been described to manage these challenging cases. We review the available literature on causes and management of peripheral corneal thinning disorders.

79: Magoon R, Malik V, Choudhury A, Chauhan S, Hote MP, Ramakrishnan S, Singh V. A Comparison of the Strain and Tissue Doppler-Based Indices as Echocardiographic Correlates of the Left Ventricular Filling Pressures. *J Cardiothorac Vasc Anesth*. 2018 Jun;32(3):1297-1304. doi: 10.1053/j.jvca.2017.11.047. Epub 2017 Nov 28. PubMed PMID: 29290381.

**OBJECTIVES:** Diastolic strain and strain rate, combined with E (peak transmitral velocity), have been proposed as novel noninvasive predictors of left ventricle (LV) filling pressures, avoiding angulation errors inherent to tissue Doppler indices (TDI). The primary objective was to study the correlation of strain-based indices (SBI) and TDI with pulmonary artery catheter-derived LV end-diastolic pressures (LVEDP). The secondary aim was to determine appropriate cut-off of indices to predict LVEDP  $\geq 15$  mmHg.

**DESIGN:** A prospective observational clinical study.

**SETTING:** Single university hospital.

**PARTICIPANTS:** One hundred twenty adults with preserved ejection fraction (EF) undergoing coronary artery bypass grafting.

**INTERVENTIONS:** None.

**MEASUREMENTS AND MAIN RESULTS:** Two-dimensional speckle-tracking echocardiography estimated global longitudinal diastolic strain (Ds) and strain rate (DSr) at peak mitral filling to compute E/Ds and E/10DSr. TDI was measured as the ratio of E

and  $e'$  (mitral annular diastolic velocity).  $E/e'$ ,  $E/Ds$ , and  $E/10DSr$  were significantly higher ( $p < 0.001$ ) in patients with LVEDP  $\geq 15$  mm Hg (31/120). Correlation of  $E/Ds$ ,  $E/10DSr$  with LVEDP was  $R = 0.86$  and  $0.88$  ( $p < 0.001$ ), respectively, compared with a correlation of  $R = 0.63$  ( $p < 0.001$ ) for  $E/e'$ . SBI correlated well with LVEDP  $\geq 15$  mm Hg compared with TDI.  $E/Ds \geq 11$  and  $E/10DSr \geq 12$  had higher sensitivity and specificity (96.77%, 93.26%; 100%, 96.63%, respectively; area under the curve [AUC] = 0.99) than  $E/e' \geq 13$  (74%, 75%; AUC = 0.84) for prediction of LVEDP  $\geq 15$  mmHg. SBI accurately predicted elevated LVEDP in the indeterminate zone of  $8 < E/e' < 13$ .

CONCLUSIONS: SBI were better predictors of LVEDP, compared with TDI, in patients with preserved EF and indeterminate  $E/e'$  values.

80: Mahajan S, Agarwal S, Kocheri N, Jain D, Mathur SR, Iyer VK. Cytopathology of non-invasive follicular thyroid neoplasm with papillary-like nuclear features: A comparative study with similar patterned papillary thyroid carcinoma variants. *Cytopathology*. 2018 Jun;29(3):233-240. doi: 10.1111/cyt.12537. Epub 2018 Apr 11. PubMed PMID: 29638022.

OBJECTIVE: Noninvasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP) is a recently described, indolent thyroid tumor, with well-defined histopathological diagnostic criteria. Cytology features are not well documented. We reviewed cytology of histologically proven cases of NIFTP and some of its common differentials to look for salient diagnostic features.

METHODS: Cases reported on histopathology as follicular variant of papillary thyroid carcinoma (FVPTC), or NIFTP between July 2015 and April 2017 having available cytology smears were retrieved and reclassified as NIFTP, FVPTC, and classical papillary thyroid carcinoma with predominant follicular pattern (PTC-FP). Cytological features were assessed, classified as per The Bethesda System for Reporting Cytopathology and compared.

RESULTS: There were 23 NIFTP cases, 18 FVPTC and 8 PTC-FP. A microfollicle-predominant pattern was seen in all. Nuclear score was 2 in most NIFTP cases (61%). Pseudoinclusions were absent. NIFTP showed features of atypia of undetermined significance/follicular lesion of undetermined significance (AUS/FLUS) (III) in 61%, follicular neoplasm/suspicious for a follicular neoplasm (FN/SFN) (IV) in 35% and suspicious for malignancy (SFM) (V) in 4%. Most of the FVPTCs were also called FN/SFN (IV) (56%) or AUS/FLUS (III) (22%). Nuclear features did not statistically differ from NIFTP. PTC-FP showed high-grade cytology in 75%, and higher nuclear score (3 in 75%) in contrast to NIFTP ( $P = .003$ ).

CONCLUSION: NIFTP and FVPTC show a similar distribution among the Bethesda categories hence precluding conclusive distinction on cytology. PTC-FP, in contrast, was found to have a statistically significant higher nuclear score and more commonly showed malignant cytology.

81: Mahapatra A, Sharma P. Association of Internet addiction and alexithymia - A scoping review. *Addict Behav*. 2018 Jun;81:175-182. doi: 10.1016/j.addbeh.2018.02.004. Epub 2018 Feb 6. Review. PubMed PMID: 29429757.

It has been hypothesized that individuals with alexithymia who have difficulty in identifying, expressing, and communicating emotions may overuse Internet as a tool of social interaction to better regulate their emotions and to fulfill their unmet social needs. Similarly, an increasing body of evidence suggests that alexithymia may also play an essential role in the etiopathogenesis of addictive disorders. We conducted a scoping review of questionnaire-based studies of problematic Internet use/Internet addiction and alexithymia. From initial 51 studies, all of the final 12 included studies demonstrated a significant positive association between scores of alexithymia and severity of Internet addiction. However, the causal direction of the association is not clear because the

interplay of numerous other variables that could affect the relation has not been studied. There are limitations in the methodology of the studies conducted. Hence, we emphasise the need for longitudinal studies with stronger methodologies.

82: Maharana PK, Sahay P, Sen S, Venugopal R, Titiyal JS, Sharma N. Corneal Ectasia in Stevens-Johnson Syndrome: A Sequela of Chronic Disease. *Am J Ophthalmol*. 2018 Sep;193:1-9. doi: 10.1016/j.ajo.2018.05.030. Epub 2018 Jun 8. PubMed PMID: 29890163.

**PURPOSE:** To describe corneal ectasia in cases of chronic Stevens-Johnson syndrome (SJS).

**DESIGN:** Prospective observational study.

**METHODS:** Setting: Institutional.

**PATIENTS:** Fifteen consecutive cases of chronic SJS.

**MAIN OUTCOME MEASURES:** Best-corrected distance visual acuity (BCDVA), maximum corneal curvature (Kmax), anterior elevation, posterior elevation, thinnest pachymetry, and Sotozono severity score.

**RESULTS:** Thirty eyes of 15 patients were included. Corneal tomography using Scheimpflug technology (Pentacam-HR, Oculus GmbH) was performed. Nine eyes were excluded owing to poor-quality scans. The median age was 26 years. The median time from onset of disease to assessment for corneal ectasia was 7 years. The median BCDVA was 0.8 logMAR units at presentation. The median Sotozono severity score was 11. Corneal ectasia (Kmax > 48 diopters [D]) was noted in 76.2% of eyes. The mean Kmax was  $58.37 \pm 14.89$  D. On Belin/Ambrosio enhanced ectasia display the median front and back elevation was 42  $\mu\text{m}$  (10-176  $\mu\text{m}$ ) and 267  $\mu\text{m}$  (15-2392  $\mu\text{m}$ ), respectively. The mean pachymetry was  $377.76 \pm 165.05$   $\mu\text{m}$  (133-448  $\mu\text{m}$ ). The point of maximum ectasia was peripheral in 57.1%, both central and peripheral in 19.1%, and central in 23.8% of eyes. On Spearman correlation analysis, deterioration in BCDVA ( $R = 0.759$ ,  $P < .001$ ) and increase in Kmax ( $R = 0.589$ ,  $P = .005$ ) was associated with higher disease severity (Sotozono grading). **CONCLUSION:** Corneal ectasia is a common but often missed entity in cases of chronic SJS that may be a cause for poor visual acuity in these cases. All cases of SJS must be evaluated for corneal ectasia, especially when the visual acuity is disproportionate to the disease severity

83: Maharana PK, Chhablani JK, Das TP, Kumar A, Sharma N. All India Ophthalmological Society members survey results: Cataract surgery antibiotic prophylaxis current practice pattern 2017. *Indian J Ophthalmol*. 2018 Jun;66(6):820-824. doi: 10.4103/ijo.IJO\_1336\_17. PubMed PMID: 29785991; PubMed Central PMCID: PMC5989505.

**Purpose:** The purpose of this article is to document the current practice pattern of Indian ophthalmologists for antibiotic prophylaxis in cataract surgery to prevent endophthalmitis.

**Methods:** Fifteen structured questions were sent online to all ophthalmologists registered with the All India Ophthalmological Society. The questionnaire was divided into three main categories of prophylaxis - preoperative, intraoperative, and postoperative. A web-based anonymous survey was conducted, and a unique response link allowed completing the survey only once. We compared the results with a similar 2014 survey among the members of the American Society of Cataract and Refractive Surgeons (ASCRS).

**Results:** The response was received from 30.2% ( $n = 4292/14,170$ ) ophthalmologists. The results were as follows: all respondents do not prepare the eye with 5% povidone-iodine (83% of them use povidone iodine), majority (90%) use topical antibiotic both pre- and post-operatively, 46% use subconjunctival antibiotic at the end of surgery, and 40% use intracameral antibiotic (46% of them in high-risk patients only). Moxifloxacin was the preferred antibiotic for topical and

intracameral use. Comparison with the 2014 ASCRS survey results showed a similarity in decision for pre- and post-operative antibiotics and intracameral antibiotic but dissimilarity in the choice of intracameral antibiotic and decision for subconjunctival antibiotic.

Conclusion: The antibiotic prophylaxis practice by the Indian ophthalmologists is not too dissimilar from the practice in North American Ophthalmologists (ASCRS) though all ophthalmologists in India must be nudged to preoperative preparation of the eye with povidone-iodine and discontinue the practice of postoperative subconjunctival and systemic antibiotic.

84: Malhi P, Kaur A, Singhi P, Sankhyan N. Sleep Dysfunction and Behavioral Daytime Problems in Children with Autism Spectrum Disorders: A Comparative Study. *Indian J Pediatr.* 2018 Jun 28. doi: 10.1007/s12098-018-2731-z. [Epub ahead of print] PubMed PMID: 29951780.

**OBJECTIVES:** To compare parent reported sleep behaviors of children with Autism Spectrum Disorders (ASD) and normal healthy controls and to examine the association of sleep disturbances with daytime behavioral difficulties in children with ASD.

**METHODS:** Sixty ASD children (85% boys) (Mean age=6.1 y, SD=2.4) were recruited from the Psychology unit of the Department of Pediatrics of a tertiary care hospital. An age and socio-economic status matched group of typically developing (TD) children (N=60) were also recruited. The Children's Sleep Habits Questionnaire (CSHQ) was used to measure sleep problems. The Childhood Psychopathology Measurement Schedule was used to measure day time behavioral difficulties.

**RESULTS:** Sleep problems were nearly two times more prevalent among children with ASD (88.3%) as compared to the TD group (46.7%) ( $\chi^2=23.74$ ,  $P=0.0001$ ). The total CSHQ and 6 out of the 8 subscales scores of the ASD group were also significantly higher than the TD group. Overall, children with ASD displayed significant more bedtime resistance than controls ( $t= 3.95$ ,  $P=0.001$ ). The sleep duration subscale showed that children with ASD, relative to the TD group, slept too little ( $\chi^2=23.08$ ,  $P=0.0001$ ), did not sleep the right amount of time ( $\chi^2= 11.86$ ,  $P=0.003$ ), and displayed significant variation in the duration of time slept ( $\chi^2=11.96$ ,  $P=0.003$ ). In addition, parent reported sleep dysfunction had a significant relationship with daytime reported behavior difficulties ( $r=0.53$ ,  $P=0.01$ ) in children with ASD. Stepwise multiple regression analysis revealed that 30% of the variance in number of daytime behavioral problems was explained by only two variables: total CSHQ scores and duration of night awake time ( $F=11.18$ ,  $P=0.001$ ).

**CONCLUSIONS:** Children with ASD are at a high risk for sleep problems and this is associated with daytime behavior disturbances. Pediatricians should routinely screen ASD children for sleep problems and initiate timely and appropriate interventions.

85: Malhotra R, Jain VK, Gautam D. Distal tibial metaphyseal allograft cone for proximal tibial bone loss in revision knee arthroplasty - A novel technique. *J Orthop.* 2018 May 7;15(2):610-614. doi: 10.1016/j.jor.2018.05.026. eCollection 2018 Jun. PubMed PMID: 29881205; PubMed Central PMCID: PMC5990296.

Large bone defects in femur or tibia are common at the setting of revision knee arthroplasty. Filling up the defect remains a challenging problem to the orthopaedic surgeons. A variety of options are available to fill up these defects depending upon the type of defect. We report a case of large contained defect in proximal tibia managed with distal tibial metaphyseal allograft cone. We also discuss the operative details and the advantages of using the allograft.

86: Mallick S, Kunhiparambath H, Gupta S, Benson R, Sharma S, Laviraj MA,



Upadhyay AD, Julka PK, Sharma D, Rath GK. Hypofractionated accelerated radiotherapy (HART) with concurrent and adjuvant temozolomide in newly diagnosed glioblastoma: a phase II randomized trial (HART-GBM trial). *J Neurooncol*. 2018 Oct;140(1):75-82. doi: 10.1007/s11060-018-2932-3. Epub 2018 Jun 23. PubMed PMID: 29936695.

**INTRODUCTION:** Maximal safe surgical resection followed by adjuvant chemoradiation has been standard for newly diagnosed glioblastoma multiforme (GBM). Hypofractionated accelerated radiotherapy (HART) has the potential to improve outcome as it reduces the overall treatment time and increases the biological effective dose.

**METHODS:** Between October 2011 and July 2017, a total of 89 newly diagnosed GBM patients were randomized to conventional fractionated radiotherapy (CRT) or HART. Radiotherapy was delivered in all patients with a three-dimensional conformal radiotherapy technique in CRT arm (60 Gy in 30 fractions over 6 weeks @ 2 Gy/per fraction) or simultaneous integrated boost intensity modulated radiotherapy in HART arm (60 Gy in 20 fractions over 4 weeks @ 3 Gy/per fraction to high-risk planning target volume (PTV) and 50 Gy in 20 fractions over 4 weeks @ 2.5 Gy/per fraction to low-risk PTV). The primary endpoint of the trial was overall survival (OS).

**RESULTS:** After a median follow-up of 11.4 months (Range: 2.9-42.5 months), 26 patients died and 39 patients had progression of the disease. Median OS for the entire cohort was 23.4 months. Median OS in the CRT and HART arms were 18.07 months (95% CI 14.52-NR) and 25.18 months (95% CI 12.89-NR) respectively,  $p=0.3$ . Median progression free survival (PFS) for the entire cohort was 13.5 months (Range: 11.7-15.7 months). In multivariate analysis patients younger than 40 years of age, patients with a gross total resection of tumor and a mutated IDH-1 had significantly better OS. PFS was significantly better for patients with a gross total resection of tumor and a mutated IDH-1. All patients included in the trial completed the planned course of radiation. Only two patients required hospital admission for features of raised intracranial tension. One patient in the HART arm required treatment interruption.

**CONCLUSION:** HART is comparable to CRT in terms of survival outcome. HART arm had no excess treatment interruption and minimal toxicity. Dose escalation, reduction in overall treatment time, is the advantages with use of HART.

87: Mallick S, Benson R, Melgandi W, Giridhar P, Rath GK. Impact of surgery, adjuvant treatment, and other prognostic factors in the management of anaplastic ganglioglioma. *Childs Nerv Syst*. 2018 Jun;34(6):1207-1213. doi: 10.1007/s00381-018-3780-3. Epub 2018 Mar 29. PubMed PMID: 29594461.

**BACKGROUND/PURPOSE:** Anaplastic ganglioglioma (AGG) is a rare tumor with both glial and neuronal component accounting for less than 1% of all CNS tumors with limited information about the optimum treatment and outcome of these tumors.

**METHOD AND MATERIALS:** We did a thorough search of the PubMed with the following Mesh terms: "Ganglioglioma; Anaplastic ganglioglioma; Ganglioglioma AND treatment; and Anaplastic ganglioglioma AND survival" to find all possible publications related to AGG to perform an individual patient data analysis and derive the survival outcome and optimum treatment of these tumors.

**RESULTS:** A total of 56 articles were retrieved pertaining to AGG with 88 patients. However, a total of 40 publications found eligible with 69 patients for individual patient data analysis. Median age for the entire cohort was 16 years (range 0.2-77 years). Surgical details were available for 64 patients. A gross total or near total resection was reported in 21 cases (32.8%), subtotal resection or debulking was reported in 25 cases (39.1%). Surgical details were available for 64 patients. A gross total or near total resection was reported in 21 cases (32.8%), and subtotal resection or debulking was reported in 25 cases (39.1%). Median overall survival (OS) was 29 months [95% CI 15.8-42.2 months]

with 2- and 5-year OS 61 and 39.4% respectively.

**CONCLUSION:** AGG is associated with a dismal. Pediatric age and a gross total resection of tumor confer a better progression-free survival and OS. Hence, surgery should remain the cornerstone of therapy. However, because of modest survival, there is enough opportunity to improve survival with addition of adjuvant radiation and chemotherapy. A whole genome sequencing and molecular characterization would help to derive the best treatment option.

88: Mankotia DS, Sawarkar DP, Singh PK, Kumar A, Verma SK, Chandra PS, Kale SS. Rare Case of Cerebrospinal Fluid Proctorrhea Caused by Anterior Sacral Meningocele with Rectothecal Fistula. *World Neurosurg.* 2018 Jun;114:323-325. doi: 10.1016/j.wneu.2018.03.087. Epub 2018 Mar 20. Review. PubMed PMID: 29572171.

**BACKGROUND:** Anterior sacral meningocele (ASM) leading to secondary rectothecal fistula is extremely rare, and to date only 5 such cases have been described in the world literature.

**CASE DESCRIPTION:** We describe an uncomplicated case of a 52-year-old female patient presenting with cerebrospinal fluid leak from the anus who was investigated and found to have an ASM with rectothecal fistula. The ASM and rectothecal fistula were subsequently repaired using a posterior approach. Pertinent literature review, clinical findings, neuroimaging, and surgical management are described for these rare lesions.

**CONCLUSION:** Early diagnosis and surgical disconnection of the fistulous tract led to satisfactory outcome in the present case and avoided the catastrophic complication of meningitis.

89: Marik B, Bagga A, Sinha A, Hari P, Sharma A. Genetics of Refractory Rickets: Identification of Novel PHEX Mutations in Indian Patients and a Literature Update. *J Pediatr Genet.* 2018 Jun;7(2):47-59. doi: 10.1055/s-0038-1624577. Epub 2018 Jan 28. Review. PubMed PMID: 29707405; PubMed Central PMCID: PMC5916800.

Refractory rickets is a genetic disorder that cannot be treated by vitamin D supplementation and adequate dietary calcium and phosphorus. Hereditary hypophosphatemic rickets is one of the major forms of refractory rickets in Indian children and caused due to mutations in the PHEX, FGF23, DMP1, ENPP1, and SLC34A3 genes. This is the first study in India on a large number of patients reporting on mutational screening of the PHEX gene. Direct sequencing in 37 patients with refractory rickets revealed eight mutations in 13 patients of which 1 was nonsense, 2 were deletions, 1 was a deletion-insertion, and 4 were missense mutations. Of these mutations, four (c.566\_567 delAG, c.651\_654delACAT, c.1337delinsAATAA, and c.2048T>A) were novel mutations. This article discusses the mutations in Indian patients, collates information on the genetic causes of refractory rickets, and emphasizes the significance of genetic testing for precise diagnosis, timely treatment, and management of the condition, especially in developing countries.

90: Misra S, Talwar P, Kumar A, Kumar P, Sagar R, Vibha D, Pandit AK, Gulati A, Kushwaha S, Prasad K. Association between matrix metalloproteinase family gene polymorphisms and risk of ischemic stroke: A systematic review and meta-analysis of 29 studies. *Gene.* 2018 Sep 25;672:180-194. doi: 10.1016/j.gene.2018.06.027. Epub 2018 Jun 12. Review. PubMed PMID: 29906531.

**BACKGROUND:** Ischemic stroke (IS) is a complex and devastating vascular disease that has become one of the leading causes of disability and mortality worldwide. Several studies have shown the association between matrix metalloproteinase (MMP) family gene polymorphisms and IS. However, the results have been indecisive.

**OBJECTIVE:** To investigate the association between Matrix Metalloproteinase gene polymorphisms and risk of IS.

**METHODS:** A literature search for eligible candidate gene studies published before, 28 June 2017, was conducted in the PubMed, EMBASE, Cochrane and Google Scholar databases. The following combinations of main keywords were used: ('Matrix Metalloproteinase' or 'MMP' or 'Stromelysin-1' or 'Gelatinase b') AND ('ischemic stroke' or 'IS') AND ('single nucleotide polymorphism' or 'gene polymorphism' or 'SNP'). Fixed or random effects models were used to estimate the Pooled Odds ratio (OR) and 95% confidence interval (CI). Statistical analysis was carried out by using STATA version 13.0 software.

**RESULTS:** Total 29 studies were included in our meta-analysis. A significant association was observed for MMP-9 (-1562C/T) (OR 1.27; 95% CI 1.06 to 1.53; p value=0.01) and MMP-12 (-1082 A/G) (OR 2.55; 95% CI 1.75 to 3.71; p value<0.001) gene polymorphisms and risk of IS. No significant association was found for any of the MMP-1(-1607 1G/2G), MMP-2 (-1306C/T) & (-735C/T) and MMP-3 (-1612 5A/6A) gene polymorphisms with the risk of IS.

**CONCLUSION:** Our meta-analysis suggests that MMP-9 (-1562C/T) and MMP-12 (-1082 A/G) gene polymorphisms could be a risk factor for IS while MMP-1 (-1607 1G/2G), MMP-2 (-1306C/T) & (-735C/T) and MMP-3 (-1612 5A/6A) have no association with the risk of causing IS. However, large prospective studies with sufficient power are required to validate our findings.

91: Mittal R, Kumar A, Singh DP, Bishnoi M, Nag TC. Ameliorative potential of rutin in combination with nimesulide in STZ model of diabetic neuropathy: targeting Nrf2/HO-1/NF- $\kappa$ B and COX signalling pathway. *Inflammopharmacology*. 2018 Jun;26(3):755-768. doi: 10.1007/s10787-017-0413-5. Epub 2017 Nov 1. PubMed PMID: 29094308.

Emerging role of Nrf-2/HO-1 in pathogenesis of diabetic neuropathy has been suggested. Diabetic neuropathy is one of the most common complications of diabetes and more than 50% patients of diabetes develop diabetic neuropathy. Rutin has been well documented to show protective effect in various complications, e.g., diabetic neuropathy. However, its mechanistic insight is still not completely understood. The present study has been designed to explore the protective effect of rutin and its interaction with COX-2 inhibitor, nimesulide in diabetic neuropathy. DN (diabetic neuropathy) rats were maintained with or without rutin (100 and 200 mg/kg), nimesulide (5 and 10 mg/kg), and their combinations for 8 weeks. Body weight, serum glucose, pain assessment (mechanical allodynia, cold allodynia, mechanical hyperalgesia, and thermal hyperalgesia), and motor nerve conduction velocity (MNCV) were measured in all groups. Oxidative damage was assessed through biochemical estimation and mitochondrial ROS production, followed by inflammatory and apoptotic markers (TNF- $\alpha$ , caspase-3, Nrf-2, HO-1, and NF- $\kappa$ Bp65) for their activity, protein, and gene expression. The structural changes were also reported through transmission electron microscope. Streptozotocin injection (55 mg/kg) induced diabetes reduced body weight, reduced the threshold for pain in various pain assessment parameters. Oxidative damage (increased MDA, decreased SOD, catalase, and GSH levels) increased mitochondrial ROS production followed by increased expression of inflammatory markers and decreased expression of Nrf-2/HO-1 in sciatic nerve. Treatment with rutin (100 and 200 mg/kg) and nimesulide (5 and 10 mg/kg) significantly attenuates these alterations as compared to DN control rats. Furthermore, combination of rutin (200 mg/kg) and nimesulide (10 mg/kg) significantly potentiated their protective effect which was significant as compared to their effect alone in streptozotocin-treated rats. The present study suggests the involvement of Nrf-2/HO-1 pathway in the protective effect of rutin against streptozotocin-induced diabetic neuropathy.

92: Mittal S, Mohan A, Madan K. Difficult intubation: 'Beyond the vocal cords'. *Indian J Anaesth*. 2018 Jun;62(6):476-477. doi: 10.4103/ija.IJA\_87\_18. PubMed PMID: 29962534; PubMed Central PMCID: PMC6004759.

93: Mourão LC, Baptista RP, de Almeida ZB, Grynberg P, Pucci MM, Castro-Gomes T, Fontes CJF, Rathore S, Sharma YD, da Silva-Pereira RA, Bemquerer MP, Braga AM. Anti-band 3 and anti-spectrin antibodies are increased in Plasmodium vivax infection and are associated with anemia. *Sci Rep.* 2018 Jun 8;8(1):8762. doi: 10.1038/s41598-018-27109-6. PubMed PMID: 29884876; PubMed Central PMCID: PMC5993813.

Clearance of non-infected red blood cells (nRBCs) is one of the main components of anemia associated with Plasmodium vivax malaria. Recently, we have shown that anemic patients with P. vivax infection had elevated levels of anti-RBCs antibodies, which could enhance in vitro phagocytosis of nRBCs and decrease their deformability. Using immunoproteomics, here we characterized erythrocytic antigens that are differentially recognized by autoantibodies from anemic and non-anemic patients with acute vivax malaria. Protein spots exclusively recognized by anemic P. vivax-infected patients were identified by mass spectrometry revealing band 3 and spectrin as the main targets. To confirm this finding, antibody responses against these specific proteins were assessed by ELISA. In addition, an inverse association between hemoglobin and anti-band 3 or anti-spectrin antibodies levels was found. Anemic patients had higher levels of IgG against both band 3 and spectrin than the non-anemic ones. To determine if these autoantibodies were elicited because of molecular mimicry, we used in silico analysis and identified P. vivax proteins that share homology with human RBC proteins such as spectrin, suggesting that infection drives autoimmune responses. These findings suggest that band 3 and spectrin are potential targets of autoantibodies that may be relevant for P. vivax malaria-associated anemia.

94: Muhammad Aslam MK, Sharma VK, Pandey S, Kumaresan A, Srinivasan A, Datta TK, Mohanty TK, Yadav S. Identification of biomarker candidates for fertility in spermatozoa of crossbred bulls through comparative proteomics. *Theriogenology.* 2018 Oct 1;119:43-51. doi: 10.1016/j.theriogenology.2018.06.021. Epub 2018 Jun 27. PubMed PMID: 29982135.

Associations between expression of some proteins in spermatozoa and fertility have been sought in recent years to identify the male fertility markers. Since the incidence of sub-fertility is high in crossbred bulls, the present investigation was carried out on high- and low-fertile crossbred bulls to identify fertility markers in spermatozoa through proteomics approach. Sperm proteome of high-fertile bulls were compared with low-fertile bulls using 2D-DIGE and MALDI-TOF-MS techniques and the results were validated with immuno-blotting. The proteins MDH2, ENO1, RIBC1, CAPN7, ATP5D, LacA like protein-2 like, NCAPD3, DECR1, GCNT2, GDI2, TOP and USP12 were over expressed in high-fertile spermatozoa, whereas DST like isoform 1, TMEM43 and BSP1 were over expressed in low-fertile spermatozoa ( $P < 0.05$ ). The differential expression ranged from 1.57 (GDI2) to 5.1 (BSP1) fold between the two groups. Based on the GO annotation, majority of them were involved in cellular and metabolic processes, with catalytic and binding activities, and localized in cell and organelles. Among these proteins, ENO1 and BSP1 were selected based on the degree of differential expression and reliability in identification, for further validation. Immuno-blotting studies indicated that ENO1 expression was positively correlated ( $P < 0.05$ ) while the expression of BSP1 was negatively ( $P < 0.01$ ) correlated with bull fertility. The proportion of capacitated spermatozoa in frozen thawed spermatozoa of low-fertile bulls was higher ( $P < 0.05$ ) as compared to high-fertile bulls. Collectively, the study identified some potential molecules in spermatozoa of bulls, which may act as a panel of biomarkers for fertility.

95: Nagori SA, Roy Chowdhury SK, Thukral H, Jose A, Roychoudhury A. Single puncture versus standard double needle arthrocentesis for the management of temporomandibular joint disorders: A systematic review. *J Oral Rehabil.* 2018 Oct;45(10):810-818. doi: 10.1111/joor.12665. Epub 2018 Jun 22. Review. PubMed PMID: 29889989.

The aim of this systematic review was to investigate the current evidence in order to assess the efficacy of single puncture arthrocentesis vs standard double needle arthrocentesis in the management of temporomandibular joint (TMJ) disorders. An electronic search of the PubMed, Scopus, Cochrane CENTRAL and Google Scholar databases was performed to identify English studies published up until October 2017. Eligible studies were selected based on inclusion criteria and included randomised controlled trials (RCTs) comparing single puncture arthrocentesis and standard double needle arthrocentesis for the management of TMJ disorders. The initial screening identified 984 records, of which only 5 fulfilled the inclusion criteria. A high degree of heterogeneity was found in the 5 studies with each reporting different sample selection and arthrocentesis protocol. All 5 studies reported no difference in reduction in pain intensity and improvement in maximal mouth opening between the single puncture technique and standard double needle technique. This review provides some evidence that single puncture arthrocentesis is clinically as efficacious as standard double needle arthrocentesis. There is a need of well-designed RCT with standard protocol of arthrocentesis comparing different single puncture techniques and standard double needle technique for the management of TMJ disorders.

96: Naik RD, Gupta K, Soneja M, Elavarasi A, Sreenivas V, Sinha S. Sleep Quality and Quantity in Intensive Care Unit Patients: A Cross-sectional Study. *Indian J Crit Care Med.* 2018 Jun;22(6):408-414. doi: 10.4103/ijccm.IJCCM\_65\_18. PubMed PMID: 29962740; PubMed Central PMCID: PMC6020640.

**Introduction:** Lack of restorative sleep and altered sleep-wake cycle is a frequent problem among patients admitted to the Intensive Care Unit (ICU). This study was conducted to estimate the prevalence of poor sleep and patient's perspective of factors governing poor sleep in the ICU.

**Materials and Methods:** A cross-sectional study was performed in medical ICU of a tertiary care hospital. A total of 32 patients admitted to the ICU for at least 24 h were recruited. A 72-h actigraphy was done followed by a subjective assessment of sleep quality by the Richards-Campbell Sleep Questionnaire (RCSQ). Patient's perspective of sleep quality and quantity and possible risk factors for poor sleep were recorded.

**Results:** Poor sleep (defined as RCSQ <50, sensitivity 88% and specificity 87%) was found in 15 out of the 32 patients (47%). The prevalence of poor sleep was higher among patients on mechanical ventilation (n = 15) (66.7% vs. 33.3%, P < 0.05). Patients with poor sleep had higher age (median age [in years] 42.8 vs. 31.4, P = 0.008), acute physiology, and chronic health evaluation II score (mean 14 ± 5.15 vs. 9.3 ± 5.64, P = 0.02), SAPS 3 score (62.7 ± 8.9 vs. 45.6 ± 10.5, P ≤ 0.0001), and worse actigraphy parameters. Only 55.63% of total sleep time was in the night (2200-0600). All patients had discomfort from indwelling catheters and suctioning of endotracheal tubes. All patients suggested that there be a minimum interruption in the sleep for interventions or medications.

**Conclusion:** There is a high prevalence of poor sleep among patients admitted to the ICU. There is a dire need to minimize untimely interventions and design nonpharmacological techniques to allow patients to sleep comfortably.

97: Nambirajan A, Sashidharan A, Garg A, Dash D, Bhatia R, Sharma MC, Mathur SR. Cytological diagnosis of cerebrotendinous xanthomatosis in two siblings presenting with bilateral ankle swellings and neurological decline. *Cytopathology.* 2018 Oct;29(5):482-485. doi: 10.1111/cyt.12573. Epub 2018 Jun 14.

PubMed PMID: 29737592.

98: Nandini B, Mooventhan A, Manjunath NK. Add-on Effect Of Hot Sand Fomentation To Yoga On Pain, Disability, And Quality Of Life In Chronic Neck Pain Patients. *Explore (NY)*. 2018 Jun 28. pii: S1550-8307(17)30363-4. doi: 10.1016/j.explore.2018.01.002. [Epub ahead of print] PubMed PMID: 30100129.

**BACKGROUND:** Neck pain is one of the commonest complaints and an important public health problem across the globe. Yoga has reported to be useful for neck pain and hot sand has reported to be useful for chronic rheumatism. The present study was conducted to evaluate the add-on effect of hot sand fomentation (HSF) to yoga on pain, disability, quality of sleep (QOS) and quality of life (QOL) of the patients with non-specific neck pain.

**MATERIALS AND METHODS:** A total of 60 subjects with non-specific or common neck pain were recruited and randomly divided into either study group or control group. Both the groups have received yoga and sesame seed oil (*Sesamum Indicum* L.) application. In addition to yoga and sesame seed oil, study group received HSF for 15 min per day for 5-days. Assessments were taken prior to and after the intervention.

**RESULTS:** Results of the study showed a significant reduction in the scores of visual analogue scale for pain, neck disability index (NDI), The Pittsburgh Sleep Quality Index (PSQI), and a significant increase in physical function, physical health, emotional problem, pain, and general health both in study and control groups. However, reductions in pain and NDI along with improvement in social functions were better in the study group as compared with control group.

**CONCLUSION:** Results of this study suggest that addition of HSF to yoga provides a better reduction in pain and disability along with improvement in the social functioning of the patients with non-specific neck pain than yoga alone.

99: Natrajan S, Singh AR, Shewade HD, Verma M, Bali S. Pre-diagnosis attrition in patients with presumptive MDR-TB in Bhopal, India, 2015: a follow-up study. *Public Health Action*. 2018 Jun 21;8(2):95-96. doi: 10.5588/pha.18.0015. PubMed PMID: 29946527; PubMed Central PMCID: PMC6012967.

100: Noopur G, Praveen V, Radhika T, Sanjeev K G, Mani K, Deepak K. Attitudes and Perception Towards Eye Donation in Patients with Corneal Disease: A Case-controlled Population-based Study. *Curr Eye Res*. 2018 Jun;43(6):734-739. doi: 10.1080/02713683.2018.1449221. Epub 2018 Apr 13. PubMed PMID: 29652516.

**PURPOSE:** To assess awareness, barriers, and misconceptions related to eye donation in people with corneal disease as compared to controls in a population setting.

**MATERIALS AND METHODS:** A population-based study was conducted in 25 randomly selected clusters of Rural Gurgaon, Haryana, India, as part of the CORE (Cornea Opacity Rural Epidemiological) study. In addition to ophthalmic examination, knowledge and perceptions regarding eye donation were assessed through a validated questionnaire. The questionnaire captured the sociodemographic factors influencing awareness regarding eye donation in participants with corneal disease and twice the number of age- and gender-matched controls recruited from the same study clusters. Descriptive statistics were computed along with multivariable logistic regression analysis to determine associated factors for awareness of eye donation.

**RESULTS:** In the CORE study, 452 participants had corneal opacities on ocular examination. Of these, 442 were assessed for eye donation awareness. Additionally, 884 age- and gender-matched controls were recruited. The mean age of cases and controls was  $60.9 \pm 15.5$  and  $59.6 \pm 14.3$  years, respectively. Awareness of eye donation in cases and controls was 46.4% (n = 205 of 442) and

52.3% (n = 462 of 884), respectively (P = 0.044). Educational status was an important factor determining knowledge about eye donation in both cases and controls (P = < 0.001). Major barriers reported for not pledging eyes were lack of willingness (36.7%) and ignorance (15.3%). Common misconceptions like eyes could be donated before death or even after 24 h of death and that any type of blindness could be treated with corneal transplantation were prevalent.

CONCLUSIONS: The study demonstrated that although there is substantial awareness about eye donation, there are numerous barriers in this population that need to be resolved to improve donation rates. Additional efforts are needed to translate this awareness into actual eye donation in both cases with corneal disease and controls.

101: Padhy SK, Rathi A, Mandal S, Gagrani M. Tip of the iceberg: congenital cataract with pre-existing posterior capsule defect (PPCD): how vital is the role of ultrasound biomicroscopy? *BMJ Case Rep.* 2018 Jun 28;2018. pii: bcr-2018-225417. doi: 10.1136/bcr-2018-225417. PubMed PMID: 29954771.

102: Pal R, Hameed S, Sabareesh V, Kumar P, Singh S, Fatima Z. Investigations into Isoniazid Treated Mycobacterium tuberculosis by Electrospray Mass Spectrometry Reveals New Insights into Its Lipid Composition. *J Pathog.* 2018 Jun 19;2018:1454316. doi: 10.1155/2018/1454316. eCollection 2018. PubMed PMID: 30018826; PubMed Central PMCID: PMC6029481.

Many of the earlier studies involving the effect of isoniazid (INH) treatment have solely focused on the fatty acyl (FA) category of Mycobacterium tuberculosis (MTB) lipids. This motivated us with the major interest to examine the impact of INH on various other categories of MTB lipids. Towards this, we chose to interpret our mass spectral data (LC-ESI-MS) by a standalone software, MS-LAMP, in which "Mtb LipidDB" was integrated. Analysis by MS-LAMP revealed that INH treatment can alter the composition of "glycerolipids (GLs)" and "glycerophospholipids (GPLs)" categories of MTB lipids, in addition to the variations to FA category. Interpretation by "MycoMass" database yielded similar results as that of Mtb LipidDB, except that significant alterations to polyketides (PKs) category also were observed. Probing biosynthetic pathways of certain key lipids belonging to any of GLs, GPLs, and PKs categories can be attractive target(s) for drug discovery or can be useful to identify means to overcome drug resistance or to obtain insights into the causal factors of virulence. To the best of our knowledge, this is the first report hinting at the influence of INH on GLs, GPLs, and PKs of MTB.

103: Panda S, Kumar R, Gopinath VR, Sagar P. Head and Neck Myxoma Presenting as Isolated Laryngeal Polyp. *Case Rep Otolaryngol.* 2018 Jun 10;2018:6868737. doi: 10.1155/2018/6868737. eCollection 2018. PubMed PMID: 29984026; PubMed Central PMCID: PMC6015694.

Myxoma is a benign tumour with a propensity for local infiltration and recurrence. Laryngeal myxoma presents as a submucosal polyp. Being an uncommon tumour and mimicking vocal cord polyp, only anecdotal evidence is available in the literature. The literature was reviewed from 1986 onwards using the keywords "myxoma" and "larynx." The databases used were PubMed, Google Scholar, Scopus, and Web of Science. Along with this, we also report our case of vocal fold myxoma. We found a total of 19 studies reporting laryngeal myxoma. Laryngeal myxoma typically affects males in the 6th decade with a history of smoking. Unlike myxomas originating outside the larynx, recurrence is not widely described, and microlaryngeal surgery will usually suffice. Laryngeal myxomas should definitely be kept in the list of differential diagnosis when dealing with a benign-looking vocal fold lesion.

104: Pandey M, Singh G, Agarwal R, Dabas Y, Jyotsna VP, Kumar R, Xess I. Emerging *Rhizopus microsporus* Infections in India. *J Clin Microbiol*. 2018 May 25;56(6). pii: e00433-18. doi: 10.1128/JCM.00433-18. Print 2018 Jun. PubMed PMID: 29563203; PubMed Central PMCID: PMC5971529.

105: Pandey R, Biswas R, Ray M, Ramteke PP, Dhamija E, Halder A. Report of a unique case of myoepithelial carcinoma of left parotid gland with metachronous bilateral cavernous sinus metastasis. *J Egypt Natl Canc Inst*. 2018 Jun;30(2):73-76. doi: 10.1016/j.jnci.2018.02.002. Epub 2018 Apr 23. PubMed PMID: 29699873.

Myoepithelial carcinoma (MC) is a rare, locally aggressive malignant neoplasm of the salivary glands. Only few evidences on its metastatic behavior are available in the literature. We herein present a unique case of MC of left parotid gland which metastasized to bilateral cavernous sinuses. The patient was successfully treated with palliative radiotherapy and chemotherapy.

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106: Panduranga MS, Vibha D, Prasad K, Srivastava AK, Shukla G. Clinical spectrum and quality of life in patients with chronic polyneuropathy: A cross-sectional study. *J Peripher Nerv Syst*. 2018 Jun;23(2):120-123. doi: 10.1111/jns.12269. Epub 2018 May 7. PubMed PMID: 29687564.

Chronic polyneuropathy is a disabling condition of the peripheral nerves, characterized by symmetrical sensory motor symptoms and signs. There is paucity of studies on the etiological spectrum of polyneuropathy and its impact on quality of life (QoL). The present cross-sectional study in a referral based tertiary care center in North India found diabetic neuropathy as the commonest cause (25.5%) amongst 212 patients with chronic polyneuropathy. Idiopathic axonal polyneuropathy was present in 14.2% patients. Leprosy presenting as confluent mononeuritis multiplex constituted 11.3% of the patients. Additionally, it revealed a significantly worse QoL in these patients in all domains measured by short form (SF-36). This is the first study conducted in India to determine the QoL in chronic neuropathy patients. The current study demonstrates the clinical feasibility and applicability of the SF-36 generic health status in patients with polyneuropathies.

107: Parmar A, Patil V, Sarkar S, Rao R. An Observational Study of Treatment Seeking Users of Natural Opiates from India. *Subst Use Misuse*. 2018 Jun 7;53(7):1139-1145. doi: 10.1080/10826084.2017.1400564. Epub 2017 Dec 8. PubMed PMID: 29220602.

**BACKGROUND:** The type of opioid used influences the severity and complications experienced. Natural opiates (opium and poppy husk) use is a socio-culturally accepted phenomenon reported in India. However, studies on their profile, quality of life, and addiction severity are limited.

**OBJECTIVES:** The objective of this cross-sectional, observational study was to assess the socio-demographic profile, clinical profile, addiction severity, and quality of life of treatment-seeking natural opiate users.

**METHOD:** Hundred subjects aged 18-65 years using opium or poppy husk seeking outpatient treatment at a tertiary addiction treatment center in India were interviewed to collect information on their socio-demography, natural opiate, and other substance use. Additionally, their addiction severity and quality of life were assessed using Addiction Severity Index-Lite and WHO Quality of Life-Bref instrument, respectively.

**RESULTS:** All subjects were male with a mean age of 44.6 ( $\pm$ 11.0) years. Majority



(97%) used poppy husk daily orally. Curiosity/experimentation (63%) was the most common reason for starting opiate use. The past month rates of tobacco, alcohol, cannabis, and sedative-hypnotics use was 58%, 33%, 3%, and 12%, respectively. Only 4% injected any opioid. Inability to afford opiates (72%) was the most common reason for seeking treatment. Rates of medical, familial, social, psychological, and legal complications were low, while the WHOQOL-BREF scores fell between 40 and 50 across various domains. Conclusions/Importance: Natural opiate users may constitute distinct subgroup of opioid users with fewer/no complications despite long duration of uninterrupted use. These findings would be important in planning management strategies for people dependent on natural opiates.

108: Passah A, Arora S, Damle NA, Tripathi M, Bal C, Subudhi TK, Arora G. 68Ga-Prostate-Specific Membrane Antigen PET/CT in Triple-Negative Breast Cancer. Clin Nucl Med. 2018 Jun;43(6):460-461. doi: 10.1097/RLU.0000000000002071. PubMed PMID: 29578872.

The prostate-specific membrane antigen (PSMA) is a transmembrane protein with elevated expression in prostate cancer cells. Breast cancer also shows PSMA expression. We present the case of a 30-year-old woman with triple-negative bilateral breast carcinoma who underwent bilateral mastectomy, chemotherapy, and radiotherapy. She developed a left chest wall and liver recurrence after primary therapy. Her recurrent disease was also triple-negative. In view of the known poor prognosis and very limited therapeutic options, we performed Ga-PSMA PET/CT scan to explore the possibility of PSMA-based therapy as a future option after exhausting standard-of-care treatments.

109: Pathak M, Dwivedi SN, Deo SVS, Thakur B, Sreenivas V, Rath GK. Neoadjuvant chemotherapy regimens in treatment of breast cancer: a systematic review and network meta-analysis protocol. Syst Rev. 2018 Jun 26;7(1):89. doi: 10.1186/s13643-018-0754-1. PubMed PMID: 29945652; PubMed Central PMCID: PMC6020442.

**BACKGROUND:** Neoadjuvant chemotherapy (NACT), a standard of care for locally advanced breast cancer patients, is widely used for early breast cancer patients also. The varying role of regimens used as NACT needs to be investigated. Despite availability of some randomized controlled trials (RCTs), it is unclear which treatment regimen suits best. Further, there is no study comparing all the three regimens. Accordingly, present study will compare the efficacy of anthracyclines, taxanes, and targeted therapy administered in neoadjuvant setting on the basis of oncological outcomes and functional outcomes.

**METHOD/DESIGN:** Online databases PubMed and Cochrane Register of Controlled Trials will be searched to acquire eligible studies. Further, content of relevant journals, references of relevant articles, and proceedings of major related conference will also be searched. The RCTs comparing any of abovementioned regimen as NACT on breast cancer patients will be eligible. Two reviewers independently and in duplicate will screen the records on the basis of title and abstract and complete full-text review to determine eligibility. Similarly, data extraction and risk of bias assessment will be done by two independent reviewers. The pair-wise meta-analysis as well as network meta-analysis will be conducted to assess the relative efficacy of anthracyclines, taxanes, and targeted therapy regimens.

**DISCUSSION:** The present systematic review will improve the understanding of the relative efficacies of the three treatment regimens and possibly guide the clinical practices by providing the current best evidence on the efficacy of various regimens of NACT in the management of breast cancer patients.

**SYSTEMATIC REVIEW REGISTRATION:** PROSPERO ( CRD42016027236 ).

110: Patil S, Singh N. Spatially controlled functional group grafting of silk films to induce osteogenic and chondrogenic differentiation of human mesenchymal stem cells. *Mater Sci Eng C Mater Biol Appl*. 2018 Oct 1;91:796-805. doi: 10.1016/j.msec.2018.06.008. Epub 2018 Jun 12. PubMed PMID: 30033315.

For tissue engineering, fabrication of appropriate biomaterials, which not only support cellular attachment and proliferation but also direct lineage-specific differentiation of stem cells is crucial. It is widely reported in literature that biomaterial surface chemistry modulates human mesenchymal stem cell (hMSC) differentiation in a lineage dependent manner. In recent years, natural materials such as silk have been used for hMSC culture because of its superior mechanical strength, biocompatibility, and biodegradability. We report here a simple strategy for differentiating hMSCs into two different lineages on the same surface. We have grafted functional groups such as acrylic acid and phosphates to guide the differentiation of hMSCs into chondrocytes and osteocytes respectively. Unlike other strategies, our strategy does not require growth factors and other added signals in the media and is initiated due to the difference of functional groups present on the surface. We believe this study will foster the development of effective silk based tissue engineered constructs.

111: Prakash S, Sharan P, Sood M. A qualitative study on psychopathology of dhat syndrome in men: Implications for classification of disorders. *Asian J Psychiatr*. 2018 Jun;35:79-88. doi: 10.1016/j.ajp.2018.05.007. Epub 2018 May 18. PubMed PMID: 29803962.

**BACKGROUND:** Dhat syndrome is regarded by many as a culture bound syndrome of the Indian sub-continent. However the nosological status, conceptual understanding of the condition as well as the diagnostic guidelines are all mired in controversy. **AIMS:** The current study aims to study the psychopathology of Dhat syndrome in men by using a qualitative approach and to arrive at an operational definition for diagnosing Dhat syndrome.

**METHOD:** The qualitative approach consisted of five Focus Group Discussions (FGD) and five Key Individual Interviews (KII) with participants, consisting of patients as well as doctors - both allopathic as well as traditional.

**RESULTS:** Detailed analysis revealed valuable data regarding the symptoms, causes, treatment measures, socio-cultural context, psychiatric co-morbidity, nature of the disorder and various other phenomenological dimensions. Ideas for future nosological positioning were also specifically looked for. Operational definition and diagnostic guidelines were also arrived at based on the analysis as well as on previous literature.

**CONCLUSION:** Although lot of agreement existed among various stakeholders about symptoms and presentation, they varied significantly in their opinion on nature of the condition and treatment. Suggestions for ICD 11 have been made.

112: Pramanik R, Tyagi A, Chopra A, Kumar A, Vishnubhatla S, Bakhshi S. Myeloid Sarcoma Predicts Superior Outcome in Pediatric AML; Can Cytogenetics Solve the Puzzle? *Clin Lymphoma Myeloma Leuk*. 2018 Jun;18(6):e249-e254. doi: 10.1016/j.clml.2018.03.013. Epub 2018 Mar 31. PubMed PMID: 29680411.

**BACKGROUND:** The purpose of our study was to evaluate the clinical, cytogenetic, and molecular features, and survival outcomes in patients with acute myeloid leukemia (AML) with myeloid sarcoma (MS) and compare them with patients with AML without MS.

**PATIENTS AND METHODS:** This was a retrospective analysis of de novo pediatric AML patients with or without MS diagnosed at our cancer center between June 2003 and June 2016.

**RESULTS:** MS was present in 121 of 570 (21.2%), the most frequent site being the orbit. Patients with MS had a younger median age (6 years vs. 10 years) and

presented with higher hemoglobin and platelet but lower white blood cell count compared with patients without MS. Further,  $t(8; 21)$  ( $P < .01$ ), loss of Y chromosome ( $P < .01$ ), and deletion 9q ( $P = .03$ ) were significantly higher in patients with AML with MS. Event-free survival (EFS;  $P = .003$ ) and overall survival (OS;  $P = .001$ ) were better among patients with AML with MS (median EFS 21.0 months and median OS 37.1 months) compared with those with AML without MS (median EFS 11.2 months and median OS 16.2 months). The  $t(8; 21)$  was significantly associated with MS (odds ratio, 3.92). In a comparison of the 4 groups divided according to the presence or absence of MS and  $t(8; 21)$ , the subgroup of patients having MS without concomitant  $t(8; 21)$  was the only group to have a significantly better OS (hazard ratio, 0.53; 95% confidence interval, 0.34-0.82;  $P = .005$ ).

CONCLUSION: Although  $t(8; 21)$  was more frequently associated with MS, it did not appear to be the reason for better outcome.

113: Prea SM, Kong YXG, Mehta A, He M, Crowston JG, Gupta V, Martin KR, Vingrys AJ. Six-month Longitudinal Comparison of a Portable Tablet Perimeter With the Humphrey Field Analyzer. *Am J Ophthalmol*. 2018 Jun;190:9-16. doi: 10.1016/j.ajo.2018.03.009. Epub 2018 Mar 14. PubMed PMID: 29550190.

PURPOSE: To establish the medium-term repeatability of the iPad perimetry app Melbourne Rapid Fields (MRF) compared to Humphrey Field Analyzer (HFA) 24-2 SITA-standard and SITA-fast programs.

DESIGN: Multicenter longitudinal observational clinical study.

METHODS: Sixty patients (stable glaucoma/ocular hypertension/glaucoma suspects) were recruited into a 6-month longitudinal clinical study with visits planned at baseline and at 2, 4, and 6 months. At each visit patients undertook visual field assessment using the MRF perimetry application and either HFA SITA-fast ( $n = 21$ ) or SITA-standard ( $n = 39$ ). The primary outcome measure was the association and repeatability of mean deviation (MD) for the MRF and HFA tests. Secondary measures were the point-wise threshold and repeatability for each test, as well as test time.

RESULTS: MRF was similar to SITA-fast in speed and significantly faster than SITA-standard (MRF  $4.6 \pm 0.1$  minutes vs SITA-fast  $4.3 \pm 0.2$  minutes vs SITA-standard  $6.2 \pm 0.1$  minutes,  $P < .001$ ). Intraclass correlation coefficients (ICC) between MRF and SITA-fast for MD at the 4 visits ranged from 0.71 to 0.88. ICC values between MRF and SITA-standard for MD ranged from 0.81 to 0.90. Repeatability of MRF MD outcomes was excellent, with ICC for baseline and the 6-month visit being 0.98 (95% confidence interval: 0.96-0.99). In comparison, ICC at 6-month retest for SITA-fast was 0.95 and SITA-standard 0.93. Fewer points changed with the MRF, although for those that did, the MRF gave greater point-wise variability than did the SITA tests.

CONCLUSIONS: MRF correlated strongly with HFA across 4 visits over a 6-month period, and has good test-retest reliability. MRF is suitable for monitoring visual fields in settings where conventional perimetry is not readily accessible.

114: Pujari A, Mukhija R, Phuljhele S, Saxena R. Bilateral ocular paralysis in an ocular emergency. *BMJ Case Rep*. 2018 Jun 8;2018. pii: bcr-2018-225189. doi: 10.1136/bcr-2018-225189. PubMed PMID: 29884721.

115: Pujari A, Kumar A, Chawla R, Khokhar S, Agarwal D, Gagrani M, Sharma N, Sharma P. Impact on the pattern of ocular injuries and awareness following a ban on firecrackers in New Delhi: A tertiary eye hospital-based study. *Indian J Ophthalmol*. 2018 Jun;66(6):837-840. doi: 10.4103/ijo.IJO\_1290\_17. PubMed PMID: 29785995; PubMed Central PMCID: PMC5989509.

Purpose: To review the nature of firecracker-related ocular injuries at a tertiary eye hospital in northern India following the firecracker ban and also to

review the level of awareness among the victims.

**Methods:** A cross-sectional observational study involving the patients presenting with firecracker-related ocular injuries from October 18 to 27, 2017 were assessed for demographic distribution, detailed ocular evaluation, and a questionnaire related to the awareness about the injuries.

**Results:** A total of 68 patients were observed. Fifty patients (74.5%) were males. This year, a majority of patients were from outside Delhi. Uttar Pradesh constituted the most 38.23% of the patients followed by Haryana 30.88%, Delhi 23.5%, and Bihar 7.35%. Visual acuity varied from 6/6 to no perception of light. Open globe injury was observed in 56 patients (82.35%) who commonly had zone I injury. A significant number of patients (88.23%) were aware of firecracker-related injuries, and a large number of such injuries (58.8%) occurred in those who were not actively involved in the ignition of firecrackers but were in the vicinity.

**Conclusion:** This year, following a ban, the number of firecracker-related ocular injuries reported from areas outside Delhi outnumbered as compared to within Delhi. However, firecracker-related ocular injuries are still a major cause of significant visual loss, especially involving the bystanders. Thus, firecracker-related celebrations should be monitored with a stringent protocol.

116: Pushpam D, Bakhshi S. Impact of Pediatric Malignancies on Parent's Quality of Life. *Indian J Pediatr*. 2018 Sep;85(9):713-714. doi: 10.1007/s12098-018-2735-8. Epub 2018 Jun 28. Review. PubMed PMID: 29951781.

117: Rai S, Bhardwaj U, Misra A, Singh S, Gupta R. Comparison between photostability of Alexa Fluor 448 and Alexa Fluor 647 with conventional dyes FITC and APC by flow cytometry. *Int J Lab Hematol*. 2018 Jun;40(3):e52-e54. doi: 10.1111/ijlh.12809. Epub 2018 Mar 25. PubMed PMID: 29575796.

118: Rajagopal R, Sharma S. Comments to "Usefulness of Hydrogel-Coated Coils in Embolization of Pulmonary Arteriovenous Malformations". *Cardiovasc Intervent Radiol*. 2018 Nov;41(11):1807. doi: 10.1007/s00270-018-2013-1. Epub 2018 Jun 26. PubMed PMID: 29946939.

119: Rathod S, Irfan M, Bhargava R, Pinninti N MD, Scott J, Mohammad Algahtani H, Guo Z, Gupta R, Nadkarni P, Naeem F, Howells F, Sorsdahi K, Thorne K, Osman-Hicks V, Pallikadavath S, Phiri P, Carr H, Graves L, Kingdon D. Multinational comparative cross-sectional survey of views of medical students about acceptable terminology and subgroups in schizophrenia. *BMJ Open*. 2018 Jun 7;8(6):e021461. doi: 10.1136/bmjopen-2017-021461. PubMed PMID: 29880569; PubMed Central PMCID: PMC6009566.

**AIM:** The aim of this study was to inform thinking around the terminology for 'schizophrenia' in different countries.

**OBJECTIVES:** The objective of this study was to investigate: (1) whether medical students view alternative terminology (psychosis subgroups), derived from vulnerability-stress models of schizophrenia, as acceptable and less stigmatising than the term schizophrenia; (2) if there are differences in attitudes to the different terminology across countries with different cultures and (3) whether clinical training has an impact in reducing stigma.

**DESIGN:** This is a cross-sectional survey that examined the attitudes of medical students towards schizophrenia and the alternative subgroups.

**SETTING:** The study was conducted across eight sites: (1) University of Southampton, UK; (2) All India Institute of Medical Science, India; (3) Rowan University, USA; (4) Peshawar Medical College, Pakistan; (5) Capital Medical University, China; (6) College of Medicine and Medical sciences, Bahrain; (7) Queens University, Kingston, Canada and (8) University of Cape Town, South Africa.

**METHOD:** This study extended an initial pilot conducted by the Royal College of Psychiatrists on the term schizophrenia and psychosis subgroups to assess whether the subgroup terminology might have an effect on the attitudes of a convenience sample of medical students from eight different countries and potentially play a role in reducing stigmatisation.

**RESULTS:** 1873 medical students completed a questionnaire recording their attitudes to schizophrenia and the psychosis subgroups. A reduction in negative perceptions were found for the psychosis subgroups, especially for the stress sensitivity psychosis and anxiety psychosis subgroups. Negative perceptions were found for drug-related psychosis. Participants who had undergone clinical training had overall positive attitudes. Differences across different countries were found.

**CONCLUSION:** The attitudes towards psychosis subgroups used in this study have shown mixed results and variation across countries. Further research is warranted to investigate acceptability of terminology. Methods of reducing stigma are discussed in line with the findings.

**ETHICS:** The study received ethical approval from ERGO (Ethics and Research Governance Online; ID: 15972) and subsequently from the ethics committee at each site.

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120: Reed GM, Sharan P, Rebello TJ, Keeley JW, Elena Medina-Mora M, Gureje O, Luis Ayuso-Mateos J, Kanba S, Khoury B, Kogan CS, Krasnov VN, Maj M, de Jesus Mari J, Stein DJ, Zhao M, Akiyama T, Andrews HF, Asevedo E, Cheour M, DomÃ­nguez-MartÃ­nez T, El-Khoury J, Fiorillo A, Grenier J, Gupta N, Kola L, Kulygina M, Leal-Leturia I, Luciano M, Lusu B, Nicolas J, MartÃ­nez-LÃ³pez I, Matsumoto C, Umukoro Onofa L, Paterniti S, Purnima S, Robles R, Sahu MK, Sibeko G, Zhong N, First MB, Gaebel W, Lovell AM, Maruta T, Roberts MC, Pike KM. The ICD-11 developmental field study of reliability of diagnoses of high-burden mental disorders: results among adult patients in mental health settings of 13 countries. *World Psychiatry*. 2018 Jun;17(2):174-186. doi: 10.1002/wps.20524. PubMed PMID: 29856568; PubMed Central PMCID: PMC5980511.

Reliable, clinically useful, and globally applicable diagnostic classification of mental disorders is an essential foundation for global mental health. The World Health Organization (WHO) is nearing completion of the 11th revision of the International Classification of Diseases and Related Health Problems (ICD-11). The present study assessed inter-diagnostic reliability of mental disorders accounting for the greatest proportion of global disease burden and the highest levels of service utilization - schizophrenia and other primary psychotic disorders, mood disorders, anxiety and fear-related disorders, and disorders specifically associated with stress - among adult patients presenting for treatment at 28 participating centers in 13 countries. A concurrent joint-rater design was used, focusing specifically on whether two clinicians, relying on the same clinical information, agreed on the diagnosis when separately applying the ICD-11 diagnostic guidelines. A total of 1,806 patients were assessed by 339 clinicians in the local language. Intraclass kappa coefficients for diagnoses weighted by site and study prevalence ranged from 0.45 (dysthymic disorder) to 0.88 (social anxiety disorder) and would be considered moderate to almost perfect for all diagnoses. Overall, the reliability of the ICD-11 diagnostic guidelines was superior to that previously reported for equivalent ICD-10 guidelines. These data provide support for the suitability of the ICD-11 diagnostic guidelines for implementation at a global level. The findings will inform further revision of the ICD-11 diagnostic guidelines prior to their publication and the development of programs to support professional training and implementation of the ICD-11 by

WHO member states.

121: Roth CL, Jain V. Rising Obesity in Children: A Serious Public Health Concern. *Indian J Pediatr.* 2018 Jun;85(6):461-462. doi: 10.1007/s12098-018-2639-7. Epub 2018 Feb 17. Review. PubMed PMID: 29455329.

22: Rufai SB, Singh J, Kumar P, Mathur P, Singh S. Association of *gyrA* and *rrs* gene mutations detected by MTBDRsl V1 on *Mycobacterium tuberculosis* strains of diverse genetic background from India. *Sci Rep.* 2018 Jun 18;8(1):9295. doi: 10.1038/s41598-018-27299-z. PubMed PMID: 29915257; PubMed Central PMCID: PMC6006251.

There is limited data on the use of Genotype MTBDRslVersion 1 (MTBDRsl V1) as an initial rapid screening test to rule out XDR-TB and most importantly its performance in various genotypes of *Mycobacterium tuberculosis* is scarcely studied. A total of 359 MDR-TB isolates were tested for gene mutations representing second line drug resistance, using the MTBDRsl\_V.1 and the results were compared with phenotypic method (Bactec MGIT-960 system) for second-line drug (SLD) susceptibility testing. Genetic lineages of all these isolates were also determined using spoligotyping and SITVIT2 WEB database. The MTBDRsl V1 detected mutations in the *gyrA*, *rrs*, and *emb* genes in 108 (30%), 2 (0.5%) and 129 (35.9%) isolates, respectively. Remaining 120 (33.4%) had no second line drug (SLD) resistance. In 17 (4.7%) isolates mutations were detected in both *gyrA* and *rrs* genes. Its concordance with MGIT-960 culture drug susceptibility testing (DST) was 97% and 94.1%, 93.5%, 60.5% and 50% for the detection of XDR-TB, pre-XDR, Ethambutol, and Aminoglycosides/Cyclopeptides resistance. The Beijing lineage was predominant (46%) between both the pre-XDR/XDR-TB isolates. We conclude that MTBDRsl is useful for rapid detection of SLD resistance. Also in pre-XDR and XDR-TB isolates the frequency of relevant genetic mutations was significantly higher in the Beijing strains.

123: Sabel BA, Wang J, Cárdenas-Morales L, Faiq M, Heim C. Mental stress as consequence and cause of vision loss: the dawn of psychosomatic ophthalmology for preventive and personalized medicine. *EPMA J.* 2018 May 9;9(2):133-160. doi: 10.1007/s13167-018-0136-8. eCollection 2018 Jun. Review. PubMed PMID: 29896314; PubMed Central PMCID: PMC5972137.

The loss of vision after damage to the retina, optic nerve, or brain has often grave consequences in everyday life such as problems with recognizing faces, reading, or mobility. Because vision loss is considered to be irreversible and often progressive, patients experience continuous mental stress due to worries, anxiety, or fear with secondary consequences such as depression and social isolation. While prolonged mental stress is clearly a consequence of vision loss, it may also aggravate the situation. In fact, continuous stress and elevated cortisol levels negatively impact the eye and brain due to autonomous nervous system (sympathetic) imbalance and vascular dysregulation; hence stress may also be one of the major causes of visual system diseases such as glaucoma and optic neuropathy. Although stress is a known risk factor, its causal role in the development or progression of certain visual system disorders is not widely appreciated. This review of the literature discusses the relationship of stress and ophthalmological diseases. We conclude that stress is both consequence and cause of vision loss. This creates a vicious cycle of a downward spiral, in which initial vision loss creates stress which further accelerates vision loss, creating even more stress and so forth. This new psychosomatic perspective has several implications for clinical practice. Firstly, stress reduction and relaxation techniques (e.g., meditation, autogenic training, stress management training, and psychotherapy to learn to cope) should be recommended not only as complementary to traditional treatments of vision loss but possibly as preventive

means to reduce progression of vision loss. Secondly, doctors should try their best to inculcate positivity and optimism in their patients while giving them the information the patients are entitled to, especially regarding the important value of stress reduction. In this way, the vicious cycle could be interrupted. More clinical studies are now needed to confirm the causal role of stress in different low vision diseases to evaluate the efficacy of different anti-stress therapies for preventing progression and improving vision recovery and restoration in randomized trials as a foundation of psychosomatic ophthalmology.

124: Sahay P, Pandya I, Maharana PK, Titiyal JS. Cloudy Cornea with Arcus Juvenilis in a Case of Dense Deposit Disease. *BMJ Case Rep.* 2018 Jun 27;2018. pii: bcr-2018-224545. doi: 10.1136/bcr-2018-224545. PubMed PMID: 29950499.

A 25-year-old male patient presented with complaints of blurred vision in both eyes since 2 years. The patient was a known case of nephrotic syndrome with dyslipidaemia for which he was on diuretics and lipid-lowering agents for 3 years. On examination, his visual acuity was 6/9 in both eyes with cloudy cornea and arcus juvenilis. Fundus examination was within normal limits. On systemic work-up, his lipid profile was deranged with increased serum total cholesterol, very low density lipoprotein, low density lipoprotein and triglyceride. The serum high density lipoprotein was decreased. Renal function test revealed elevated serum creatinine with significant proteinuria. Renal biopsy was suggestive of dense deposit disease on immunofluorescence and transmission electron microscopy. Ocular manifestation of dense deposit disease is characterised by retinal drusen, pigmentary atrophy, choroidal neovascular membrane and atypical serous retinopathy. To the best of our knowledge, anterior segment changes in dense deposit disease has not been reported. This is the first case reporting cloudy cornea with arcus juvenilis in a case of dense deposit disease.

125: Sahay P, Agarwal D, Maharana PK, Titiyal JS. Granular corneal dystrophy: an enigma resolved. *Int Ophthalmol.* 2018 Jun 25. doi: 10.1007/s10792-018-0971-6. [Epub ahead of print] PubMed PMID: 29943099.

**PURPOSE:** To report the intra-familial phenotypic variation of granular corneal dystrophy (GCD) across different age groups.

**METHOD:** Two cases of GCD belonging to the same family (mother and daughter) were assessed and clinical findings were noted.

**RESULT:** An 18-year-old female with complaint of glare, on examination showed brownish granules involving bowman's layer and superficial corneal stroma suggesting a diagnosis of Bowman layer dystrophy. Screening of her mother revealed multiple diffuse white granular opacities with snowflake appearance involving the central cornea. The intervening cornea was clear and limbus was not involved. Focal illumination showed deep stromal involvement. All these findings were typical of GCD. Genetic analysis revealed mutation of TGF beta-1 located on 5q31 which was consistent with our clinical diagnosis of GCD.

**CONCLUSION:** Variable clinical presentation of GCD in different age groups can lead to diagnostic dilemma. Screening of family members can be helpful especially when dealing with early cases of GCD.

126: Saxena H, Takkar B, Shrivastava V, Azad SV. Subfoveal congenital hypertrophy of retinal pigment epithelium. *BMJ Case Rep.* 2018 Jun 29;2018. pii: bcr-2018-225845. doi: 10.1136/bcr-2018-225845. PubMed PMID: 29960977.

127: Saxena R, Sharma M, Singh D, Sharma P. Full tendon medial transposition of lateral rectus with augmentation sutures in cases of complete third nerve palsy. *Br J Ophthalmol.* 2018 Jun;102(6):715-717. doi: 10.1136/bjophthalmol-2017-311376. Epub 2018 Mar 22. PubMed PMID: 29567790.

Management options in third nerve palsy are limited as four of the six extraocular muscles are involved. Surgery has to be tailored on a case-to-case basis. Aim of this retrospective case series is to report 1-year outcomes of a modified surgical technique entailing full tendon transposition of lateral rectus to medial rectus augmented with posterior fixation sutures in four patients with complete third nerve palsy. All four cases showed significant improvement of vertical and horizontal deviation with long-term stability of correction. Choice of route of full tendon augmented transposition of lateral rectus to medial rectus can aid in achieving good correction of the vertical misalignment in addition to horizontal correction.

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128: Sebastian S, Malhotra R, Pande A, Gautam D, Xess I, Dhawan B. Staged Reimplantation of a Total Hip Prosthesis After Co-infection with *Candida tropicalis* and *Staphylococcus haemolyticus*: A Case Report. *Mycopathologia*. 2018 Jun;183(3):579-584. doi: 10.1007/s11046-017-0177-x. Epub 2017 Jul 22. PubMed PMID: 28735470.

Fungal prosthetic joint infection is a rare complication in total joint arthroplasty. There are no established guidelines for management of these infections. We present a case of a 53-year-old male with a hip joint prosthesis co-infected with *Candida tropicalis* and *Staphylococcus haemolyticus*. A two-stage exchange arthroplasty was performed. The patient underwent implant removal, debridement, irrigation with saline solution and application of cement spacer impregnated with vancomycin followed by aggressive antimicrobial treatment in first stage. Complete eradication of infection was demonstrated by negative culture of sonicated cement spacer fluid and negative 16S rRNA and 18S rRNA gene PCR of sonicate fluid, synovial fluid and periprosthetic tissue samples. He underwent second-stage revision hip arthroplasty after 9 months of the first stage. At the latest follow-up, there was no evidence of recurrence of infection. This case illustrates the utility of sonication of biomaterials and molecular techniques for microbiological confirmation of absence of infection in staged surgeries which is required for a successful outcome.

129: Selvan H, Gupta S. Transconjunctival rectus muscle bridle: an adjunct in surgical exposure. *Eye (Lond)*. 2018 Jun;32(6):1151-1153. doi: 10.1038/s41433-018-0020-8. Epub 2018 Feb 6. PubMed PMID: 29403071; PubMed Central PMCID: PMC5997662.

130: Shah B, Gupta R, Sarkar S, Balhara YPS. Injection Butorphanol dependence: A case report. *Asian J Psychiatr*. 2018 Jun;35:45-46. doi: 10.1016/j.ajp.2018.05.008. Epub 2018 May 14. PubMed PMID: 29778749.

131: Sharma A, Singh K, Biswas A, Ranjan R, Kishor K, Pandey H, Kumar R, Mahapatra M, Oldenburg J, Saxena R. Impact of interleukin 6 promoter polymorphisms (-174 Gâ€%>â€%C, -572 Gâ€%>â€%C and -597 Gâ€%>â€%A) on plasma IL-6 levels and their influence on the development of DVT: a study from India. *Hematology*. 2018 Dec;23(10):833-838. doi: 10.1080/10245332.2018.1483546. Epub 2018 Jun 11. PubMed PMID: 29890913.

**OBJECTIVES:** To evaluate the association of interleukin 6 (IL-6) levels with deep vein thrombosis (DVT) and to assess the impact of IL-6 promoter polymorphisms



(-174G>C, -572G>C and -597G>A) on its plasma levels and their influence in the development of DVT in India.

**METHODS:** One hundred DVT patients and 100 age and sex-matched healthy controls were study subjects. IL-6 polymorphisms were identified by polymerase chain reaction-restriction fragment length polymorphism. IL-6 levels were detected by enzyme-linked immunosorbent assay.

**RESULTS:** Significantly raised IL-6 levels were observed in patients as compared to controls. (Patients: 13.73±6.30 pg/ml, Controls: 11.83±4.47 pg/ml, p=0.014). The prevalence of C allele of -572G>C polymorphism was significantly higher in patients than controls (Patients: 39.5%, Controls: 27.5%, p=0.011,  $\chi^2=6.463$ ). Subjects with GC and CC genotype had significantly higher IL-6 levels than GG genotype (p<0.001). Patients with GC and CC genotype increased the DVT risk by 1.39 fold (ORa: 1.39, CI: 0.74-2.62) and 2.69 fold (ORa: 2.42, CI: 1.08-6.70), respectively. IL-6 -174G>C and -597G>A polymorphisms were not associated with raised IL-6 levels and nor with thrombotic risk (-174G>C: p=0.823  $\chi^2=0.369$ ; -597G>A: p=0.678  $\chi^2=1.08$ ).

**CONCLUSION:** Our study emphasizes the importance of -572G>C polymorphism in increasing IL-6 levels, thereby showing its significant role in DVT in India. IL-6 -174G>C and -597G>A were neither associated with raised plasma IL-6 levels nor with thrombotic risk. Thus -572G>C polymorphism detection may be one of the connecting links between IL-6 and thrombotic risk in Indian DVT patients.

132: Sharma N, Singhal D, Maharana PK, Jain R, Sahay P, Titiyal JS. Continuous intraoperative optical coherence tomography-guided shield ulcer debridement with tuck in multilayered amniotic membrane transplantation. *Indian J Ophthalmol.* 2018 Jun;66(6):816-819. doi: 10.4103/ijo.IJO\_929\_17. PubMed PMID: 29785990; PubMed Central PMCID: PMC5989504.

**Purpose:** The aim of this study is to describe a modified surgical technique of continuous intraoperative optical coherence tomography (iOCT)-guided shield ulcer debridement with tuck-in multilayered Amniotic membrane transplantation (ML AMT) in vernal keratoconjunctivitis (VKC) with shield ulcer with plaque.

**Methods:** Seven eyes of seven patients presenting with VKC with shield ulcer with plaque were enrolled in this prospective case series and planned for shield ulcer debridement with ML AMT. Debridement of the ulcer base with double-layered AMT was done under the continuous guidance of iOCT. The main outcome measure was the time for complete reepithelialization. Statistical analysis was performed using the Stata-14.0 program for Windows. Data were presented as mean ± standard deviation/median (minimum-maximum) and frequency percentage as applicable. **Results:** The surgery could be completed successfully in all cases and iOCT could provide real-time assessment of the depth of dissection during the entire procedure. The duration of complete healing and disintegration of amniotic membrane varied from 7 to 12 days. Recurrence was not seen in any case till 2 months follow-up.

**Conclusion:** iOCT provides continuous monitoring of the depth of dissection and allows for a safe and complete debridement of the shield ulcer with plaque.

133: Sharma R, Phalak M, Sharma P. Letter to the Editor. Is the serum glucose/potassium ratio a reliable prognostic factor for aneurysmal SAH? *J Neurosurg.* 2018 Oct;129(4):1098-1099. doi: 10.3171/2018.2.JNS18434. Epub 2018 Jun 29. PubMed PMID: 29957117.

134: Sharma R, Sharma P, Katiyar V, Vora Z, Gurjar H. Can diabetic ketoacidosis (DKA) precipitate posterior reversible encephalopathy syndrome (PRES)? *Childs Nerv Syst.* 2018 Jun;34(6):1107-1108. doi: 10.1007/s00381-018-3799-5. Epub 2018 Apr 20. PubMed PMID: 29675562.

135: Sharma SK, Mohan A, Singh AD, Mishra H, Jhanjee S, Pandey RM, Singh BK, Sharma R, Pallipamu PB, Pai M, Dheda K. Impact of nicotine replacement therapy as an adjunct to anti-tuberculosis treatment and behaviour change counselling in newly diagnosed pulmonary tuberculosis patients: an open-label, randomised controlled trial. *Sci Rep.* 2018 Jun 11;8(1):8828. doi: 10.1038/s41598-018-26990-5. PubMed PMID: 29891957; PubMed Central PMCID: PMC5995820.

We evaluated the impact of intensive smoking cessation activities as an adjunct to anti-tuberculosis treatment on patient-related treatment outcomes. In this open-label, randomised controlled trial, self-reporting smokers with pulmonary tuberculosis who initiated standard anti-tuberculosis treatment were randomised to either nicotine replacement therapy and behaviour change counselling (n=400) or counselling alone (n=400) provided at baseline and two follow-up visits. The primary outcomes were change in TBscore at 24-weeks and culture conversion at 8-weeks. Biochemical smoking quit rates defined as serum cotinine levels <10ng/mL and/or exhaled carbon monoxide levels <6ppm (47.8% vs 32.4%, p-value=<0.001) and self-reported quit rates (69.3% vs 38.7%, p-value=<0.001) were significantly higher in the intervention arm at 24-weeks. Though the TBscores at 24 weeks (95% CI) were lower in the intervention arm [2.07 (1.98, 2.17) versus 2.12 (2.02, 2.21)], the difference was not clinically meaningful. Patients in the control arm required treatment extension more often than intervention arm (6.4% vs 2.6%, p-value=0.02). Combining nicotine replacement therapy with behaviour change counselling resulted in significantly higher quit rates and lower cotinine levels, however, impact on patient-related (TBscore) or microbiological outcomes (culture conversion) were not seen.

136: Shaw M, Sharma A, Pandey NN, Kumar S. Cleft on the left: imaging appearance on dual-source CT. *BMJ Case Rep.* 2018 Jun 14;2018. pii: bcr-2018-225907. doi: 10.1136/bcr-2018-225907. PubMed PMID: 29903780.

137: Shekhar S, Yadav Y, Singh AP, Pradhan R, Desai GR, Dey AB, Dey S. Neuroprotection by ethanolic extract of *Syzygium aromaticum* in Alzheimer's disease like pathology via maintaining oxidative balance through SIRT1 pathway. *Exp Gerontol.* 2018 Sep;110:277-283. doi: 10.1016/j.exger.2018.06.026. Epub 2018 Jun 27. PubMed PMID: 29959974.

The oxidative stress plays a key role in Alzheimer's disease (AD) and Sirtuin (SIRT1) is potential mediator of oxidative pathway. This study explored the role of *Syzygium aromaticum* on SIRT1 and oxidative balance in amyloid beta induced toxicity. Anti-oxidative capacity of *Syzygium aromaticum* was performed in A $\beta$ 25-35 induced neurotoxicity in neuronal cells. Superoxide dismutase, Catalase and Glutathione enzyme activity were determined by the treatment of *Syzygium aromaticum*. Both recombinant and endogenous SIRT1 activity were performed in its presence. The expression of  $\gamma$ -secretase and SIRT1 were evaluated by western blot. *Syzygium aromaticum* was capable to scavenge ROS and elevate the percentage of anti-oxidant enzymes. It also activated and elevated the level of SIRT1 and downregulated  $\gamma$ -secretase level. These findings show a holistic approach towards the neurodegenerative disease management by *Syzygium aromaticum* which could lead to the formulation of new drug for AD. This Ayurvedic product can give a healthy aging with no side effects and also be cost effective. It may meet unmet medical needs of current relevance.

138: Shenoy K, Singla A, Krystal JD, Razi AE, Kim YH, Sharan AD. Discitis in Adults. *JBJS Rev.* 2018 Jun;6(6):e6. doi: 10.2106/JBJS.RVW.17.00104. PubMed PMID: 29916943.

139: Shin SS, Carpenter CL, Ekstrand ML, Yadav K, Shah SV, Ramakrishnan P, Pamujula S, Sinha S, Nyamathi AM. Household Food Insecurity as Mediator of the Association Between Internalized Stigma and Opportunistic Infections. *AIDS Behav.* 2018 Jun 22. doi: 10.1007/s10461-018-2193-3. [Epub ahead of print] PubMed PMID: 29934793.

Internalized HIV stigma can affect health outcomes, but the mechanism underlying this relationship is poorly understood. We investigated the potential pathways for the association between internalized stigma and opportunistic infections (OIs) among women living with HIV in rural India. We conducted a cross-sectional study involving in-person interviews with 600 participants. We modeled two outcome variables, total number of OIs and fungal dermatoses, which was the most frequently reported OI. Causal mediation analysis was performed to estimate the total effect, direct effect, and indirect effect through mediators while controlling for confounders. Food insecurity was a strong mediator of the association between internalized stigma and the number of OIs (70% of the total effect) and fungal dermatoses (83% of the total effect), while the indirect effect of stigma through adherence was minimal for both outcomes. Household food insecurity may be an important mediator of the impact of HIV-related stigma on opportunistic infections.

140: Sihota R, Kumar S, Sidhu T, Midha N, Sharma A, Yadav S, Gupta V, Dada T. Is combined mechanism glaucoma a distinct entity? *Graefes Arch Clin Exp Ophthalmol.* 2018 Jun 20. doi: 10.1007/s00417-018-4050-5. [Epub ahead of print] PubMed PMID: 29922891.

**PURPOSE:** Primary adult glaucomas that have an occludable angle with peripheral anterior synechiae which are too few to account for the chronically raised IOP, or the glaucomatous optic neuropathy, do not fit the definition of either POAG or PACG and can be considered as combined mechanism glaucoma (CMG). We aimed to compare the clinical features and anatomical parameters of combined mechanism glaucoma with age, sex, and refraction-matched POAG and chronic PACG eyes.

**METHODS:** Consecutive adult patients with definitive optic nerve head and perimetric changes of glaucoma were screened at a tertiary care center. All glaucomatous eyes having an IOP >22 mmHg on at least three separate occasions and glaucomatous optic neuropathy consistent with moderate visual field loss in the eye were divided as POAG, PACG, and CMG. Eyes with occludable angles having <90° of goniosynechiae were diagnosed as CMG. A detailed clinical examination, ocular biometry, and ASOCT were performed in the better eye of all individuals. **RESULTS:** A total of 93 patients with similar visual field index or pattern standard deviation on perimetry were evaluated: 32 POAG, 31 CMG, and 30 PACG. The mean anterior chamber depth was 3.47±0.37 mm in POAG, 2.81±0.32 mm in PACG, and 3.06±0.26 mm in CMG (p<0.0001). Mean lens thickness was 4.22±0.27 mm in POAG, 4.53±0.35 mm in PACG, and 4.44±0.29 mm in CMG (p=0.0004).

Iridotrabecular contact on ASOCT was nil in POAG, a mean of 87.60±12.802% in PACG eyes, and 15.23±14.19% in CMG eyes, p<0.0001. CMG was similar to PACG in terms of corneal diameters and lens thickness and had an axial length in between PACG and POAG. On ASOCT, all parameters had highest values in POAG eyes and the least in PACG eyes, with CMG eyes having values in between the other two groups, p value of <0.0001 between each group for all parameters.

**CONCLUSION:** This study has demonstrated significantly different anatomical parameters in eyes with CMG, in addition to the differences on gonioscopy and iridotrabecular contact, indicating that CMG is discernibly dissimilar to PACG and POAG.

141: Sikary AK, Behera C, Murty OP. Adipocere Formation in Subtropical Climate of Northern India: A Retrospective Study. *J Forensic Sci.* 2018 Jun 25. doi: 10.1111/1556-4029.13847. [Epub ahead of print] PubMed PMID: 29940696.

Adipocere formation depends upon multiple environmental factors. In comparison with temperate countries, it usually develops early in the subtropical climate. We have studied a retrospective data of 31 cases with adipocere formation at Department of Forensic Medicine at All India Institute of Medical Sciences, New Delhi. Most of the cases were recovered during the month of May to October from closed rooms at home, open grounds, open forest areas, various water sources, and riverbanks. The time duration of recovery from the time of death was from 12 h to 7 days 12 h. In 10 cases, adipocere formation was seen within 2 days, and in four male cases among them, the adipocere formed within a day. Most of the bodies showing adipocere formation within 2 days were recovered from land. These facts showed that subtropical climate having hot and humid weather promotes early adipocere formation compared to temperate climate.

142: Singh A, Gupta A, Datta PK, Pandey M. Intrathecal levobupivacaine versus bupivacaine for inguinal hernia surgery: a randomized controlled trial. *Korean J Anesthesiol.* 2018 Jun;71(3):220-225. doi: 10.4097/kja.d.18.27191. Epub 2018 Apr 24. PubMed PMID: 29684982; PubMed Central PMCID: PMC5995016.

**BACKGROUND:** Levobupivacaine is an attractive alternative to racemic bupivacaine for spinal anesthesia due to the lower potential for cardio-toxicity and faster recovery profile. This study was designed to compare isobaric levobupivacaine with hyperbaric racemic bupivacaine with respect to intraoperative quality of anesthesia and the postoperative recovery profile in patients undergoing inguinal hernia surgery.

**METHODS:** A total of 100 American Society of Anesthesiologists 1 and 2 patients, aged 18-60 years, undergoing elective daycare unilateral inguinal hernia surgery, were randomized into two groups. Group L received spinal anesthesia with 3 ml of 0.5% plain levobupivacaine. Group B received 3 ml of 0.5% hyperbaric racemic bupivacaine. Quality of anesthesia, sensory and motor block characteristics, duration of effective analgesia, time to mobilization, and incidence of side effects were compared.

**RESULTS:** The quality of anesthesia was comparable between the two groups. No difference was observed in the block onset time or maximum block height. The duration of anesthesia was significantly shorter in group L compared with that in group B ( $206.2 \pm 18.9$  min vs.  $224.1 \pm 15.6$  min,  $P < 0.001$ ), as was duration of motor block ( $185.9 \pm 20.3$  min vs.  $196.4 \pm 21.2$  min,  $P = 0.016$ ) and time to walk unaided ( $321.9 \pm 19.2$  min vs.  $356.7 \pm 26.6$  min,  $P < 0.001$ ). The incidence of hypotension was less in group L (12%) compared to group B (32%) ( $P = 0.028$ ).

**CONCLUSIONS:** Levobupivacaine is an effective alternative to bupivacaine for patients undergoing unilateral inguinal hernia surgery. It has a shorter duration of sensory and motor block, allowing earlier mobilization in daycare surgeries, and a lower incidence of intraoperative hypotension.

143: Singh A, Pandey PK, Agrawal A, Rana KM, Mittal SK, Kumar B. Simultaneous Superior Rectus Recession and Anterior Transposition of Inferior Oblique Muscle as a Surgical Option for Traumatically Lost Inferior Rectus Muscle. *Strabismus.* 2018 Jun;26(2):90-95. doi: 10.1080/09273972.2018.1444066. Epub 2018 Feb 27. PubMed PMID: 29485307.

**PURPOSE:** To evaluate the role of simultaneous superior rectus (SR) recession and anterior transposition of inferior oblique (ATIO) muscle in patients with traumatically lost inferior rectus (IR) muscle.

**METHODS:** Six patients with history of ocular trauma, followed by sudden onset vertical diplopia along with marked hypertropia (HT) and limitation of depression

in abduction in the affected eye suggestive of IR disinsertion, were included in this prospective study. The patients were treated by simultaneous SR recession and ATIO muscle in the affected eye by limbal conjunctival approach under local anesthesia.

RESULTS: Preoperatively, primary position HT of 40-50 (mean  $44.16 \pm 4.91$ ) prism diopters (PD) was present in all cases which increased to 65-70 (mean  $65.83 \pm 5.84$ ) PD in down and in the ipsilateral gaze along with marked limitation of depression in abduction and A pattern. On exploration, the IR could not be traced in four cases. Fibrotic muscle sheath with retracted IR was found 10-12 mm away from the limbus in rest of the two patients. ATIO (6.5 mm from the limbus) with simultaneous recession of ipsilateral SR was done under local anesthesia. At 12 weeks postoperatively, three patients were orthophoric in primary position and vertical alignment with in 4-7 PD in primary position was achieved in rest of the three patients.

CONCLUSION: Simultaneous SR recession with ATIO seems to be a good alternative to achieve satisfactory vertical alignment for patients with traumatically lost inferior rectus muscle.

144: Singh AD, Makkar N, Ray A, Sood R. Phlegmasia cerulea dolens presenting with acute compartment syndrome and pulmonary embolism. *BMJ Case Rep.* 2018 Jun 13;2018. pii: bcr-2018-224879. doi: 10.1136/bcr-2018-224879. PubMed PMID: 29898911.

145: Singh AN, Kilambi R, Das P, Madhusudhan KS, Pal S. Malignant Hemangiopericytoma of the Liver Masquerading as Hepatocellular Carcinoma. *Indian J Surg Oncol.* 2018 Jun;9(2):256-259. doi: 10.1007/s13193-018-0734-x. Epub 2018 Mar 2. PubMed PMID: 29887712; PubMed Central PMCID: PMC5984853.

Isolated, metastatic hemangiopericytoma of liver is an extremely rare entity. We present a case of hemangiopericytoma of the liver, metastatic from a meningeal hemangiopericytoma, who presented 10 years after the surgical excision of the primary tumour and morphologically mimicked a hepatocellular carcinoma. We review the literature regarding this entity and discuss the difficulties in preoperative diagnosis and the need for a thorough preoperative evaluation.

146: Singh HN, Scheiber-Mojdekar B, Rajeswari MR. DNA trinucleotide (GAA) repeats in human genome: hint for disease pathogenesis? *J Biomol Struct Dyn.* 2018 Jun;36(8):1958-1965. doi: 10.1080/07391102.2017.1341336. Epub 2017 Jun 23. PubMed PMID: 28605995.

147: Singh J, Gupta R, Prajapati DC, Rao R. Use of opium containing herbal drug and associated mania. *Asian J Psychiatr.* 2018 Aug;36:36-37. doi: 10.1016/j.ajp.2018.06.006. Epub 2018 Jun 21. PubMed PMID: 29957528.

148: Singh K, Mahajan R, Gupta P, Singh T. Flipped Classroom: A Concept for Engaging Medical Students in Learning. *Indian Pediatr.* 2018 Jun 15;55(6):507-512. Review. PubMed PMID: 29978818.

Technological advances have created immense pressure on our younger generation to keep themselves abreast with the newer developments in medical sciences. Educators have to evolve innovative pedagogy to help prepare this generation for future challenges as the training periods are getting relatively shorter. Flipped classroom or Inverted classroom is one such innovation that can empower a learner to develop critical thinking skills and master ways to imbibe vast information by engaging students in active learning process. Reading and understanding are carried at home, and the class-time is utilized for higher levels of learning like analyzing, evaluating, and application of the basic information. This review

article is aimed to guide the educators in applying the concept of flipped classroom in their teaching learning armamentarium.

149: Singh P, Arora A, Strand TA, Leffler DA, MÅski M, Kelly CP, Ahuja V, Makharia GK. Diagnostic Accuracy of Point of Care Tests for Diagnosing Celiac Disease: A Systematic Review and Meta-Analysis. *J Clin Gastroenterol*. 2018 Jun 16. doi: 10.1097/MCG.0000000000001081. [Epub ahead of print] PubMed PMID: 29912751.

**GOALS:** To perform a systematic review and meta-analysis to estimate the overall diagnostic accuracy of point of care tests (POCTs) for diagnosing celiac disease (CD).

**BACKGROUND:** Recently, POCTs for CD have been developed and are commercially available. Studies have reported significant variability in their sensitivity (70% to 100%) and specificity (85% to 100%).

**STUDY:** We searched MEDLINE, EMBASE databases, and the Cochrane library through June 2017. Positive reference test was defined as villous atrophy along with positive celiac-specific serology and/or clinical improvement after gluten-free diet. Normal duodenal biopsy was defined as negative reference test. Bivariate random-effect model was used to present the summary estimates of sensitivities and specificities along with 95% confidence regions We assessed methodologic quality using the quality assessment of diagnostic accuracy studies-2 tool.

**RESULTS:** The pooled sensitivity and specificity of all POCTs (based on tTG or DGP or tTG+Anti-gliadin antibodies) for diagnosing CD were 94.0% [95% confidence interval (CI), 89.9-96.5] and 94.4% (95% CI, 90.9-96.5), respectively. The pooled positive and negative likelihood ratios for POCTs were 16.7 and 0.06, respectively. The pooled sensitivity and specificity for IgA-tTG-based POCTs were 90.5% (95% CI, 82.3-95.1) and 94.8% (95% CI, 92.5-96.4), respectively.

**CONCLUSIONS:** The pooled sensitivity and specificity of POCTs in diagnosing CD are high. POCTs may be used to screen for CD, especially in areas with limited access to laboratory-based testing. Further research assessing the diagnostic accuracy of individual POCTs and comparing it with other available POCTs is needed.

150: Singh P, Arora A, Strand TA, Leffler DA, Catassi C, Green PH, Kelly CP, Ahuja V, Makharia GK. Global Prevalence of Celiac Disease: Systematic Review and Meta-analysis. *Clin Gastroenterol Hepatol*. 2018 Jun;16(6):823-836.e2. doi: 10.1016/j.cgh.2017.06.037. Epub 2018 Mar 16. PubMed PMID: 29551598.

**BACKGROUND & AIMS:** Celiac disease is a major public health problem worldwide. Although initially it was reported from countries with predominant Caucasian populations, it now has been reported from other parts of the world. The exact global prevalence of celiac disease is not known. We conducted a systematic review and meta-analysis to estimate the global prevalence of celiac disease.

**METHODS:** We searched Medline, PubMed, and EMBASE for the keywords celiac disease, celiac, celiac disease, tissue transglutaminase antibody, anti-endomysium antibody, endomysial antibody, and prevalence for studies published from January 1991 through March 2016. Each article was cross-referenced with the words Asia, Europe, Africa, South America, North America, and Australia. The diagnosis of celiac disease was based on European Society of Pediatric Gastroenterology, Hepatology, and Nutrition guidelines. Of 3843 articles, 96 articles were included in the final analysis.

**RESULTS:** The pooled global prevalence of celiac disease was 1.4% (95% confidence interval, 1.1%-1.7%) in 275,818 individuals, based on positive results from tests for anti-tissue transglutaminase and/or anti-endomysial antibodies (called seroprevalence). The pooled global prevalence of biopsy-confirmed celiac disease was 0.7% (95% confidence interval, 0.5%-0.9%) in 138,792 individuals. The prevalence values for celiac disease were 0.4% in South America, 0.5% in Africa and North America, 0.6% in Asia, and 0.8% in Europe and Oceania; the prevalence was higher in female vs male individuals (0.6% vs 0.4%;  $P < .001$ ). The prevalence

of celiac disease was significantly greater in children than adults (0.9% vs 0.5%;  $P < .001$ ).

**CONCLUSIONS:** In a systematic review and meta-analysis, we found celiac disease to be reported worldwide. The prevalence of celiac disease based on serologic test results is 1.4% and based on biopsy results is 0.7%. The prevalence of celiac disease varies with sex, age, and location. There is a need for population-based prevalence studies in many countries.

151: Singh PK, Sharma S, Ghosh M, Shastri SS, Gupta N, Kabra M. Spectrum of GJB2 gene variants in Indian children with non-syndromic hearing loss. *Indian J Med Res.* 2018 Jun;147(6):615-618. doi: 10.4103/ijmr.IJMR\_76\_16. PubMed PMID: 30168495; PubMed Central PMCID: PMC6118150.

152: Singh PM, Borle A, Panwar R, Makkar JK, McGrath I, Trikha A, Sinha A. Perioperative antiemetic efficacy of dexamethasone versus 5-HT3 receptor antagonists: a meta-analysis and trial sequential analysis of randomized controlled trials. *Eur J Clin Pharmacol.* 2018 Oct;74(10):1201-1214. doi: 10.1007/s00228-018-2495-4. Epub 2018 Jun 1. Review. PubMed PMID: 29858921.

**BACKGROUND:** Dexamethasone has many desirable pharmacologic properties for perioperative use. Its antiemetic potential has been a focus of many recent trials.

**METHODS:** Trials comparing dexamethasone to 5-HT3-receptor antagonists (5HT3-RA) for 24 h postoperative vomiting incidences published till August 2017 were searched in the medical database. Comparisons for antiemetic efficiency variables (vomiting incidence, nausea incidence, rescue antiemetic need, and patients with complete response) during early (until 6 h) and late postoperative phase were made. Comparative analgesic requirements were also evaluated.

**RESULTS:** Twenty randomized controlled double-blinded trials were included in the final analysis. Twenty-four-hour vomiting incidence was similar (Fixed-effects,  $P=0.86$ ,  $I^2=2.94\%$ ). Trial sequential analysis (TSA) confirmed non-inferiority of dexamethasone for 24-h vomiting incidence. ( $\alpha=5\%$ ,  $\beta=20\%$ ,  $\delta=10\%$ ) with "information size" being 1619 (required  $>573$ ). Equivalence was also verified from early and delayed nausea rate as well using TSA. Pooled results did not demonstrate superiority/inferiority of 5-HT3-RAs over dexamethasone in all other antiemetic efficacy variables (early and delayed). Heterogeneity was found to be low in all of the comparisons. Linear-positive dose-response curve for dexamethasone 24-h vomiting and nausea incidence was seen (correlation coefficient being 0.21 and 0.28, respectively). Dexamethasone reduced the analgesic need (MH-odds of 0.64 (95% CI being 0.44 to 0.93)  $P=0.02$ ,  $I^2=0$ ). Possibility of publication bias could not be ruled out (Egger's test, X-intercept=1.41,  $P=0.04$ ).

**CONCLUSIONS:** Dexamethasone demonstrates equal antiemetic efficacy compared to 5-HT3 receptor antagonists. The agents perform equally well both in early postoperative phase and up to 24 h after surgery. Use of dexamethasone replacing 5-HT3 RAs offers an additional advantage of lowering the opioid requirements during the perioperative period.

153: Singh S, Taneja N, Bala P, Verma KK, Devarajan LSJ. Aicardi-GoutiÄres syndrome: cold-induced acral blemish is not always cryoglobulinaemic vasculitis or chilblain lupus. *Clin Exp Dermatol.* 2018 Jun;43(4):488-490. doi: 10.1111/ced.13376. Epub 2018 Jan 17. PubMed PMID: 29341198.

154: Singla R, Kamra D, Sharma R, Katiyar V, Gurjar H. Do Gliomas Behave Differently in Patients with Human Immunodeficiency Virus? *World Neurosurg.* 2018 Jun;114:431. doi: 10.1016/j.wneu.2018.03.104. PubMed PMID: 29791996.

155: Singla R, Katiyar V, Sharma R, Gurjar H. Is decision-making easier post RESCUE ICP trial? *Acta Neurochir (Wien)*. 2018 Jun;160(6):1301-1302. doi: 10.1007/s00701-018-3533-9. Epub 2018 Apr 23. PubMed PMID: 29687252.

156: Soni S, Muthukrishnan SP, Sood M, Kaur S, Sharma R. Hyperactivation of left inferior parietal lobule and left temporal gyri shortens resting EEG microstate in schizophrenia. *Schizophr Res*. 2018 Jun 17. pii: S0920-9964(18)30353-0. doi: 10.1016/j.schres.2018.06.020. [Epub ahead of print] PubMed PMID: 29925477.

**OBJECTIVE:** The momentary spatial configuration of the brain electric field at the scalp reflects quasi-stable "functional microstates" caused by activity of different intracranial generators. There is paucity in literature on the intracranial generators of resting state EEG microstate alterations in stable patients with schizophrenia. The present study aimed to investigate resting state microstate alterations and their neural generators in patients with schizophrenia and their first-degree relatives as compared to healthy controls in an attempt to establish state and trait marker.

**METHOD:** Thirty-four patients with schizophrenia (DSM-5 criteria), 29 first-degree relatives and 25 matched healthy controls participated in the study. Brain activity during eyes closed condition was recorded using 128 channel electroencephalography. Microstates were clustered into 5 maps across groups according to their topography. Microstate map parameters and their cortical sources were compared among groups.

**RESULTS:** Map 5 mean duration ( $\chi^2(2)=7.617$ ,  $p=0.022$ ) was significantly lower in patients compared to controls ( $U=256$ ,  $p=0.010$ ). Maximum activation was seen in left inferior parietal lobule (MNI coordinates: -65, -35, 25, Log-Fmax=0.748). Suprathreshold cortical voxels with increased activations were found localized at left temporal gyri.

**CONCLUSION:** Hyperactivation in left inferior parietal lobule and temporal gyri might have shortened Map 5 duration at rest in patients with schizophrenia. This could imply microstate alterations as the potential state marker of schizophrenia.

157: Sreenivasan SA, Garg K, Singh M, Chandra PS. Letter to the Editor. Cervical intramedullary tumor resection and kyphotic malalignment. *J Neurosurg Spine*. 2018 Sep;29(3):348-350. doi: 10.3171/2018.1.SPINE1896. Epub 2018 Jun 1. PubMed PMID: 29856304.

158: Subbiah A, Mahajan S, Yadav RK, Agarwal SK. Intravenous immunoglobulin therapy for dengue capillary leak syndrome in a renal allograft recipient. *BMJ Case Rep*. 2018 Jun 19;2018. pii: bcr-2018-225225. doi: 10.1136/bcr-2018-225225. PubMed PMID: 29925559.

A 45-year-old man presented 4 months after ABOi renal transplantation with febrile illness and bicytopenia necessitating cessation of mycophenolate mofetil. Dengue non-structural protein 1 antigen (NS1 Ag) test was positive. Lowest total leucocyte count was  $3.1 \times 10^9/L$  and platelet count was  $14 \times 10^9/L$ . As fever subsided, patient became tachypneic with abdominal distention and hypotension. Ultrasonographic evaluation revealed ascites, gall bladder wall oedema and bilateral pleural effusion consistent with dengue capillary leak syndrome. He developed massive ascites with abrupt weight gain of 4 kg within 24 hours and worsening renal dysfunction. Patient was deteriorating rapidly in spite of adequate supportive care and we gave a trial of intravenous immunoglobulin (0.5g/kg/day) for 5 days. Patient improved from day 2, and by day 3, he became haemodynamically stable and recovered completely. Patient was stable at discharge and is on regular follow-up.



159: Subbiah A, Bagchi S, Bhowmik D, Mahajan S, Yadav RK, Chhabra Y, Agarwal S. Dengue fever in renal allograft recipients: Clinical course and outcome. *Transpl Infect Dis.* 2018 Jun;20(3):e12875. doi: 10.1111/tid.12875. Epub 2018 Mar 30. PubMed PMID: 29512853.

**BACKGROUND:** There are annual outbreaks of dengue infection in tropical and subtropical countries. This retrospective study aimed to assess the clinical manifestation of dengue and outcome in renal transplant recipients.

**METHODS:** Renal transplant recipients diagnosed with dengue in the nephrology department during the outbreak from August 2015 to December 2015 were included in the study.

**RESULTS:** Twenty patients developed dengue presenting during the outbreak. Mean age was  $31.9 \pm 8.8$  years and all were males. Two patients had severe dengue (dengue hemorrhagic fever, dengue shock syndrome). Clinical presentation included febrile illness (95%), myalgia (65%), headache (30%), retro-orbital pain (10%), and mucocutaneous bleeding manifestations (10%). Three (15%) had third space fluid accumulation and 2 (10%) had hypotension. Ninety percent patients had thrombocytopenia, with 4 requiring platelet transfusion. Leucopenia (WBC < 4000/mm<sup>3</sup>) developed in 50% patients. About 60% had transient transaminitis. One patient with severe dengue expired and 1 recovered with IV immunoglobulin therapy. About 40% patients had rise in serum creatinine, with complete recovery in all patients.

**CONCLUSION:** Clinical manifestations of dengue infection in renal transplant recipients were similar to that in general population. However, leucopenia necessitating temporary withdrawal of immunosuppression was common. Renal dysfunction was frequent but completely reversible.

160: Sudhanshu S, Riaz I, Sharma R, Desai MP, Parikh R, Bhatia V. Newborn Screening Guidelines for Congenital Hypothyroidism in India: Recommendations of the Indian Society for Pediatric and Adolescent Endocrinology (ISPAE) - Part II: Imaging, Treatment and Follow-up. *Indian J Pediatr.* 2018 Jun;85(6):448-453. doi: 10.1007/s12098-017-2576-x. Epub 2018 Feb 17. Review. PubMed PMID: 29455331.

The Indian Society for Pediatric and Adolescent Endocrinology has formulated Clinical Practice Guidelines for newborn screening, diagnosis and management of congenital hypothyroidism (CH). This manuscript, part II addresses management and follow-up. **RECOMMENDATIONS:** Screening should be done for every newborn using cord blood, or postnatal blood ideally at 48 to 72 h of age. Neonates with screen TSH > 20 mIU/L serum units (or > 34 mIU/L for samples taken between 24 and 48 h of age) should be recalled for confirmation. For screen TSH > 40 mIU/L, immediate confirmatory venous T4/FT4 and TSH, and for mildly elevated screen TSH, a second screening TSH at 7 to 10 d of age, should be taken. Preterm and low birth weight infants should undergo screening at 48-72 h age. Sick babies should be screened at least by 7 d of age. Venous confirmatory TSH > 20 mIU/L before age 2 wk and > 10 mIU/L after age 2 wk, with low T4 (< 10 µg/dL) or FT4 (< 1.17 ng/dL) indicate primary CH and treatment initiation. Imaging is recommended by radionuclide scintigraphy and ultrasonography after CH is biochemically confirmed but treatment should not be delayed till scans are performed. Levothyroxine is commenced at 10-15 µg/kg in the neonatal period. Serum T4/FT4 is measured at 2 wk and TSH and T4/FT4 at 1 mo, then 2 monthly till 6 mo, 3 monthly from 6 mo-3 y and every 3-6 mo thereafter. Babies with the possibility of transient CH should be re-evaluated at age 3 y, to assess the need for lifelong therapy.

161: Talwar S, Bhoje A, Khadagawat R, Chaturvedi P, Sreenivas V, Makhija N, Sahu M, Choudhary SK, Airan B. Oral thyroxin supplementation in infants undergoing cardiac surgery: A double-blind placebo-controlled randomized clinical trial. *J Thorac Cardiovasc Surg.* 2018 Sep;156(3):1209-1217.e3. doi:

10.1016/j.jtcvs.2018.05.044. Epub 2018 Jun 4. PubMed PMID: 30119284.

**BACKGROUND:** Decreases in serum total thyroxin and total triiodothyronine occurs after cardiopulmonary bypass, and is reflected as poor immediate outcome. We studied effects of oral thyroxin supplementation in infants who underwent open-heart surgery.

**METHODS:** In this prospective study, 100 patients were randomized into 2 groups: 50 in the thyroxin group (TH) and 50 in the placebo group (PL). Patients in the TH group received oral thyroxin (5 µg/kg) 12 hours before surgery and once daily for the remainder of their intensive care unit (ICU) stay. Data on intraoperative and postoperative variables were recorded. Cardiac index (CI) was measured. Perioperative serum thyroid hormone levels and serum interleukin-6 and tumor necrosis factor-α were measured. Secondary analysis was performed by dividing patients into simple and complex subcategories.

**RESULTS:** Results of the primary analysis indicated a higher CI in the TH compared with the PL. In the complex category, the mean duration of mechanical ventilation was  $3.85 \pm 0.93$  and  $4.66 \pm 1.55$  days in the TH and PL, respectively ( $P = .001$ ). Mean ICU stay was  $6.79 \pm 2.26$  and  $8.33 \pm 3.09$  days ( $P = .03$ ), and mean hospital stay was  $15.70 \pm 4.77$  and  $18.90 \pm 4.48$  days ( $P = .01$ ) in the TH and PL, respectively. There were no significant differences between the TH and the PL in the simple category. CI was higher in the TH at all time points ( $P = .004$ ). The average therapeutic intervention scoring system scores for the first 2 days were higher in the PL in the complex category.

**CONCLUSIONS:** Oral thyroxin supplementation improves the CI and reduces the inotropic requirement. In addition, it reduces the duration of mechanical ventilation, ICU and hospital stay, and therapeutic intervention scoring system in infants after surgery for complex congenital heart defects.

162: Talwar S, Keshri VK, Gupta SK, Narula J, Choudhary SK, Airan B. Valved patch closure of aortopulmonary window. *Asian Cardiovasc Thorac Ann.* 2018 Jun;26(5):396-399. doi: 10.1177/0218492317714666. Epub 2017 Jun 7. PubMed PMID: 28592142.

The case of an 8-year-old boy with an aortopulmonary window who underwent unidirectional valved patch closure of the window is described. The advantages of unidirectional valved patch closure in this setting are discussed.

163: Temkar S, Karuppaiah N, Takkar B, Bhowmik D, Tripathi M, Ramakrishnan S, Sharma YR, Vohra R, Chawla R, Venkatesh P. Impact of estimated glomerular filtration rate on diabetic macular edema. *Int Ophthalmol.* 2018 Jun;38(3):1043-1050. doi: 10.1007/s10792-017-0557-8. Epub 2017 May 18. PubMed PMID: 28523527.

**PURPOSE:** Diabetic macular edema (DME) is a major cause of visual impairment in patients with diabetes and is influenced by various systemic factors. This study evaluates the effect of renal status on DME using estimated glomerular filtration rate (eGFR) as a study marker.

**METHODS:** This was a prospective observational cross-sectional study. One hundred and ninety-five patients of diabetic retinopathy (DR) were included. Group 1 had patients of DR without DME ( $n = 100$ ), and group 2 had patients of DR with DME ( $n = 95$ ). All patients were evaluated for DR/DME-related risk factors. eGFR was calculated in all patients. Spectral domain optical coherence tomography (SDOCT) was done to identify the various patterns and severity of DME.

**RESULTS:** Group 2 patients had significantly higher comorbidities than those in group 1 ( $p < 0.001$ ). HbA1c, total cholesterol, triglycerides, LDL/HDL ratio, systolic and diastolic blood pressures were significantly higher in group II ( $p < 0.001$  in each). There was no significant difference between the groups in

terms of blood urea, serum creatinine or eGFR. eGFR did not show a significant association with a specific SDOCT pattern or severity of DME.

CONCLUSION: Comorbidities are more common and more severe in patients with DME. However, eGFR as a marker was not useful in predicting either the severity or pattern of DME. eGFR, in its present form, may not be useful in the evaluation and management of patients with DME.

164: Thakran S, Gupta PK, Kabra V, Saha I, Jain P, Gupta RK, Singh A. Characterization of breast lesion using T(1)-perfusion magnetic resonance imaging: Qualitative vs. quantitative analysis. *Diagn Interv Imaging*. 2018 Oct;99(10):633-642. doi: 10.1016/j.diii.2018.05.006. Epub 2018 Jun 14. PubMed PMID: 29910171.

OBJECTIVES: The objective of this study was to quantify the hemodynamic parameters using first pass analysis of T1-perfusion magnetic resonance imaging (MRI) data of human breast and to compare these parameters with the existing tracer kinetic parameters, semi-quantitative and qualitative T1-perfusion analysis in terms of lesion characterization.

MATERIALS AND METHODS: MRI of the breast was performed in 50 women (mean age, 44±11 [SD] years; range: 26-75) years with a total of 15 benign and 35 malignant breast lesions. After pre-processing, T1-perfusion MRI data was analyzed using qualitative approach by two radiologists (visual inspection of the kinetic curve into types I, II or III), semi-quantitative (characterization of kinetic curve types using empirical parameters), generalized-tracer-kinetic-model (tracer kinetic parameters) and first pass analysis (hemodynamic-parameters). Chi-squared test, t-test, one-way analysis-of-variance (ANOVA) using Bonferroni post-hoc test and receiver-operating-characteristic (ROC) curve were used for statistical analysis.

RESULTS: All quantitative parameters except leakage volume ( $V_e$ ), qualitative (type-I and III) and semi-quantitative curves (type-I and III) provided significant differences ( $P<0.05$ ) between benign and malignant lesions. Kinetic parameters, particularly volume transfer coefficient ( $K_{trans}$ ) provided a significant difference ( $P<0.05$ ) between all grades except grade-II vs III. The hemodynamic parameter (relative-leakage-corrected-breast-blood-volume [rBBVcorr]) provided a statistically significant difference ( $P<0.05$ ) between all grades. It also provided highest sensitivity and specificity among all parameters in differentiation between different grades of malignant breast lesions.

CONCLUSION: Quantitative parameters, particularly rBBVcorr and  $K_{trans}$  provided similar sensitivity and specificity in differentiating benign from malignant breast lesions for this cohort. Moreover, rBBVcorr provided better differentiation between different grades of malignant breast lesions among all the parameters.

165: Thergaonkar RW, Narang A, Gurjar BS, Tiwari P, Puraswani M, Saini H, Sinha A, Varma B, Mukerji M, Hari P, Bagga A. Targeted exome sequencing in anti-factor H antibody negative HUS reveals multiple variations. *Clin Exp Nephrol*. 2018 Jun;22(3):653-660. doi: 10.1007/s10157-017-1478-6. Epub 2017 Sep 22. PubMed PMID: 28939980.

BACKGROUND: Genetic susceptibility to atypical hemolytic uremic syndrome (aHUS) may lie within genes regulating or activating the alternate complement and related pathways converging on endothelial cell activation.

METHODS: We tested 32 Indian patients of aHUS negative for antibodies to complement factor H for genetic variations in a panel of 15 genes, i.e., CFH, CFHR1-5, CFI, CFB, C3, CD46, MASP2, DGKE, ADAMTS13, THBD and PLG using next-generation DNA sequencing and for copy number variation in CFHR1-3.

RESULTS: Despite absence of a public database of exome variations in the Indian population and limited functional studies, we could establish a genetic diagnosis

in 6 (18.8%) patients using a stringent scheme of prioritization. One patient carried a likely pathogenic variation. The number of patients carrying possibly pathogenic variation was as follows: 1 variation: 5 patients, 2 variations: 9 patients, 3 variations: 5 patients, 4 variations: 9 patients, 5 variations: 2 patients and 6 variations: 2 patients. Homozygous deletion of CFHR1-3 was present in five patients; none of these carried a diagnostic genetic variation. Patients with or without diagnostic variation did not differ significantly in terms of enrichment of genetic variations that were rare/novel or predicted deleterious, or for possible environmental triggers.

**CONCLUSION:** We conclude that genetic testing for multiple genes in patients with aHUS negative for anti-FH antibodies reveals multiple candidate variations that require prioritization. Population data on variation frequency of the Indian population and supportive functional studies are likely to improve diagnostic yield.

166: Titiyal JS, Kaur M, Brar AS, Falera R. "Meniscus Sign" to Identify the Lenticule Edge in Small-Incision Lenticule Extraction. *Cornea*. 2018 Jun;37(6):799-801. doi: 10.1097/ICO.0000000000001538. PubMed PMID: 29394173.

**PURPOSE:** To describe our technique of lenticule edge identification in small-incision lenticule extraction using the "meniscus sign" to prevent lenticule misdissection.

**METHODS:** Femtosecond laser application for small-incision lenticule extraction was performed. A "double ring" was visible, signifying the edge of the cap cut (outer ring) and lenticule cut (inner ring). The anterior and posterior lamellar planes were delineated in 2 different directions. During creation of the posterior lamellar channel, the lenticule edge was slightly pushed away from the surgeon to create a gap between the inner ring (diameter of the lenticule cut) and the lenticule edge. The lenticule edge assumed a frilled wavy appearance, and the meniscus sign was observed as a gap between the lenticule edge and the inner ring. The meniscus-shaped gap served as a landmark to identify the lenticule edge, and the relationship between the frilled lenticule edge and surgical instruments further acted as a guide to identify the correct plane of dissection.

**RESULTS:** This technique was successfully undertaken in 50 eyes of 25 patients. The meniscus sign was observed in all cases, and no case had cap lenticular adhesions.

**CONCLUSIONS:** The meniscus sign helps to identify the lenticule edge and correct dissection planes and provides a visual landmark during the entire surgical procedure.

167: Tripathy K, Chawla R, Temkar S, Sagar P, Kashyap S, Pushker N, Sharma YR. Phthisis Bulbi—a Clinicopathological Perspective. *Semin Ophthalmol*. 2018;33(6):788-803. doi: 10.1080/08820538.2018.1477966. Epub 2018 Jun 14. Review. PubMed PMID: 29902388.

Phthisis bulbi denotes end-stage eye disease characterized by shrinkage and disorganization of the eye with the resultant functional loss. The major factors associated with the pathogenesis of phthisis are hypotony, deranged blood-ocular barriers, and inflammation. Common causes include trauma, surgery, infection, inflammation, malignancy, retinal detachment, and vascular lesions. A phthisical globe shows a small squared off shape, opaque and thickened cornea, thickened sclera, neovascularization of iris, cataract, cyclitic membrane, ciliochoroidal detachment, and retinal detachment. Microscopic features include internal disorganization, inflammatory reaction, a reactive proliferation of various cells, calcification, and ossification. Early treatment of the causative etiology is the best strategy available to avoid an eye from going into phthisis. A phthisical eye has no visual potential and cosmetic rehabilitation or symptomatic relief of pain remains the mainstay in the management. The authors present a

comprehensive review of the etiopathogenesis, pathology, clinical features, and management of the end-stage ocular disease.

168: Tyagi A, Pramanik R, Chaudhary S, Chopra A, Bakhshi S. Cytogenetic Profiles of 472 Indian Children with Acute Myeloid Leukemia. *Indian Pediatr.* 2018 Jun 15;55(6):469-473. PubMed PMID: 29978812.

**OBJECTIVE:** To analyze the cytogenetic abnormalities of a large cohort of consecutive pediatric Acute Myeloid Leukemia (AML) patients, treated on a uniform protocol.

**DESIGN:** Review of case records.

**SETTING:** Pediatric Cancer Center of tertiary care hospital between June 2003 and June 2016.

**PARTICIPANTS:** 617 consecutive de novo pediatric AML patients were screened and 472 patients were found eligible. Eligibility criteria included non M3 patients, successful cytogenetic profile and availability of complete records.

**MAIN OUTCOME MEASURE:** Cytogenetic profile.

**RESULTS:** Gum-hypertropy, chloromas and rate of complete remission were significantly different between European Leukemia Network classification (ELN) cytogenetic risk groups ( $P < 0.01$ ).  $t(8;21)$  (141, 29.8%), loss of Y chromosome (61, 12.9%) and trisomy 8 (39, 8.3%) were the most common abnormalities. Among the chromosomal gains, trisomy 8 and trisomy 21 (both  $P < 0.01$ ) were significantly different among the three ELN risk groups. Among the chromosome losses, monosomy 5, 7 (both  $P < 0.01$ ) and 9 ( $P = 0.03$ ), loss of X and loss of Y (both  $P < 0.01$ ) were statistically different amongst three cytogenetic risk groups. Event-free survival ( $P < 0.01$ ) and overall survival ( $P < 0.01$ ) were found to be significantly different among the three risk groups.

**CONCLUSIONS:** The higher frequency of  $t(8;21)$  and its association with chloroma in Indian pediatric patients is different from other studies around the world.

169: Vasaikar N, Mahajan U, Patil KR, Suchal K, Patil CR, Ojha S, Goyal SN. D-pinitol attenuates cisplatin-induced nephrotoxicity in rats: Impact on pro-inflammatory cytokines. *Chem Biol Interact.* 2018 Jun 25;290:6-11. doi: 10.1016/j.cbi.2018.05.003. Epub 2018 May 9. PubMed PMID: 29752894.

Cisplatin has been widely used as a first-line agent against various forms of solid cancers. However, nephrotoxicity is the major limiting factor for its clinical use. Several clinical and pre-clinical studies have suggested different strategies for the reduction of cisplatin-induced nephrotoxicity. The present study was conducted to investigate the efficacy of D-Pinitol, against cisplatin-induced nephrotoxicity in Swiss albino mice. A single intraperitoneal injection of cisplatin (20mg/kg) was used to induce nephrotoxicity in mice. Administration of cisplatin in mice is linked with elevated oxidative stress, imbalanced biochemical parameters, apoptosis and stimulation of mitogen-activated protein kinase (MAPK) pathway. D-Pinitol is a member of the flavonoid family and a chief constituent of *Sutherlandia frutescens*. It was administered with saline water (10, 20, 40mg/kg, p.o.) for seven consecutive days after a single dose of cisplatin. At the end of experiment, animals were sacrificed and biochemical parameters in serum and urine were recorded. Kidneys were isolated for the estimation of tumor necrosis factor- $\alpha$ , interleukin- $1\beta$ , interleukin-6 levels and histopathological evaluations. It was noted that D-Pinitol significantly ameliorated biochemical levels of serum and urinary creatinine and blood urea nitrogen. Tissue homogenate levels of TNF- $\alpha$ , IL-6, IL- $1\beta$  and the renal expression of tissue nitrites were also significantly decreased in D-Pinitol treated mice. These results were supplemented by histopathological findings. This study highlights the potential role of D-Pinitol against cisplatin-induced toxicity, exhibited through favorable alterations in biochemical and histological changes as well as reduction in oxidative stress and cytokine levels.

170: Venkatesh P, Kashyap S, Temkar S, Gogia V, Garg G, Bafna RK. Endoillumination (chandelier) and wide-angle viewing-assisted fine-needle aspiration biopsy of intraocular mass lesions. *Indian J Ophthalmol*. 2018 Jun;66(6):845-847. doi: 10.4103/ijo.IJO\_1306\_17. PubMed PMID: 29785997; PubMed Central PMCID: PMC5989511.

Fine-needle aspiration biopsy (FNAB) of intraocular mass lesions is an important intervention in the presence of diagnostic difficulty. FNAB of intraocular mass lesions is also likely to become more commonly recommended for prognostication of tumors such as choroidal melanoma. The most commonly described approach for tumor localization and visualization during FNAB is transillumination and indirect ophthalmoscopic viewing. Herein, we report endoillumination (chandelier) and wide-angle viewing assisted, microscope-based approach for FNAB in two patients using two port minimally invasive vitreoretinal surgical approach. The submission is supported by a video demonstration. The entire procedure was completed under the microscope. Adequate sample was obtained. In the first patient, the inflammatory nature of the lesion was confirmed though magnetic resonance imaging had been reported as melanoma. In the second patient, a clinical diagnosis of amelanotic melanoma was confirmed. Endoillumination-assisted FNAB of intraocular mass lesions is easier to learn and more precise and hence carries lesser risks.

171: Zere E, Chaudhari PK, Sharan J, Dhingra K, Tiwari N. Developing Class III malocclusions: challenges and solutions. *Clin Cosmet Investig Dent*. 2018 Jun 22;10:99-116. doi: 10.2147/CCIDE.S134303. eCollection 2018. Review. PubMed PMID: 29950903; PubMed Central PMCID: PMC6016584.

Class III malocclusion represents a growth-related dentofacial deformity with mandibular prognathism in relation to the maxilla and/or cranial base. Its prevalence varies greatly among and within different races, ethnic groups, and geographic regions studied. Class III malocclusion has a multifactorial etiology, which is the expression of a moderate distortion of normal development as a result of interaction between innate factors or genetic hereditary with environmental factors. Various skeletal topographies of underlying Class III malocclusion are due to discrepancy in the maxillary and mandibular growth along with vertical and/or transverse problems apart from sagittal malformations. The spectrum of complications for Class III malocclusion ranges in gravity from dentoalveolar problems with functional anterior shift of the mandible to true skeletal problems with serious maxillomandibular discrepancies, which makes its diagnosis highly challenging in growing children. Concern regarding early treatment and the need for interceptive care in the case of Class III malocclusion has always been a dilemma, knowing that not all problems will be solved in these cases until maxillomandibular growth is further completed, and the long-term outcome of various treatment approaches may depend on the growth tendency of an individual. Interceptive treatment of Class III malocclusions should be undertaken if it prevents damage to the oral tissues and/or significantly reduces the amount or severity of future orthodontic and surgical interventions. This paper presents an overview of developing Class III malocclusion, with the emphasis on challenges and their solutions based on the best current available evidence.