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

1: Agarwal S, Jain D. Thyroid Cytology in India: Contemporary Review and Meta-analysis. J Pathol Transl Med. 2017 Nov;51(6):533-547. doi: 10.4132/jptm.2017.08.04. Epub 2017 Oct 5. Review. PubMed PMID: 28994274; PubMed Central PMCID: PMC5700878.

Fine-needle aspiration cytology (FNAC) is a screening test for triaging thyroid nodules, aiding in subsequent clinical management. However, the advantages have been overshadowed by the multiplicity of reporting systems and a wide range of nomenclature used. The Bethesda System for Reporting Thyroid Cytopathology (TBSRTC) was formulated in 2007, to give the world a uniform thyroid cytology reporting system, facilitating easy interpretation by the clinicians. Here, we review the status of thyroid FNAC in India in terms of various reporting systems used including a meta-analysis of the previously published data. An extensive literature search was performed using internet search engines. The reports with detailed classification system used in thyroid cytology were included. The meta-analysis of published data was compared with the implied risk of malignancy by TBSRTC. More than 50 studies were retrieved and evaluated. TBSRTC is currently the most widely used reporting system with different studies showing good efficacy and interobserver concordance. Ancillary techniques have, as of now, limited applicability and acceptability in thyroid cytology in India. Twenty-eight published articles met the criteria for inclusion in the meta-analysis. When compared with TBSRTC recommendations, the meta-analysis showed a higher risk of malignancy for categories I and III. Thyroid FNAC is practiced all over India. TBSRTC has found widespread acceptance, with most institutions using this system for routine thyroid cytology reporting. However, reasons for a high malignancy risk for categories I and III need to be looked into. Various possible contributing factors are discussed in the review.

DOI: 10.4132/jptm.2017.08.04
PMCID: PMC5700878
PMID: 28994274

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, Borkar SA, Singla R, Mahapatra AK. Letter to the Editor Regarding "Burr-Hole Drainage for Chronic Subdural Hematoma under Low-Dose Acetylsalicylic Acid: a Comparative Risk Analysis Study". World Neurosurg. 2017 Nov;107:1037. doi: 10.1016/j.wneu.2017.05.160. PubMed PMID: 29059789.

4: Ahmed SM, Garg R, Divatia JV, Rao SC, Mishra BB, Kalandoor MV, Kapoor MC,

Singh B. Compression-only life support (COLS) for cardiopulmonary resuscitation by layperson outside the hospital. Indian J Anaesth. 2017 Nov;61(11):867-873. doi: 10.4103/ija.IJA_636_17. PubMed PMID: 29217851; PubMed Central PMCID: PMC5702999.

The cardiopulmonary resuscitation (CPR) guidelines of compression-only life support (COLS) for management of the victim with cardiopulmonary arrest in adults provide a stepwise algorithmic approach for optimal outcome of the victim outside the hospital by untrained laypersons. These guidelines have been developed to recommend practical, uniform and acceptable resuscitation algorithms across India. As resuscitation data of the Indian population are inadequate, these guidelines have been based on international literature. The guidelines have been recommended after discussion among Indian experts and the recommendations modified to ensure its practical applicability across the country. The COLS emphasises on early recognition of cardiac arrest and activation, early chest compression and early transfer to medical facility. The guidelines emphasise avoidance of any interruption of chest compression, and thus relies primarily on chest compression-only CPR by laypersons.

DOI: 10.4103/ija.IJA_636_17
PMCID: PMC5702999
PMID: 29217851

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

5: Akhtar N, Verma KK, Sharma A. Immunogenetics of cytokine genes in parthenium dermatitis: a review. Eur Ann Allergy Clin Immunol. 2018 Mar;50(2):59-65. doi: 10.23822/EurAnnACI.1764-1489.40. Epub 2017 Nov 27. Review. PubMed PMID: 29384111.

Summary: Parthenium dermatitis is a chronic immuno-inflammatory, distressing skin disease and is mediated by activated T-lymphocyte which is primarily manifested on the exposed sites of the face, neck, hand and flexures. Parthenium hysterophorus is ubiquitous, hence it is diffi-cult to avoid the aero-allergenic antigen parthenin, responsible for the contact dermatitis. The pathogenesis of parthenium dermatitis is characterized by infiltration of T-lymphocytes into challenged skin sites and the development of a cutaneous inflammation due to altered regulatory network of pro and anti-inflammatory cytokines. Regulation of inflammatory events perpetuated by cytokines continues to complicate efforts to analyze both the function of individual cytokine and the influence of candidate gene polymorphism on expression and disease severity. The genetic polymorphisms in these cytokines are significantly affecting immunological parameters and, subsequently, modulation and polarization of immune responses. This review has focused mainly on understanding of the mechanisms of genetic susceptibility of cytokine genes in this disease and, further, this process is likely to achieve significant advances in the diagnosis and management of parthenium dermatitis.

DOI: 10.23822/EurAnnACI.1764-1489.40
PMID: 29384111

6: Akhter MS, Biswas A, Abdullah SM, Behari M, Saxena R. The Role of PAI-1 4G/5G Promoter Polymorphism and Its Levels in the Development of Ischemic Stroke in Young Indian Population. Clin Appl Thromb Hemost. 2017 Nov;23(8):1071-1076. doi: 10.1177/1076029617705728. Epub 2017 May 1. PubMed PMID: 28460568.

The plasminogen activator inhibitor-1 (PAI-1) gene has been found to be associated with the pathogenesis and progression of vascular diseases including stroke. A 4G/5G, PAI-1 gene polymorphism has been found to be associated with the plasma PAI-1 levels in different ethnic populations but results are still controversial. The aim of this study was to determine the potential association of 4G/5G polymorphism and plasma PAI-1 levels in the development of ischemic stroke (IS) in young Asian Indians. One hundred patients with IS and an equal

number of age- and sex-matched controls were studied. The 4G/5G polymorphism was genotyped in the study population through allele-specific polymerase chain reaction. Plasma PAI-1 levels were evaluated using a commercial kit. The PAI-1 levels were significantly higher in patients when compared to the controls (P = .03). The variant 4G allele for the PAI-I 4G/5G polymorphism showed both genotypic (P = .0013, $\chi 2$ = 10.303; odds ratio [OR] = 3.75) as well as allelic association (P = .0004, $\chi 2$ = 12.273; OR = 1.99) with IS. The homozygous variant 4G/4G also was found to be associated with the higher PAI-1 levels (0.005). The variant allele 4G of PAI-1 4G/5G polymorphism and higher plasma PAI-1 levels were found to be significantly associated with IS in young Asian Indians.

DOI: 10.1177/1076029617705728
PMID: 28460568 [Indexed for MEDLINE]

7: Anoop S, Misra A, Bhatt SP, Gulati S, Pandey RM, Mahajan H. High circulating plasma dipeptidyl peptidase- 4 levels in non-obese Asian Indians with type 2 diabetes correlate with fasting insulin and LDL-C levels, triceps skinfolds, total intra-abdominal adipose tissue volume and presence of diabetes: a case-control study. BMJ Open Diabetes Res Care. 2017 Nov 6;5(1):e000393. doi: 10.1136/bmjdrc-2017-000393. eCollection 2017. PubMed PMID: 29188065; PubMed Central PMCID: PMC5704106.

Aim: To evaluate circulating plasma dipeptidyl peptidase-4 (DPP4) levels in non-obese Asian Indians with type 2 diabetes mellitus (T2DM), and to correlate these with metabolic profile and measures of anthropometry, skinfolds, abdominal adipose tissue depots, pancreatic volume, and liver span.
Methodology: Non-obese (body mass index (BMI) <25 kg/m2) patients with T2DM (cases, n=93), diagnosed within 1 year from recruitment, on metformin therapy and BMI-matched, and non-diabetic subjects (controls, n=40) were compared. Measurements of blood glucose, glycosylated hemoglobin, plasma insulin levels, lipid profile, hepatic transaminases and plasma DPP4 levels, and quantification of abdominal fat depots, pancreatic volume and liver span (MRI scan), were done.
Results: Significantly higher ($p<0.001$) circulating plasma DPP4 levels were observed in cases as compared to controls. Specifically, in patients with T2DM with non-alcoholic fatty liver disease (NAFLD) (n=48), the mean plasma DPP4 level (52.6±27.8 ng/mL) was significantly higher ($p<0.05$) as compared with those without NAFLD (n=43; 47±28.3 ng/mL). Significant positive correlation was observed for circulating plasma DPP4 levels with waist-to-hip ratio, total intra-abdominal adipose volume, and liver span. Fasting serum insulin, low-density lipoprotein cholesterol (LDL-C), triceps skinfolds, total intra-abdominal adipose tissue volume and presence of T2DM were significant determinants of circulating plasma DPP4 levels.
Conclusion: Non-obese Asian Indian patients with T2DM and on metformin therapy have significantly higher circulating plasma DPP4 levels as compared to non-obese non-diabetic controls, and these levels correlate with fasting insulin and LDL-C levels, upper limb subcutaneous adipose tissue, intra-abdominal adiposity and presence of diabetes.

DOI: 10.1136/bmjdrc-2017-000393
PMCID: PMC5704106
PMID: 29188065

Conflict of interest statement: Competing interests: None declared.

8: Bahrani K, Singh MB, Bhatia R, Prasad K, Vibha D, Shukla G, Vishnubhatla S, Patterson V. Telephonic review for outpatients with epilepsy-A prospective randomized, parallel group study. Seizure. 2017 Dec;53:55-61. doi: 10.1016/j.seizure.2017.11.003. Epub 2017 Nov 7. PubMed PMID: 29127858.

PURPOSE: Our objective was to assess how telephonic review of outpatients with stable epilepsy compared with conventional face-to-face clinic management.

METHODS: We constructed a randomized parallel group study of suitable patients attending our Epilepsy Clinic and compared telephonic review with conventional clinic visit based management. Primary outcomes were the percentage of patients with breakthrough seizures and total number of breakthrough seizures. We also compared cost, patient satisfaction and numbers defaulting.
RESULTS: A total of 465 patients were randomized and 429 were included in the final analysis. There was no significant difference in breakthrough seizures between the two groups. Mean time spent in the consultation was 10min in the telephone group (FT) and 22h in the face-to-face group (FC) and cost was INR 865 more expensive on an average in the FC group. Satisfaction was over 90% in the FT group. Significantly more people in the FC group were lost to follow-up.
CONCLUSION: This study provides Class I evidence that the number of stable epilepsy patients who have breakthrough seizures and the total number of breakthrough seizures remain the same irrespective of whether patients are reviewed telephonically or face-to-face in the clinic. Clinicians managing epilepsy patients should consider using telephonic review for selected patients. Telephonic reviews have the potential of effectively reducing the secondary treatment gap in millions of patients who do not have easy access to doctors.

DOI: 10.1016/j.seizure.2017.11.003
PMID: 29127858

9: Ballal S, Yadav MP, Damle NA, Sahoo RK, Bal C. Concomitant 177Lu-DOTATATE and Capecitabine Therapy in Patients With Advanced Neuroendocrine Tumors: A Long-term-Outcome, Toxicity, Survival, and Quality-of-Life Study. Clin Nucl Med. 2017 Nov;42(11):e457-e466. doi: 10.1097/RLU.0000000000001816. PubMed PMID: 28872545.

PURPOSE: The purpose of this study was to evaluate the outcome, toxicity, survival, and quality of life in patients with advanced neuroendocrine tumors.
METHODS: One hundred sixty-seven patients were enrolled in the study. All patients underwent baseline Ga-DOTANOC PET/CT scans. Lu-DOTATATE therapy was administered quarterly along with oral capecitabine therapy in group 1 patients (n = 88), whereas group 2 patients (n = 79) were treated only with Lu-DOTATATE. Hematologic, kidney function, liver function tests and chromogranin A levels were recorded before and after therapy at 2-week, 4-week, and 3-month intervals. Biochemical and morphological responses were assessed with the trend in chromogranin A levels and Response Evaluation Criteria in Solid Tumors 1.1 criteria, respectively.
RESULTS: There was no significant difference in the hemoglobin levels after Lu-DOTATATE therapy (P = 0.4892). In most patients, there was a decrease in the platelet levels; however, all the patients had platelet counts greater than 100,000/μL with no platelet toxicity. There was no toxicity related to leukocytes. Two patients showed renal insufficiencies. No hepatotoxicity was observed in any of the patients. According to Response Evaluation Criteria in Solid Tumors 1.1 criteria, in group 1 patients, the response was partial response in 34% of the patients, stable disease in 50.2%, and progressive disease in 6.8% versus partial response in 6.3%, stable disease in 60.9%, and progressive disease in 26.5% among group 2 patients. The median overall survival (OS) and progression-free survival (PFS) was not reached in group 1 patients. The median OS and PFS in group 2 patients were 48 months. Ki-67 tumor proliferation index was significantly associated with increased risk of disease progression.
CONCLUSIONS: Addition of capecitabine therapy with Lu-DOTATATE therapy lengthens the OS and PFS. Patients with aggressive disease may benefit from this synergetic therapeutic approach.

DOI: 10.1097/RLU.0000000000001816
PMID: 28872545 [Indexed for MEDLINE]

10: Bherwani S, Ahirwar AK, Saumya AS, Sandhya AS, Prajapat B, Patel S, Jibhkate SB, Singh R, Ghotekar LH. The study of association of Vitamin B(12) deficiency in type 2 diabetes mellitus with and without diabetic nephropathy in North Indian Population. Diabetes Metab Syndr. 2017 Nov;11 Suppl 1:S365-S368. doi: 10.1016/j.dsx.2017.03.017. Epub 2017 Mar 6. PubMed PMID: 28283394.

AIM: Diabetic Mellitus is the chronic metabolic disorder associated with various complications of heart, eyes, nerves, kidney etc. Diabetic Nephropathy is one of the leading causes of death in diabetic patient. We hypothesized that decrease Vitamin B12 levels is associated with Diabetic Nephropathy. Aim of our study is to study the serum Vitamin B12 levels in type 2 diabetes mellitus patients with and without nephropathy.
METHODS: Our study population consist of 100 subjects out of which 50 cases of Diabetes Mellitus without Diabetic Nephropathy and 50 cases of Diabetes Mellitus with Diabetic Nephropathy. We measured various routine lab parameters, apart from it, we measured spot urinary albumin to creatinine ratio to assess diabetic nephropathy and in special investigation we measured serum Vitamin B12 by chemiluminesence based immunoassay.
RESULT: Serum Vitamin B12 level in the group with nephropathy (181.6±17.6pg/dl) was significantly lower than in the group without nephropathy (286±30.1pg/dl) (p=0.03).
CONCLUSION: Our study points towards the decrease levels of serum Vitamin B12 levels associated with the complication of diabetic mellitus such as diabetic nephropathy. So treatment of Vitamin B12 deficiency by supplementing could prevent the development and progression of diabetic nephropathy and improves the overall management of diabetic patient.

DOI: 10.1016/j.dsx.2017.03.017
PMID: 28283394

11: Chandran N, Parmar A, Deb KS. A Rare Presentation of a Case of Obsessive-compulsive Disorder Comorbid with Bipolar Affective Disorder. Indian J Psychol Med. 2017 Nov-Dec;39(6):794-796. doi: 10.4103/0253-7176.219655. PubMed PMID: 29284814; PubMed Central PMCID: PMC5733431.

Obsessive-compulsive disorder (OCD) is a chronic illness with waxing and waning course. OCD is not uncommonly found to be comorbid with bipolar affective disorder (BPAD). The course and prognosis of OCD have distinctive features in such cases. Only rarely symptoms of OCD emerge during mania in such individuals. We hereby report a very unusual case of OCD comorbid with BPAD in which obsession and compulsion symptoms occurred only during manic episodes with complete remission during periods between manic episodes (including during depressive episodes).

DOI: 10.4103/0253-7176.219655
PMCID: PMC5733431
PMID: 29284814

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

12: Chaturvedi S, Suri V. Proliferation in meningiomas: Introducing objectivity in assessment. Neurol India. 2017 Nov-Dec;65(6):1239-1240. doi: 10.4103/0028-3886.217989. PubMed PMID: 29133693.

13: Chauhan R, Sazawal S, Singh K, Ragesh R Nair R, Chhikara S, Deka R, Chaubey R, Veetil KK, Dange P, Mahapatra M, Saxena R. Reversal of Glanzmann thrombasthenia platelet phenotype after imatinib treatment in a pediatric chronic

myeloid leukemia patient. Platelets. 2018 Mar;29(2):203-206. doi: 10.1080/09537104.2017.1384539. Epub 2017 Nov 29. PubMed PMID: 29185819.

Chronic Myelogenous Leukemia (CML) is a myeloproliferative neoplasm characterized by proliferation of Philadelphia positive clonal pluripotent hematopoietic cells. Bleeding is a rare presentation of CML that can occur due to platelet dysfunction. Both pre-treatment and post-treatment platelet function abnormalities in CML have been described in the literature. We describe a rare case of childhood CML who presented with mucocutateous bleeding manifestations. On laboratory workup, a Glanzmann Thrombasthenia (GT) like platelet phenotype was demonstrated along with confirmation of diagnosis of CML in chronic phase. The acquired nature of platelet function defect was confirmed by demonstrating recovery of platelet antigens glycoprotein IIb/IIIa after achieving complete hematological response with Imatinib. Due to presenting complaint of bleeding diathesis and absence of hepatosplenomegaly, the case was undiagnosed for CML until the patient reported to us. Careful evaluation of complete blood counts, peripheral blood picture and detailed laboratory workup was the window to proper diagnosis and treatment in this case.

DOI: 10.1080/09537104.2017.1384539
PMID: 29185819

14: Chauhan V, Dada R, Jain V. Retracted: Aetiology and clinical profile of children with 46, XY differences of sex development at an Indian referral centre. Andrologia. 2017 Nov;49(9). doi: 10.1111/and.12663. Epub 2016 Aug 8. PubMed PMID: 27501740.

Retraction: 'Aetiology and clinical profile of children with 46, XY differences of sex development at an Indian referral centre' by Vasundhera Chauhan, Rima Dada, Vandana Jain The above article, published online on 8 August 2016 in Wiley Online Library (http://wileyonlinelibrary.com), has been retracted by agreement between the authors, the Journal Editors-in-Chief, Wolf-Bernhard Schill and Ralf Henkel, and Blackwell Verlag GmbH. The retraction has been agreed as the result of an unresolved dispute between the first author and a colleague research fellow due to the inclusion of data from patients who were simultaneously enrolled in two studies being conducted separately by the two parties. Reference Chauhan, V., Dada, R. and Jain, V. (2016), Aetiology and clinical profile of children with 46, XY differences of sex development at an Indian referral centre. Andrologia. doi:10.1111/and.12663.

DOI: 10.1111/and.12663
PMID: 27501740

15: Chhabra YK, Sood S, Rathi O, Mahajan S. Effect of renal transplantation on cognitive function in hemodialysis patients: a longitudinal study. Int Urol Nephrol. 2017 Nov;49(11):2071-2078. doi: 10.1007/s11255-017-1700-1. Epub 2017 Sep 12. Erratum in: Int Urol Nephrol. 2017 Dec 8;:. PubMed PMID: 28900874.

BACKGROUND: The literature notes high prevalence of cognitive function (CF) impairment among hemodialysis patients. Renal transplantation by reversing metabolic factors should improve cognitive function; however, results in post-transplant patients are inconsistent. Lack of longitudinal studies, variable and small patient population, variable renal function and post-transplantation period and use of non-specific tests make results difficult to interpret. We looked at CF in stable hemodialysis patients just prior to live renal transplantation and approximately 3 months subsequently using well-validated electrophysiological study of P300 cognitive potential obtained by auditory oddball paradigm using multiple scalp electrodes.
METHODS: Ten healthy age- and gender-matched controls (group 1) and 20 end-stage

kidney disease (ESKD) male patients on maintenance hemodialysis with no other comorbidities that affect CF were studied before (group 2) and 3 months after successful transplantation (group 3).
RESULTS: ESKD population had mean age of 29.7 ± 7.5 years, with mean dialysis vintage and post-transplant period being 10.3 ± 6.9 and 3.2 ± 0.4 months, respectively. Mean P300 latencies in groups 1, 2 and 3 were 319 ± 33.6, 348.6 ± 27.8 and 316.4 ± 33.4 ms, respectively (P < 0.001 group 1 vs 2 and group 2 vs 3; group 1 vs 3 NS). Mean P300 amplitude in groups 1, 2 and 3 was 27.9 ± 12.8, 13.4 ± 8.6 and 14.6 ± 9.4 μV, respectively (P < 0.001 group 1 vs 2 and group 1 vs 3; group 2 vs 3 NS). P300 latencies correlated negatively with hemoglobin and serum albumin.
CONCLUSIONS: ESKD patients have impaired CF as documented by prolonged P300 latencies. There was normalization of P300 latencies post-transplantation indicating role of uremic toxins in CF impairment.

DOI: 10.1007/s11255-017-1700-1
PMID: 28900874

16: Chhibber-Goel J, Singhal V, Parakh N, Bhargava B, Sharma A. The Metabolite Trimethylamine-N-Oxide is an Emergent Biomarker of Human Health. Curr Med Chem. 2017 Nov 24;24(36):3942-3953. doi: 10.2174/0929867323666160830104025. Review. PubMed PMID: 27573063.

Trimethylamine-N-oxide (TMAO) is a low molecular weight metabolite whose production is dependent on metabolism of its precursors choline, carnitine, creatinine, betaine or lecithin by host gut microbes resulting in the synthesis of trimethylamine (TMA), which is subsequently oxidized to TMAO via hepatic flavin monooxygenase (FMO). TMAO is associated with microbial dysbiosis and is being studied for its linkage with cardiovascular disorders. In addition, dysregulated levels of TMAO have been linked with renal diseases, neurological disorders and cancer. Here we discuss the enzymatic and metabolic landscape that results in TMAO production, and in addition, collate data from numerous clinical studies that have assessed TMAO as a biomarker for various disease conditions. We also summarize the interaction of TMAO with modern and traditional drugs that together affect circulating TMAO levels in the human body.

DOI: 10.2174/0929867323666160830104025
PMID: 27573063 [Indexed for MEDLINE]

17: Choudhary SK, Abraham A, Bhoje A, Gharde P, Sahu M, Talwar S, Airan B. Transaortic edge-to-edge mitral valve repair for moderate secondary/functional mitral regurgitation in patients undergoing aortic root/valve intervention. J Thorac Cardiovasc Surg. 2017 Nov;154(5):1624-1629. doi: 10.1016/j.jtcvs.2017.06.013. Epub 2017 Jun 13. PubMed PMID: 28676179.

OBJECTIVE: The present study evaluates the feasibility, safety, and efficacy of edge-to-edge repair for moderate secondary/functional mitral regurgitation in patients undergoing aortic valve/root interventions.
METHODS: Sixteen patients underwent transaortic edge-to-edge mitral valve repair. Mitral regurgitation was 2+ in 8 patients and 3+ in 6 patients. Two patients in whom cardiac arrest developed preoperatively had severe (4+) mitral regurgitation. Patients underwent operation for severe aortic regurgitation ± aortic root lesions. The mean left ventricular systolic and diastolic diameters were 51.5 ± 12.8 mm and 70.7 ± 10.7 mm, respectively. Left ventricular ejection fraction ranged from 20% to 60%. Primary surgical procedure included Bentall's ± hemiarch replacement in 10 patients, aortic valve replacement in 5 patients, and noncoronary sinus replacement with aortic valve repair in 1 patient.

RESULTS: Severity of mitral regurgitation decreased to trivial or zero in 13 patients, 1+ in 2 patients, and 2+ in 1 patient. There were no gradients across the mitral valve in 9 patients, less than 5 mm Hg in 6 patients, and 9 mm Hg in 1 patient. There was no operative mortality. Follow-up ranged from 2 weeks to 54 months. Echocardiography showed trivial or no mitral regurgitation in 12 patients, 1+ in 2 patients, and 2+ in 2 patients. None of the patients had significant mitral stenosis. The mean left ventricular systolic and diastolic diameters decreased to 40.5 ± 10.3 mm and 58.7 ± 11.6 mm, respectively. Ejection fraction also improved slightly (22%-65%).
CONCLUSIONS: Transaortic edge-to-edge mitral valve repair is a safe and effective technique to abolish secondary/functional mitral regurgitation. However, its impact on overall survival needs to be studied.

DOI: 10.1016/j.jtcvs.2017.06.013
PMID: 28676179

18: Dabas A, Thomas T, Gahlot M, Gupta N, Devasenathipathy K, Khadgawat R. Carotid Intima-medial Thickness and Glucose Homeostasis in Indian Obese Children and Adolescents. Indian J Endocrinol Metab. 2017 Nov-Dec;21(6):859-863. doi: 10.4103/ijem.IJEM_112_17. PubMed PMID: 29285449; PubMed Central PMCID: PMC5729674.

Objective: To evaluate for subclinical atherosclerosis and its risk factors in Indian obese children.
Materials and Methods: A cross-sectional, case-control study was conducted to recruit 80 children aged 6-17 years with constitutional obesity as cases and 23 age- and gender-matched controls with normal body mass index (BMI). Anthropometric and clinical evaluation was followed by biochemical analysis and body fat estimation by dual-energy X-ray absorptiometry in cases. Similar evaluation was performed for controls except laboratory parameters. Carotid intima-media thickness (CIMT) was measured with B-mode ultrasonography in both cases and controls to evaluate subclinical atherosclerosis.
Results: The mean age of cases was 12.8 ± 3 years, with mean BMI of 29.2 ± 4.8 kg/m2. The mean CIMT was significantly higher in cases than controls (0.54 ± 0.13 vs. 0.42 ± 0.08; P < 0.001 across all ages). CIMT was significantly higher in participants who were hypertensive than nonhypertensive (0.6 ± 0.11 vs. 0.53 ± 0.11 mm; P = 0.04). CIMT showed a positive correlation with BMI (r = 0.23, P = 0.02), percentage body fat and fat mass index (r = 0.28 and 0.3 respectively; P < 0.001), but not with waist: hip ratio. CIMT showed significant positive correlation with blood glucose at 60 min (r = 0.22; P = 0.04), serum insulin at 60 min (r = 0.28; P = 0.01) while negative correlation with whole body insulin sensitivity (r = -0.27; P = 0.01).
Conclusion: CIMT correlated significantly to blood pressure, insulin sensitivity, and body fat in Indian obese children.

DOI: 10.4103/ijem.IJEM_112_17
PMCID: PMC5729674
PMID: 29285449

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

19: Dantham S, Srivastava AK, Gulati S, Rajeswari MR. Differentially Regulated Cell-Free MicroRNAs in the Plasma of Friedreich's Ataxia Patients and Their Association with Disease Pathology. Neuropediatrics. 2018 Feb;49(1):35-43. doi: 10.1055/s-0037-1607279. Epub 2017 Nov 27. PubMed PMID: 29179232.

Friedreich's ataxia (FRDA) is a multisystem disease affecting the predominately nervous system, followed by muscle, heart, and pancreas. Current research focused

on therapeutic interventions aimed at molecular amelioration, but there are no reliable noninvasive signatures available to understand disease pathogenesis. The present study investigates the alterations of plasma cell-free microRNAs (miRNAs) in FRDA patients and attempts to find the significance in relevance with the pathogenesis. Total RNA from the plasma of patients and healthy controls were subjected to miRNA microarray analysis using Agilent Technologies microarray platform. Differentially regulated miRNAs were validated by SYBR-green real-time polymerase chain reaction (Thermo Fisher Scientific). The study identified 20 deregulated miRNAs (false discovery rate < 0.01, fold change ≥ 2.0 ≤) in comparison with healthy controls; out of which 17 miRNAs were upregulated, and 3 miRNAs were downregulated. Target and pathway analysis of these miRNAs have shown association with neurodegenerative and other clinical features in FRDA. Further validation (n = 21) identified a set of significant ($p < 0.05$) deregulated miRNAs; hsa-miR-15a-5p, hsa-miR-26a-5p, hsa-miR-29a-3p, hsa-miR-223-3p, hsa-24-3p, and hsa-miR-21-5p in comparison with healthy controls. These miRNAs were reported to influence various pathological features associated with FRDA. The present study is expected to aid in the understanding of disease pathogenesis.

Georg Thieme Verlag KG Stuttgart · New York.

DOI: 10.1055/s-0037-1607279
PMID: 29179232

Conflict of interest statement: Conflict of Interest: The authors have declared no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

20: Dar L, Tandon R. How safe is safe, and where are we in the journey toward safest of safe? Indian J Ophthalmol. 2017 Nov;65(11):1075-1076. doi: 10.4103/ijo.IJO_1054_17. PubMed PMID: 29133628; PubMed Central PMCID: PMC5700570.

21: Das S, Maras JS, Maiwall R, Shasthry SM, Hussain S, Sharma S, Sukriti S, Singh TP, Sarin SK. Molecular Ellipticity of Circulating Albumin-Bilirubin Complex Associates With Mortality in Patients With Severe Alcoholic Hepatitis. Clin Gastroenterol Hepatol. 2017 Nov 16. pii: S1542-3565(17)31359-9. doi: 10.1016/j.cgh.2017.11.022. [Epub ahead of print] PubMed PMID: 29155355.

BACKGROUND & AIMS: Hyperbilirubinemia and hypoalbuminemia are features of hepatic dysfunction that associate with disease severity. This is because hepatic insufficiency causes hypoalbuminemia, which indirectly increases the circulating levels of free bilirubin. Circular dichroism (CD) spectroscopy can be used to quantify the molecular ellipticity (ME) of the albumin-bilirubin complex, and might associate with the severity or outcome of severe alcoholic hepatitis (SAH).
METHODS: We performed a cross-sectional study of 265 patients with SAH admitted in the Department of Hepatology, Institute of Liver and Biliary Sciences in New Delhi, India from January 2014 through January 2016. Blood samples were collected and patients were followed for 12 months or death. The molar ratios of bilirubin: albumin and albumin-bilirubin complexes were determined for a discovery cohort (30 patients who survived the study period and 60 patients who did not survive) and compared with those of 60 patients with alcoholic cirrhosis and 30 healthy individuals (controls). Optical activities of albumin-bilirubin complexes in blood samples were determined by CD spectroscopy and compared among groups. Findings were validated in a separate cohort of 150 patients with SAH from the same institute. We studied the correlation between ME and albumin binding capacity (ABiC).
RESULTS: The molar ratio of bilirubin: albumin was higher in patients with SAH than with alcoholic cirrhosis or controls ($P < .05$). Patients with SAH had different CD spectra and higher ME than the other groups ($P < .01$); ME correlated with model for end-stage liver disease score (with and without Na) and

discriminant function (r2 > .3; P < .01). ME values above a cut off of 1.84 mdeg predicted 3-month mortality in patients with SAH with an area under receiver operating characteristic curve of 0.87 (95% CI, 0.79-0.95), a 77% positive predictive value, and a 90% negative predictive value. The hazard ratio and concordance index of ME values for 3-month mortality in patients with SAH was 10% higher than the hazard ratio and concordance index of model for end-stage liver disease score. In patients with SAH, there was an inverse correlation between ME and ABiC (r2 > 0.7; P < .01). We observed a significant reduction in ABiC with increasing levels of bilirubin in vitro prepared albumin-bilirubin complex. CONCLUSION: In a cross-sectional study of patients with SAH, we associated ME of the albumin-bilirubin complex, measured by CD spectroscopy, with outcomes of patients with SAH. Increased loading of bilirubin on albumin could explain reduced albumin function. Bilirubin removal by albumin dialysis might benefit patients with SAH.

DOI: 10.1016/j.cgh.2017.11.022
PMID: 29155355

22: Dey S, Bose S, Kumar S, Rathore R, Mathur R, Jain S. Extremely low frequency magnetic field protects injured spinal cord from the microglia- and iron-induced tissue damage. Electromagn Biol Med. 2017;36(4):330-340. doi: 10.1080/15368378.2017.1389750. Epub 2017 Nov 15. PubMed PMID: 29140736.

Spinal cord injury (SCI) is insult to the spinal cord, which results in loss of sensory and motor function below the level of injury. SCI results in both immediate mechanical damage and secondary tissue degeneration. Following traumatic insult, activated microglia release proinflammatory cytokines and excess iron due to hemorrhage, initiating oxidative stress that contributes to secondary degeneration. Literature suggests that benefits are visible with the reduction in concentration of iron and activated microglia in SCI. Magnetic field attenuates oxidative stress and promotes axonal regeneration in vitro and in vivo. The present study demonstrates the potential of extremely low frequency magnetic field to attenuate microglia- and iron-induced secondary injury in SCI rats. Complete transection of the spinal cord (T13 level) was performed in male Wistar rats and subsequently exposed to magnetic field (50 Hz,17.96 µT) for 2 h daily for 8 weeks. At the end of the study period, spinal cords were dissected to quantify microglia, macrophage, iron content and study the architecture of lesion site. A significant improvement in locomotion was observed in rats of the SCI + MF group as compared to those in the SCI group. Histology, immunohistochemistry and flow cytometry revealed significant reduction in lesion volume, microglia, macrophage, collagen tissue and iron content, whereas, a significantly higher vascular endothelial growth factor expression around the epicenter of the lesion in SCI + MF group as compared to SCI group. These novel findings suggest that exposure to ELF-MF reduces lesion volume, inflammation and iron content in addition to facilitation of angiogenesis following SCI.

DOI: 10.1080/15368378.2017.1389750
PMID: 29140736

23: Dhiman R, Singh D, Gantayala SP, Ganesan VL, Sharma P, Saxena R. Neuro-Ophthalmology at a Tertiary Eye Care Centre in India. J Neuroophthalmol. 2017 Nov 9. doi: 10.1097/WNO.0000000000000586. [Epub ahead of print] PubMed PMID: 29135814.

BACKGROUND: Neuro-ophthalmology as a specialty is underdeveloped in India. The aim of our study was to determine the spectrum and profile of patients presenting to a tertiary eye care center with neuro-ophthalmic disorders.
METHODS: A retrospective hospital-based study was conducted, and records of all patients seen at the neuro-ophthalmology clinic of Dr. Rajendra Prasad Centre for

Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi, India, over a 1-year period were retrieved and evaluated.
RESULTS: Of a total of 30,111 patients referred to various specialty clinics in a span of 1 year, 1597 (5%) were referred for neuro-ophthalmology evaluation. The mean patient age was 30.8 ± 19.5 years, with a male dominance (M:F = 2.02:1). Among these patients, optic nerve disorders were noted in 63.8% (n = 1,020), cranial nerve palsy in 7% (n = 114), cortical visual impairment in 6.5% (n = 105), and others (eye/optic nerve hypophasia, blepharospasm, and optic disc drusen) in 6% (n = 95). Among the patients with optic nerve disorders, optic neuropathy without disc edema/(traumatic optic neuropathy, hereditary, tumor-related, retrobulbar neuritis, toxic, and idiopathic) was noted in 42.8% (n = 685) and optic neuropathy with disc edema (ischemic optic neuropathy, papilledema, post-papilledema optic atrophy, papillitis, neuroretinitis, and inflammatory optic neuropathy) in 20.9% (n = 335). Sixteen percent of patients (n = 263) were incorrect referrals.
CONCLUSION: The neuro-ophthalmic clinic constitutes a significant referral unit in a tertiary eye care center in India. Traumatic and ischemic optic neuropathies are the most common diagnoses. Neuro-ophthalmology requires further development as a subspecialty in India to better serve the nation's population.

DOI: 10.1097/WNO.0000000000000586
PMID: 29135814

24: Dhungana A, Khilnani G, Hadda V, Guleria R. Reproducibility of diaphragm thickness measurements by ultrasonography in patients on mechanical ventilation. World J Crit Care Med. 2017 Nov 4;6(4):185-189. doi: 10.5492/wjccm.v6.i4.185. eCollection 2017 Nov 4. PubMed PMID: 29152465; PubMed Central PMCID: PMC5680345.

AIM: To prospectively evaluate the reproducibility of diaphragm thickness measurement by ultrasonography at the bedside by critical care physicians in patients on invasive mechanical ventilation.
METHODS: In a prospective observational study of 64 invasively ventilated patients, diaphragmatic thickness measurement was taken by 2 different observers at the same site. Three measurements were taken by each observer and averaged. The intraobserver and interobserver variability was assessed by estimation of intraclass correlation coefficient. The limits of agreement were plotted as the difference between two observations against the average of the two observations in Bland and Altman analysis.
RESULTS: The mean diaphragm thickness at the functional residual capacity was 2.29 ± 0.4 mm and the lower limit of the normal, i.e., the 5th percentile was 1.7 mm (95%CI: 1.6-1.8). The intraclass correlation coefficient for intraobserver variability was 0.986 (95%CI: 0.979-0.991) with a P value of < 0.001. The intraclass correlation coefficient for interobserver variability was 0.987 (95%CI: 0.949-0.997) with a P value of < 0.001. In Bland and Altman analysis, both intraobserver and interobserver measurements showed high limits of agreement.
CONCLUSION: Our study demonstrates that the measurement of diaphragm thickness by ultrasound can be accurately performed by critical care physicians with high degree of reproducibility in patients on mechanical ventilation.

DOI: 10.5492/wjccm.v6.i4.185
PMCID: PMC5680345
PMID: 29152465

Conflict of interest statement: Conflict-of-interest statement: None of the authors have any conflict of interest.

25: Dowlatshahi D, Deshpande A, Aviv RI, Rodriguez-Luna D, Molina CA, Blas YS, Dzialowski I, Kobayashi A, Boulanger JM, Lum C, Gubitz GJ, Padma V, Roy J, Kase CS, Bhatia R, Hill MD, Demchuk AM; PREDICT ICH CTA Study Group. Do Intracerebral Hemorrhage Nonexpanders Actually Expand Into the Ventricular Space? Stroke. 2018

Jan;49(1):201-203. doi: 10.1161/STROKEAHA.117.018716. Epub 2017 Nov 22. PubMed PMID: 29167385.

BACKGROUND AND PURPOSE: The computed tomographic angiography spot sign as a predictor of hematoma expansion is limited by its modest sensitivity and positive predictive value. It is possible that hematoma expansion in spot-positive patients is missed because of decompression of intracerebral hemorrhage (ICH) into the ventricular space. We hypothesized that revising hematoma expansion definitions to include intraventricular hemorrhage (IVH) expansion will improve the predictive performance of the spot sign. Our objectives were to determine the proportion of ICH nonexpanders who actually have IVH expansion, determine the proportion of false-positive spot signs that have IVH expansion, and compare the known predictive performance of the spot sign to a revised definition incorporating IVH expansion.
METHODS: We analyzed patients from the multicenter PREDICT ICH spot sign study. We defined hematoma expansion as ≥6 mL or ≥33% ICH expansion or >2 mL IVH expansion and compared spot sign performance using this revised definition with the conventional 6 mL/33% definition using receiver operating curve analysis.
RESULTS: Of 311 patients, 213 did not meet the 6-mL/33% expansion definition (nonexpanders). Only 13 of 213 (6.1%) nonexpanders had ≥2 mL IVH expansion. Of the false-positive spot signs, 4 of 40 (10%) had >2 mL ventricular expansion. The area under the curve for spot sign to predict significant ICH expansion was 0.65 (95% confidence interval, 0.58-0.72), which was no different than when IVH expansion was added to the definition (area under the curve, 0.66; 95% confidence interval, 0.58-0.71).
CONCLUSIONS: Although IVH expansion does indeed occur in a minority of ICH nonexpanders, its inclusion into a revised hematoma expansion definition does not alter the predictive performance of the spot sign.

DOI: 10.1161/STROKEAHA.117.018716
PMID: 29167385 [Indexed for MEDLINE]

26: Elavarasi A, Goyal V, Vishnu V, Singh MB, Srivastava P. Chronic Inflammatory Demyelinating Polyneuropathy: A Case Series. Indian J Pediatr. 2017 Nov 16. doi: 10.1007/s12098-017-2536-5. [Epub ahead of print] PubMed PMID: 29143254.

27: Elwadhi D, Gupta P. Twin Registries: The Neglected Population Resource. Indian J Psychol Med. 2017 Nov-Dec;39(6):829-830. doi: 10.4103/IJPSYM.IJPSYM_233_17. PubMed PMID: 29284825; PubMed Central PMCID: PMC5733442.

28: Erwin GS, Grieshop MP, Ali A, Qi J, Lawlor M, Kumar D, Ahmad I, McNally A, Teider N, Worringer K, Sivasankaran R, Syed DN, Eguchi A, Ashraf M, Jeffery J, Xu M, Park PMC, Mukhtar H, Srivastava AK, Faruq M, Bradner JE, Ansari AZ. Synthetic transcription elongation factors license transcription across repressive chromatin. Science. 2017 Dec 22;358(6370):1617-1622. doi: 10.1126/science.aan6414. Epub 2017 Nov 30. PubMed PMID: 29192133.

The release of paused RNA polymerase II into productive elongation is highly regulated, especially at genes that affect human development and disease. To exert control over this rate-limiting step, we designed sequence-specific synthetic transcription elongation factors (Syn-TEFs). These molecules are composed of programmable DNA-binding ligands flexibly tethered to a small molecule that engages the transcription elongation machinery. By limiting activity to targeted loci, Syn-TEFs convert constituent modules from broad-spectrum inhibitors of transcription into gene-specific stimulators. Here

we present Syn-TEF1, a molecule that actively enables transcription across repressive GAA repeats that silence frataxin expression in Friedreich's ataxia, a terminal neurodegenerative disease with no effective therapy. The modular design of Syn-TEF1 defines a general framework for developing a class of molecules that license transcription elongation at targeted genomic loci.

DOI: 10.1126/science.aan6414
PMID: 29192133 [Indexed for MEDLINE]

29: Gamad N, Malik S, Suchal K, Vasisht S, Tomar A, Arava S, Arya DS, Bhatia J. Metformin alleviates bleomycin-induced pulmonary fibrosis in rats: Pharmacological effects and molecular mechanisms. Biomed Pharmacother. 2018 Jan;97:1544-1553. doi: 10.1016/j.biopha.2017.11.101. Epub 2017 Nov 22. PubMed PMID: 29793317.

BACKGROUND: Metformin, a commonly used oral antidiabetic agent, is known to possess pleiotropic antioxidant, anti-inflammatory and anti-fibrotic effects. In this study, we evaluated the effect of metformin on pulmonary fibrosis and the mechanism underlying its effect.
METHODS: Pulmonary fibrosis was induced experimentally with bleomycin (0.035 U/g, i.p.) given twice weekly for four weeks. Metformin (125, 250 and 500 mg/kg/day, p.o) was given seven days prior to first injection of bleomycin and continued till 28 days after starting bleomycin injection. Prednisolone (5 mg/kg/day, p.o) was the standard control.
RESULTS: Administration of bleomycin caused pulmonary fibrosis in rats as evidenced by characteristic structural changes in histopathology, increased inflammatory cells in bronchoalveolar lavage fluid, elevated lipid peroxidation marker, depleted endogenous antioxidants and increased inflammatory mediators (TNF-α, IL-6). There were also increased levels of TGF-β, Smad2/3, ERK1/2, p38, JNK, fibronectin, hydroxyproline and type I collagen in bleomycin-control group. All these changes were ameliorated by high dose metformin. It restored structural, biochemical and molecular changes towards normal. This protective effect may be attributed to activation of AMPK by metformin, with consequent reduction in oxidative stress and TGF-β. Moreover, this protective effect was superior to prednisolone as metformin had additional antioxidant and antifibrotic properties.
CONCLUSION: These data suggest that metformin protects against bleomycin-induced pulmonary fibrosis through activation of AMPK and amelioration of TGF-β signaling pathways.

DOI: 10.1016/j.biopha.2017.11.101
PMID: 29793317

30: Gangadaran P, Li XJ, Lee HW, Oh JM, Kalimuthu S, Rajendran RL, Son SH, Baek SH, Singh TD, Zhu L, Jeong SY, Lee SW, Lee J, Ahn BC. A new bioluminescent reporter system to study the biodistribution of systematically injected tumor-derived bioluminescent extracellular vesicles in mice. Oncotarget. 2017 Nov 18;8(66):109894-109914. doi: 10.18632/oncotarget.22493. eCollection 2017 Dec 15. PubMed PMID: 29299117; PubMed Central PMCID: PMC5746352.

In vivo biodistribution and fate of extracellular vesicles (EVs) are still largely unknown and require reliable in vivo tracking techniques. In this study, in vivo bioluminescence imaging (BLI) using Renilla luciferase (Rluc) was developed and applied to monitoring of EVs derived from thyroid cancer (CAL-62 cells) and breast cancer (MDA-MB-231) in nude mice after intravenous

administration and was compared with a dye-based labeling method for EV derived from CAL-62 cells. The EVs were successfully labeled with Rluc and visualized by BLI in mice. In vivo distribution of the EVs, as measured by BLI, was consistent with the results of ex vivo organ analysis. EV-CAL-62/Rluc showed strong signals at lung followed by liver, spleen & kidney ($P < 0.05$). EV-MDA-MB-231/Rluc showed strong signals at liver followed by lung, spleen & kidney ($P < 0.05$). EV-CAL-62/Rluc and EV-MDA-MB-231/Rluc stayed in animal till day 9 and 3, respectively; showed a differential distribution. Spontaneous EV-CAL-62/Rluc shown distributed mostly to lung followed by liver, spleen & kidney. The new BLI system used to show spontaneous distribution of EV-CAL-62/Rluc in subcutaneous CAL-62/Rluc bearing mice. Dye (DiR)-labeled EV-CAL-62/Rluc showed a different distribution in vivo & ex vivo compared to EV-CAL-62/Rluc. Fluorescent signals were predominately detected in the liver ($P < 0.05$) and spleen ($P < 0.05$) regions. The bioluminescent EVs developed in this study may be used for monitoring of EVs in vivo. This novel reporter-imaging approach to visualization of EVs in real time is expected to pave the way for monitoring of EVs in EV-based treatments.

DOI: 10.18632/oncotarget.22493
PMCID: PMC5746352
PMID: 29299117

Conflict of interest statement: CONFLICTS OF INTEREST The authors declare that no competing interests exist.

31: Garg H, Aggarwal S, Misra MC, Priyadarshini P, Swami A, Kashyap L, Jaiswal R. Mid to long term outcomes of Laparoscopic Sleeve Gastrectomy in Indian population: 3-7 year results - A retrospective cohort study. Int J Surg. 2017 Dec;48:201-209. doi: 10.1016/j.ijsu.2017.10.076. Epub 2017 Nov 6. PubMed PMID: 29122706.

INTRODUCTION: Few studies have addressed the mid to long term impact of Laparoscopic Sleeve Gastrectomy (LSG) on weight loss and obesity associated co-morbidities, particularly in Indian population. The aim of this study is to assess the efficacy of LSG in morbid obesity over 3-7 years follow up.
MATERIALS AND METHODS: Data of all patients who underwent LSG between January 2008 and March 2015 and completed their at least 1 year follow up till March 2016 was retrospectively reviewed using a prospectively collected database.
RESULTS: 424 patients undergoing primary LSG were included. The mean age (±2SD) was 39.8 ± 22.5 years and the mean Body Mass Index (BMI) (±2SD) was 46.67 ± 15.8 kg/m2. 124 patients (29.2%) were super-obese (BMI >50 kg/m2). The percentage follow-up at 1 year, 3 years, 5 years and 7 years was 78.3%, 66.7%, 42.3% and 38.4% respectively. The mean percentage Excess weight Loss (%EWL) (±2SD) at 1year, 3years, 5years, and 7years was 71.8 (±50.5%), 64.95% (±41.8%), 61.7% (±46.2%) and 57.15% (±50.2%) respectively. The preoperative BMI significantly correlated with %EWL at 5 year ($r2 = 0.107$, $p = 0.018$). The overall complication rate was 5.8%. Early complications included staple line leak (1.2%), bleeding (1.2%), deep venous thrombosis (0.4%) and 30-day mortality (0.21%). Late complications included stricture formation (0.21%) and new onset Gastro-esophageal Reflux Disease (GERD) (2.8%).At 5 years, 83.3% of diabetic patients showed remission while rest showed improvement in glycemic control with decrease in dosage. 69.3% patients showed improvement in hypertension, 100% patients showed improvement in Obstructive Sleep Apnea Syndrome, 75% patients showed improvement in hypothyroidism after surgery. GERD resolved in 62.8% patients while worsened in 11.4% patients.
CONCLUSIONS: LSG has durable weight loss at 5 year with %EWL of 61% and significant resolution of obesity associated co-morbidities.

DOI: 10.1016/j.ijsu.2017.10.076
PMID: 29122706 [Indexed for MEDLINE]

32: Garg K, Aggarwal A, Singh M. Letter to the Editor. Intraoperative brain relaxation using mannitol. J Neurosurg. 2018 Jan;128(1):326-327. doi: 10.3171/2017.6.JNS171432. Epub 2017 Nov 10. PubMed PMID: 29125415.

33: Garg K, Aggarwal A, Gupta R. Letter to the Editor. Symptomatic degenerative lumbar disease and obesity. J Neurosurg Spine. 2018 Jan;28(1):129. doi: 10.3171/2017.6.SPINE17654. Epub 2017 Nov 3. PubMed PMID: 29087810.

34: Garg K, Singh PM, Aggarwal A. Letter to the Editor Regarding "Extent of T1+C Intensity Is a Predictor of Blood Loss in Resection of Meningioma". World Neurosurg. 2017 Nov;107:1036. doi: 10.1016/j.wneu.2017.06.063. PubMed PMID: 29059788.

35: Garg R, Ahmed SM, Kapoor MC, Rao SC, Mishra BB, Kalandoor MV, Singh B, Divatia JV. Comprehensive cardiopulmonary life support (CCLS) for cardiopulmonary resuscitation by trained paramedics and medics inside the hospital. Indian J Anaesth. 2017 Nov;61(11):883-894. doi: 10.4103/ija.IJA_664_17. PubMed PMID: 29217853; PubMed Central PMCID: PMC5703001.

The cardiopulmonary resuscitation (CPR) guideline of comprehensive cardiopulmonary life support (CCLS) for management of the patient with cardiopulmonary arrest in adults provides an algorithmic step-wise approach for optimal outcome of the patient inside the hospital by trained medics and paramedics. This guideline has been developed considering the infrastructure of healthcare delivery system in India. This is based on evidence in the international and national literature. In the absence of data from the Indian population, the extrapolation has been made from international data, discussed with Indian experts and modified accordingly to ensure their applicability in India. The CCLS guideline emphasise the need to recognise patients at risk for cardiac arrest and their timely management before a cardiac arrest occurs. The basic components of CPR include chest compressions for blood circulation; airway maintenance to ensure airway patency; lung ventilation to enable oxygenation and defibrillation to convert a pathologic 'shockable' cardiac rhythm to one capable to maintaining effective blood circulation. CCLS emphasises incorporation of airway management, drugs, and identification of the cause of arrest and its correction, while chest compression and ventilation are ongoing. It also emphasises the value of organised team approach and optimal post-resuscitation care.

DOI: 10.4103/ija.IJA_664_17
PMCID: PMC5703001
PMID: 29217853

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

36: Garg R, Ahmed SM, Kapoor MC, Mishra BB, Rao SC, Kalandoor MV, Divatia JV, Singh B. Basic cardiopulmonary life support (BCLS) for cardiopulmonary resuscitation by trained paramedics and medics outside the hospital. Indian J Anaesth. 2017 Nov;61(11):874-882. doi: 10.4103/ija.IJA_637_17. PubMed PMID: 29217852; PubMed Central PMCID: PMC5703000.

The cardiopulmonary resuscitation guideline of Basic Cardiopulmonary Life Support (BCLS) for management of adult victims with cardiopulmonary arrest outside the hospital provides an algorithmic stepwise approach for optimal outcome of the victims by trained medics and paramedics. This guideline has been developed considering the need to have a universally acceptable practice guideline for India and keeping in mind the infrastructural limitations of some areas of the country. This guideline is based on evidence elicited in the international and

national literature. In the absence of data from Indian population, the excerpts have been taken from international data, discussed with Indian experts and thereafter modified to make them practically applicable across India. The optimal outcome for a victim with cardiopulmonary arrest would depend on core links of early recognition and activation; early high-quality cardiopulmonary resuscitation, early defibrillation and early transfer to medical facility. These links are elaborated in a stepwise manner in the BCLS algorithm. The BCLS also emphasise on quality check for various steps of resuscitation.

DOI: 10.4103/ija.IJA_637_17
PMCID: PMC5703000
PMID: 29217852

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

37: Gautam S, Meena RK. Primary intracranial leiomyosarcoma presenting with massive peritumoral edema and mass effect: Case report and literature review. Surg Neurol Int. 2017 Nov 20;8:278. doi: 10.4103/sni.sni_219_17. eCollection 2017. PubMed PMID: 29279795; PubMed Central PMCID: PMC5705934.

Background: Primary intracranial leiomyosarcomas (LMSs) are unusual tumors of the central nervous system (CNS) affecting all age groups, and are recently, becoming more prevalent in immunosuppressive conditions such as in patients with human immunodeficiency virus (HIV) infection. However, only a few CNS LMS case reports exist in the English literature, on the occurrence of this rare entity in immunocompetent adults. Even, rarer is a purely intraparenchymal occurrence without any dural attachment in afflicted individuals. To the best of our knowledge, only four such cases have been reported in the literature until now. None of these cases were associated with marked peritumoral brain edema (PTBE) and mass effect as seen in our case and falsely suggesting an underlying glioma.
Case Description: A 45-year-old male patient, presented with headache, right-sided weakness and difficulties with speech over 4 months along with a single generalized tonic clonic seizure. Physical examination revealed mild to moderate papilledema, motor aphasia, and right-sided hemiparesis. Radiographic evaluation showed a large left temporo-parietal mass extending into the basal ganglia with intense heterogeneous contrast enhancement. There was marked perilesional edema and mass effect with midline shift. The patient underwent a left temporo-parietal craniotomy for subtotal resection of the tumor. The post-operative period was uneventful. Histopathology revealed a spindle cell tumor, which stained immunopositive for smooth muscle actin, vimentin, and S-100, yielding the diagnosis of LMS.
Conclusion: Primary intracranial LMS can rarely occur in immuno-competent adult patients and should be considered in the differential diagnosis of intraparenchymal lesions presenting with significant PTBE.

DOI: 10.4103/sni.sni_219_17
PMCID: PMC5705934
PMID: 29279795

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

38: Ghosh-Jerath S, Singh A, Jerath N, Gupta S, Racine EF. Undernutrition and severe acute malnutrition in children. BMJ. 2017 Nov 16;359:j4877. doi: 10.1136/bmj.j4877. Erratum in: BMJ. 2017 Dec 4;359:j5632. PubMed PMID: 29146679.

39: Gipson DS, Selewski DT, Massengill SF, Modes MM, Desmond H, Lee L, Kamil E, Elliott MR, Adler SG, Oh G, Lafayette RA, Gipson PE, Sinha A, Bagga A, Pesenson A, Courtlandt C, Spino C, Eikstadt R, Pitter R, Attalla S, Waldo A, Winneker R, Carlozzi NE, Troost JP, Smokler I, Stone M. NephCure Accelerating Cures Institute: A Multidisciplinary Consortium to Improve Care for Nephrotic Syndrome. Kidney Int Rep. 2017 Nov 28;3(2):439-446. doi: 10.1016/j.ekir.2017.11.016.

eCollection 2018 Mar. PubMed PMID: 29725648; PubMed Central PMCID: PMC5932133.

Introduction: NephCure Accelerating Cures Institute (NACI) is a collaborative organization sponsored by NephCure Kidney International and the University of Michigan. The Institute is composed of 7 cores designed to improve treatment options and outcomes for patients with glomerular disease: Clinical Trials Network, Data Warehouse, Patient-Reported Outcomes (PRO) and Endpoints Consortium, Clinical Trials Consulting Team, Quality Initiatives, Education and Engagement, and Data Coordinating Center.
Methods: The Trials Network includes 22 community- and hospital-based nephrology practices, 14 of which are trial-only sites. Eight sites participate in the NACI Registry, and as of October 2017, 1054 patients are enrolled with diagnoses including but not limited to focal segmental glomerulosclerosis, minimal change disease, membranous nephropathy, IgA nephropathy, and childhood-onset nephrotic syndrome. By using electronic health record data extraction, robust and efficient clinical data are captured while minimizing the burden to site-based network staff.
Results: The Data Warehouse includes her-extracted data from registry patients, PRO development data, and data from completed observational studies and clinical trials. The Clinical Trial Consulting Team provides support for trial design in rare diseases leveraging these data. The PRO and Endpoints Consortium develops shorter-term endpoints while capturing the patient-reported significance of interventions under study. The Quality Initiatives and Education/Engagement cores elevate the level of care for patients. The Data Coordinating Center manages the analysis and operations of the Institute.
Conclusion: By engaging with patients, academia, industry, and patient advocate community representatives, including our Patient Advisory Board, NACI strives for better outcomes and treatments using evidence-based support for clinical trial design.

DOI: 10.1016/j.ekir.2017.11.016
PMCID: PMC5932133
PMID: 29725648

40: Goswami P, Sonika U, Moka P, Sreenivas V, Saraya A. Intestinal Fatty Acid Binding Protein and Citrulline as Markers of Gut Injury and Prognosis in Patients With Acute Pancreatitis. Pancreas. 2017 Nov/Dec;46(10):1275-1280. doi: 10.1097/MPA.0000000000000924. PubMed PMID: 28984785.

OBJECTIVES: Severe acute pancreatitis (AP) is associated with high mortality due to systemic inflammatory response syndrome in the early phase and secondary infection in the later phase. Concomitant intestinal ischemia often results in gut injury. We studied intestinal fatty acid binding protein (IFABP) and citrulline levels as markers of gut injury to predict prognosis in AP.
METHODS: Acute pancreatitis patients at admission and controls were studied. Serum IFABP was measured by enzyme-linked immunosorbent assay and plasma citrulline by high-performance liquid chromatography technique. Ultrastructural changes in duodenal biopsy were also compared between the 2 groups.
RESULTS: The IFABP concentration was significantly higher in AP cases (n = 94) compared with controls (n = 100) (mean [standard deviation], 592.5 [753.6] vs 87.8 [67.6] pg/mL; P < 0.001) and in patients with severe AP versus mild AP (738.3 [955.3] vs 404.0 [263.3] pg/ mL, P = 0.03). Citrulline concentration was lower in AP versus controls (29.9 [33.8] vs 83.9 [60.1] μg/L, P < 0.001). We propose a model by which these biomarkers (IFABP >350 pg/mL and citrulline <18 μg/L) are able to predict poor prognosis in 33.9% of patients with AP. The gut injury was also validated via ultrastructural changes.
CONCLUSIONS: Intestinal fatty acid binding protein is a promising prognostic marker in acute pancreatitis.

DOI: 10.1097/MPA.0000000000000924
PMID: 28984785 [Indexed for MEDLINE]

41: Goyal R, Mittal G, Yadav AK, Sethi R, Chattopadhyay A. Adductor canal block for post-operative analgesia after simultaneous bilateral total knee replacement: A randomised controlled trial to study the effect of addition of dexmedetomidine to ropivacaine. Indian J Anaesth. 2017 Nov;61(11):903-909. doi: 10.4103/ija.IJA_277_17. PubMed PMID: 29217856; PubMed Central PMCID: PMC5703004.

Background and Aims: Knee replacement surgery causes tremendous post-operative pain and adductor canal block (ACB) is used for post-operative analgesia. This is a randomised, controlled, three-arm parallel group study using different doses of dexmedetomidine added to ropiavcaine for ACB.
Methods: A total of 150 patients aged 18-75 years, scheduled for simultaneous bilateral total knee replacement, received ultrasound-guided ACB. They were randomised into three groups -Group A received ACB with plain ropivacaine; Groups B and C received ACB with ropivacaine and addition of dexmedetomidine 0.25 μg/kg and 0.50 μg/kg, respectively, on each side of ACB. The primary outcome was the duration of analgesia. Total opioid consumption, success of early ambulation, and level of patient satisfaction were also assessed.
Results: The patient characteristics and block success rates were comparable in all groups. Group C patients had longer duration of analgesia (Group C 18.4 h ± 7.4; Group B 14.6 ± 7.1; Group A 10.8 ± 7; $P < 0.001$); lesser tramadol consumption (Group C 43.8 mg ± 53.2; Group B 76.4 ± 49.6; Group A 93.9 mg ± 58.3; $P < 0.001$) and lesser pain on movement ($P < 0.001$). The patients in Group B and C walked more steps than in Group A ($P < 0.002$). The level of patient satisfaction was highest in Group C ($P < 0.001$).
Conclusions: The addition of dexmedetomidine to ropivacaine resulted in longer duration of analgesia after adductor canal block for simultaneous bilateral total knee replacement surgery.

DOI: 10.4103/ija.IJA_277_17
PMCID: PMC5703004
PMID: 29217856

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

42: Goyal V. Neurological perspective of globus pallidus interna deep brain stimulation in dystonia. Neurol India. 2017 Nov-Dec;65(6):1231. doi: 10.4103/0028-3886.217994. PubMed PMID: 29133689.

43: Gulati S, Sondhi V. Cerebral Palsy: An Overview. Indian J Pediatr. 2017 Nov 20. doi: 10.1007/s12098-017-2475-1. [Epub ahead of print] Review. PubMed PMID: 29152685.

Cerebral palsy (CP) is a neurodevelopmental disorder characterized by abnormalities of muscle tone, movement and motor skills, and is attributed to injury to the developing brain. The clinical features of this entity evolve over time and the specific CP syndrome may be recognizable only after 3-5 y of age; although suggestive signs and symptoms may be present at an earlier age. The management involves neurological rehabilitation (addressing muscle tonal abnormalities, and devising physical and occupational therapies) and diagnosis and management of co-morbidities (including epilepsy, impairment of cognition, vision, hearing, and disturbances of growth and gastrointestinal function). The management, therefore, is multidisciplinary involving the treating physician working with a team of rehabilitation-, orthopedic-, psychologic-, and social care- providers.

DOI: 10.1007/s12098-017-2475-1
PMID: 29152685

44: Gulati S, Patel H, Chakrabarty B, Dubey R, Arora NK, Pandey RM, Paul VK,

Ramesh K, Anand V, Meena A. Development of All India Institute of Medical Sciences-Modified International Clinical Epidemiology Network Diagnostic Instrument for Neuromotor Impairments in Children Aged 1 Month to 18 Years. Front Public Health. 2017 Nov 21;5:313. doi: 10.3389/fpubh.2017.00313. eCollection 2017. PubMed PMID: 29209604; PubMed Central PMCID: PMC5702309.

Introduction: There is shortage of specialists for the diagnosis of children with neuromotor impairments (NMIs), especially in resource limited settings. Existing International Clinical Epidemiology Network (INCLEN) instrument for diagnosing NMI have been validated for children aged 2-9 years. The current study modified the same including wider symptomatology and age group (1 month to 18 years).
Methods: The Modified INCLEN diagnostic tool (INDT) was developed by a team of experts by modifying the existing tool to widen the age range (1 month to 18 years) and include broader symptomatology (inclusion of milestones from the first 2 years of life and better elucidation of cerebellar and extrapyramidal features) in a tertiary care teaching hospital of North India between January and April 2015. A trained medical graduate applied the candidate tool, which was followed by gold standard evaluation by a Pediatric Neurologist (both blinded to each other).
Results: A total of 197 children (102 with NMI and 95 without NMI) were enrolled for the study. The sensitivity, specificity, positive and negative predictive values, positive and negative likelihood ratio of the modified NMI tool were 90.4% (82.6-95.5), 95.5% (88.7-98.7), 95.5% (88.9-98.7), 90.3% (82.4-95.5), 19.9 (12.1-32.6), and 0.13 (0.08-0.12), respectively.
Conclusion: The All India Institute of Medical Sciences modified INDT NMI tool is a simple and structured instrument covering a wider symptomatology in the 1 month to 18 years age group with acceptable diagnostic accuracy.

DOI: 10.3389/fpubh.2017.00313
PMCID: PMC5702309
PMID: 29209604

45: Gupta A, Parakh N, Juneja R. Right bundle branch block pattern after uncomplicated right ventricular outflow tract pacing in a patient with a left sided superior vena cava and corrected tetralogy of Fallot. Indian Pacing Electrophysiol J. 2018 Jan - Feb;18(1):39-41. doi: 10.1016/j.ipej.2017.11.005. Epub 2017 Nov 26. PubMed PMID: 29183713; PubMed Central PMCID: PMC5840853.

Usually an electrocardiogram after right ventricular (RV) pacing should yield left bundle branch block (LBBB) pattern. However, the presence of right bundle branch block (RBBB) pattern after pacemaker implantation should alert the physician to a malposition of lead. We report a case of 18-year-old female who underwent dual chamber pacemaker implantation and had RBBB pattern post implantation. Detailed evaluation revealed an uncomplicated right ventricular outflow tract pacing. The possible causes of this abnormal pattern after an uncomplicated RV pacing are also reviewed.

DOI: 10.1016/j.ipej.2017.11.005
PMCID: PMC5840853
PMID: 29183713

46: Gupta A, Khenduja P, Pandey RM, Sati HC, Sofi NY, Kapil U. Dietary Intake of Minerals, Vitamins, and Trace Elements Among Geriatric Population in India. Biol Trace Elem Res. 2017 Nov;180(1):28-38. doi: 10.1007/s12011-017-0972-8. Epub 2017 Mar 20. PubMed PMID: 28321633.

The geriatric population is at a high risk of developing deficiencies of essential micronutrients such as minerals, vitamins, and trace elements and their

related deficiency signs and symptoms. Scarce data is available on the dietary intake of essential micronutrients among geriatric subjects in India. Hence, to fill the gap in the existing knowledge, a community-based cross-sectional study was conducted during 2015-2016 in District Nainital, Uttarakhand State, India. A total of 255 geriatric subjects were enrolled from 30 clusters (villages) identified by using population proportionate to size sampling methodology. Data were collected on sociodemographic profile and dietary intake of essential micronutrients (24-h dietary recall, food frequency questionnaire) from all the geriatric subjects. A high percentage of geriatric subjects did not consume the recommended daily intake for essential micronutrients such as energy (78%), protein (78%), calcium (51%), thiamine (33%), riboflavin (64%), niacin (88%), vitamin C (42%), iron (72%), folic acid (72%), magnesium (48%), zinc (98%), copper (81%) and chromium (89%) adequately. Food groups rich in essential micronutrients such as pulses, green leafy vegetables, roots and tubers, other vegetables, fruits, nonvegetarian food items, and milk and milk products were consumed irregularly by the subjects. The overall intake of energy and essential micronutrients was inadequate among the geriatric population in India, possibly due to poor quality and quantity of the diet consumed.

DOI: 10.1007/s12011-017-0972-8
PMID: 28321633

47: Gupta N, Jain V. Prader Willi Syndrome - A Common Epigenetic Cause of Syndromic Obesity. Indian J Pediatr. 2017 Nov;84(11):809-810. doi: 10.1007/s12098-017-2512-0. Epub 2017 Oct 2. PubMed PMID: 28971315.

48: Gupta S, Lodha R, Kabra SK. Asthma, GERD and Obesity: Triangle of Inflammation. Indian J Pediatr. 2017 Nov 11. doi: 10.1007/s12098-017-2484-0. [Epub ahead of print] Review. PubMed PMID: 29127618.

There is increasing prevalence of both asthma and obesity in children globally in recent years. Various epidemiological studies link obesity as a risk factor for asthma and suggest a possible causal association. Obesity asthma phenotype is considered as distinct in view of greater severity and poor asthma control. Various mechanisms underlying this phenotype have been suggested including mechanical effects of obesity and systemic inflammation, but still the exact mechanism is unclear. Also, the comorbidities like gastroesophageal reflux disease (GERD) and sleep disordered breathing (SDB) lead to inflammation in airways and contribute to asthma obesity association. A better understanding of mechanisms by which obesity and GERD lead to inflammation in airways and increase the risk of asthma may provide insight towards targeted treatment approach of these patients.

DOI: 10.1007/s12098-017-2484-0
PMID: 29127618

49: Gupta V, Somarajan BI, Walia GK, Kaur J, Kumar S, Gupta S, Chaurasia AK, Gupta D, Kaushik A, Mehta A, Gupta V, Sharma A. Role of CYP1B1, p.E229K and p.R368H mutations among 120 families with sporadic juvenile onset open-angle glaucoma. Graefes Arch Clin Exp Ophthalmol. 2018 Feb;256(2):355-362. doi: 10.1007/s00417-017-3853-0. Epub 2017 Nov 22. PubMed PMID: 29168043.

BACKGROUND: To determine the frequency of CYP1B1 p.E229K and p.R368H, gene mutations in a cohort of sporadic juvenile onset open-angle glaucoma (JOAG) patients and to evaluate their genotype/phenotype correlation.
METHODS: Unrelated JOAG patients whose first-degree relatives had been examined and found to be unaffected were included in the study. The patients and their parents were screened for p.E229K and p.R368H mutations. The phenotypic characteristics were compared between probands carrying the mutations and those who did not carry these mutations.

RESULTS: Out of 120 JOAG patients included in the study, the p.E229K mutation was seen in 9 probands (7.5%) and p.R368H in 7 (5.8%). The average age of onset of the disease (p=0.3) and the highest untreated IOP (p=0.4) among those carrying mutations was not significantly different from those who did not have these mutations. The proportion of probands with angle dysgenesis among those with p.E229K and p.R368H mutations was 70% (11 out of 16) in comparison to 65% (67 out of 104) of those who did not harbour these mutations (p=0.56). Similarly, the probands with moderate to high myopia among those with p.E229K and p.R368H mutations was 20% (3 out of 16) in comparison to 18% (18 out of 104) of those who did not harbour these mutations (p=0.59).
CONCLUSION: The frequency of p.E229K and p.R368H mutations of the CYP1B1 gene is low even among sporadic JOAG patients. Moreover, there is no clinical correlation between the presence of these mutations and disease severity.

DOI: 10.1007/s00417-017-3853-0
PMID: 29168043 [Indexed for MEDLINE]

50: Gupta V, Taneja N, Khaitan BK, Singh M. Partial unilateral lentiginosis with ipsilateral ocular involvement and seizures. Indian J Dermatol Venereol Leprol. 2017 Nov 24. doi: 10.4103/ijdvl.IJDVL_1025_16. [Epub ahead of print] PubMed PMID: 29176249.

51: Gupta V, Chaurasia AK, Gupta S, Gorimanipalli B, Sharma A, Gupta A. In Vivo Analysis of Angle Dysgenesis in Primary Congenital, Juvenile, and Adult-Onset Open Angle Glaucoma. Invest Ophthalmol Vis Sci. 2017 Nov 1;58(13):6000-6005. doi: 10.1167/iovs.17-22695. PubMed PMID: 29183046.

Purpose: The purpose of this study was to comparatively evaluate angle dysgenesis in vivo, among congenital, juvenile, and adult-onset open angle glaucoma patients.
Methods: A cross-sectional evaluation of 96 glaucoma patients, 22 children with primary congenital glaucoma (PCG) old enough to cooperate for optical coherence tomography (OCT), 34 juvenile-onset open angle glaucoma (JOAG) patients, 40 adult-onset primary open angle glaucoma (POAG), and 30 healthy subjects, was carried out using high-resolution anterior segment spectral domain (SD)-OCT. Subgroup analysis was done for presence/ absence of angle dysgenesis as defined by presence of abnormal tissue/hyperreflective membrane within angle recess and/or absence of Schlemm's canal (SC).
Results: Morphologic features suggestive of angle dysgenesis such as the presence of abnormal tissue at the angle and a hyperreflective membranous structure covering the meshwork were seen in all PCG eyes (100%), in 14 (40%) JOAG eyes, and none of the POAG eyes in comparison to healthy eyes (P = 0.01, P = 0.03, and P = 0.23 for PCG, JOAG, and POAG, respectively). SC could be seen in 27 (90%) healthy eyes compared with only 7 (30%) in PCG (P = 0.01) 20 (60%) JOAG eyes (P = 0.03), and 26 (65%) adult-onset POAG eyes (P = 0.23; $\chi 2$ test).
Conclusions: Angle dysgenesis in the form of abnormal tissue at the angle/hyperreflective membrane and/or absence of SC could be identified on anterior segment SD-OCT, which can be used for in vivo evaluation of eyes with developmental glaucoma.

DOI: 10.1167/iovs.17-22695
PMID: 29183046 [Indexed for MEDLINE]

52: Gupta V, Sahoo AK, Singh G, Agarwal R, Xess I, Agarwal S, Gupta S. Tinea corporis presenting as disseminated verrucous plaques caused by Arthroderma incurvatum in a young Indian boy. Australas J Dermatol. 2017 Nov;58(4):e265-e267. doi: 10.1111/ajd.12606. Epub 2017 Jul 21. PubMed PMID: 28731578.

53: Gupta V, Subhadarshani S, Wig N, Khandpur S, Verma KK. A rare graft-versus-host disease-like thymoma-associated paraneoplastic autoimmune

multiorgan syndrome. Australas J Dermatol. 2017 Nov;58(4):e262-e263. doi: 10.1111/ajd.12590. Epub 2017 Jul 7. PubMed PMID: 28685829.

54: Ismail J, Chidambaram M, Sankar J, Agarwal S, Lodha R. Disseminated Cryptococcosis Presenting as Miliary Lung Shadows in an Immunocompetent Child. J Trop Pediatr. 2017 Nov 21. doi: 10.1093/tropej/fmx083. [Epub ahead of print] PubMed PMID: 29177510.

Disseminated cryptococcosis is infrequent in immunocompetent children. Pulmonary and central nervous system are the commonly involved sites of infection in an immunocompromised host. We report a fatal case of disseminated cryptococcosis in an immunocompetent host presenting as fever of unknown origin with miliary shadows on chest radiograph, mimicking tuberculosis. In countries with the heavy burden of tuberculosis, a high index of suspicion is needed for early diagnosis of its close mimics like disseminated cryptococcosis.

DOI: 10.1093/tropej/fmx083
PMID: 29177510

55: Jain A, Bakhshi S, Thakkar H, Gerards M, Singh A. Elevated mitochondrial DNA copy numbers in pediatric acute lymphoblastic leukemia: A potential biomarker for predicting inferior survival. Pediatr Blood Cancer. 2018 Mar;65(3). doi: 10.1002/pbc.26874. Epub 2017 Nov 14. PubMed PMID: 29134740.

BACKGROUND: Studies on mitochondrial DNA copy number reveal an increase or decrease in copy number that appears to be cancer specific, but data on acute lymphoblastic leukemia have been inconsistent regarding the significance of changes in mitochondrial DNA copies. The purpose of this pilot study was to analyze mitochondrial DNA copy number and mitochondrial DNA integrity.
PROCEDURE: Copy number and mitochondrial deletion ratios were estimated in the bone marrow of 51 patients and peripheral blood of 30 healthy controls using quantitative real-time PCR. The copy number values were correlated with prognostic markers in patients.
RESULTS: Significantly increased mitochondrial DNA copy number (P-value < 0.0001) and increased mitochondrial deletion ratios (P-value = 0.0018) were observed in patients compared with controls. The copy numbers were significantly decreased in patients after chemotherapy (P-value = 0.0232). Patients with higher copy numbers exhibited significantly inferior survival than patients with lower copy numbers (for event-free survival, P-value = 0.04 and overall survival, P-value = 0.1175).
CONCLUSIONS: Significant decreases in mitochondrial DNA copy number with therapy indicates that copy number could be evaluated as a potential marker for therapeutic efficacy and a higher mitochondrial DNA copy number could be a poor prognostic marker.

DOI: 10.1002/pbc.26874
PMID: 29134740

56: Jain D, Ghosh S, Teixeira L, Mukhopadhyay S. Pathology of pulmonary tuberculosis and non-tuberculous mycobacterial lung disease: Facts, misconceptions, and practical tips for pathologists. Semin Diagn Pathol. 2017 Nov;34(6):518-529. doi: 10.1053/j.semdp.2017.06.003. Epub 2017 Jun 7. Review. PubMed PMID: 28693908.

Most pathologists are familiar with the microscopic features of tuberculosis and the need to examine special stains for acid-fast bacteria (AFB) in cases of

granulomatous lung disease. However, misconceptions do exist, including the concept that finding AFB in "caseating granulomas" confirms the diagnosis of tuberculosis. This dogma is attributable to the high prevalence of tuberculosis in many countries, as well as unfamiliarity with the microscopic spectrum of non-tuberculous mycobacterial lung disease. This review aims to provide surgical pathologists with practical tips to identify AFB, illustrate the histologic overlap between pulmonary tuberculosis and non-tuberculous mycobacterial lung disease, and highlight the importance of cultures in this setting. M. tuberculosis and non-tuberculous mycobacteria cannot be reliably differentiated either on the basis of the tissue reaction or by bacterial morphology on acid-fast stains. Although a presumptive clinical diagnosis of tuberculosis can be made without culture-confirmation, the only definitive means to determine the true identity of AFB is by cultures or molecular methods. Making this distinction is most critical when AFB are found in incidentally detected lung nodules in geographic locations where the incidence of tuberculosis is low, because in such settings AFB in necrotizing granulomas of the lung are more likely to be non-tuberculous mycobacteria than M. tuberculosis.

DOI: 10.1053/j.semdp.2017.06.003
PMID: 28693908 [Indexed for MEDLINE]

57: Jain R, Quraishi R, Ambekar A, Verma A, Gupta P. Dried urine spots for detection of benzodiazepines. Indian J Pharmacol. 2017 Nov-Dec;49(6):465-469. doi: 10.4103/ijp.IJP_578_16. PubMed PMID: 29674802; PubMed Central PMCID: PMC5892029.

BACKGROUND AND AIM: Benzodiazepines (BZD) are widely prescribed to substance users. However, the nonmedical use of prescription BZD often leads to abuse and dependence. Therefore, it is important to detect BZD among substance users seeking treatment. The aim of the present study was to develop an efficient method for testing BZD on dried urine spot (DUS) and evaluating its clinical applicability.
METHODS: This involved optimization of conditions for the detection, recovery, and stability of BZD from dried urine, spotted on filter paper. Enzyme linked immuno-sorbent assay was used for screening whereas confirmation was done by gas chromatography. For clinical applicability, urine samples of BZD users were tested.
RESULTS: The recovery was found to be 99.7% in de-ionized water from 20 µl spotted urine samples. Limit of detection, inter-day and intra-day CV were found to be 100 ng/ml, 4.22% and 3.83%, respectively. BZD were found stable in DUS for 3 weeks at room temperature, and for 3 months at 4°C and -20°C. All the urine samples of benzodiazepine users were found positive by conventional method as well as the DUS method.
CONCLUSION: DUS method proved to be efficient for BZD testing with advantages of ease of collection, transportation, minimal invasiveness and small sample volume. It offers a useful alternative for BZD testing especially in developing countries where logistics of sample collection and transportation could be an important concern.

DOI: 10.4103/ijp.IJP_578_16
PMCID: PMC5892029
PMID: 29674802

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

58: Jain R, Mukherjee A, Singla M, Verma Y, Gautam H, Lodha R, Singh UB, Kabra SK. Predictors of Microbiologically Confirmed Intrathoracic Tuberculosis. Indian J Pediatr. 2017 Nov;84(11):843-847. doi: 10.1007/s12098-017-2467-1. Epub 2017 Sep 19. PubMed PMID: 28924924.

OBJECTIVE: To identify risk factors for microbiologically confirmed intrathoracic tuberculosis in children.
METHODS: Children, 6 mo to 15 y of age, attending the out-patient department of a tertiary care centre in India, with probable intrathoracic tuberculosis were enrolled. Microbiological confirmation of tuberculosis was defined as positivity on smear (Ziehl-Neelsen staining) and/or Xpert MTB/RIF and/or MGIT-960 culture. Association of various factors with microbiological confirmation were assessed by univariate and multivariate analysis.
RESULTS: Microbiologic confirmation was documented in 39 (25%) of 153 patients enrolled. On univariate analysis, microbiological positivity was associated with female gender, higher mean (SD) age [136.6 (31.8) vs. 117.3 (41.4) mo], parenchymal lesion on chest radiograph, low body mass index for age, having symptoms of cough and weight loss, lower mean (SD) hemoglobin [10.4 (1.37) g/dl vs. 11(1.52) g/dl; p = 0.04], and higher mean (SD) monocyte: lymphocyte ratio [0.38 (0.30) vs. 0.24 (0.02); p = 0.37]. Higher proportion of microbiologically negative children were BCG vaccinated (95% vs. 79%; p = 0.002). On multivariate analysis, microbiological positivity showed significant association with low body mass index for age (p = 0.033) and higher monocyte: lymphocyte ratio (p = 0.037).
CONCLUSIONS: Low body mass index for age and higher monocyte: lymphocyte ratios were associated with microbiological confirmation in children with intrathoracic tuberculosis.

DOI: 10.1007/s12098-017-2467-1
PMID: 28924924

59: Jana M, Gupta AK. USG Doppler in Juvenile Idiopathic Arthritis Treatment Response Assessment: A Much Needed Objective Tool. Indian J Pediatr. 2017 Nov;84(11):813-814. doi: 10.1007/s12098-017-2498-7. Epub 2017 Sep 25. PubMed PMID: 28944445.

60: Jialal I, Vikram NK. Inflammation and atherosclerosis: fulfilling Koch's postulates. Ther Adv Cardiovasc Dis. 2018 Jan;12(1):5-6. doi: 10.1177/1753944717744740. Epub 2017 Nov 30. PubMed PMID: 29187060; PubMed Central PMCID: PMC5933640.

61: Julka PK, Sharma DN, Mallick S, Gandhi AK, Joshi NP, Haresh KP, Gupta S, Rath GK. Outcomes of thymoma treated with multimodality approach: a tertiary cancer center experience of 71 patients. Tumori. 2017 Nov 23;103(6):572-576. doi: 10.5301/tj.5000429. Epub 2015 Sep 19. PubMed PMID: 26391761.

AIMS: To explore the demographics and clinical outcome of patients with thymoma treated with a multimodality approach at our institute.
METHODS: A total of 71 patients with thymoma (Masaoka stage II-IV and WHO subtype AB-B3) treated from 1999-2013 were included in this retrospective analysis. Age, stage, WHO subtypes, details of surgery, radiotherapy, and chemotherapy were noted. Progression-free survival (PFS) was estimated using Kaplan-Meier method and SPSS (version 21.0) was used for statistical analysis.
RESULTS: Male:female ratio was 56:15 with median age at presentation of 41 years. Stage-wise distribution was 6:46:19 for stage II, stage III, and stage IV, respectively. A total of 31 patients (44%) had associated myasthenia gravis and 3 had pure red cell aplasia. A total of 57 patients (80%) underwent radical thymectomy and all of these patients received adjuvant radiotherapy. A total of 15 patients and 7 patients received adjuvant chemotherapy and neoadjuvant chemotherapy, respectively. At median follow-up of 19.3 months (range 7.9-72.3 months), 2-year and 3-year PFS rate for the entire cohort was 78.3% and 57.1%, respectively. On univariate analysis, surgery (hazard ratio [HR] 3.881; 95% confidence interval [CI] 1.784-19.220; p = 0.006) and stage (HR 5.457; 95% CI 1.567-18.996; p = 0.0001) were significant prognostic factors and association with myasthenia gravis (HR 0.404; 95% CI 0.151-1.078; p = 0.078) trended towards better PFS. Stage retained its prognostic significance (HR 5.501; 95% CI

2.076-14.573; p = 0.0006) on multivariate analysis.
CONCLUSIONS: Multimodality management of locally advanced thymoma yields decent survival outcomes. Masaoka stage is an independent prognostic factor for survival and radical surgery should be contemplated in all cases of locoregionally limited thymoma.

DOI: 10.5301/tj.5000429
PMID: 26391761 [Indexed for MEDLINE]

62: Kakkar A, Rajeshwari M, Sakthivel P, Sharma MC, Sharma SC. Biphenotypic sinonasal sarcoma: A series of six cases with evaluation of role of β-catenin immunohistochemistry in differential diagnosis. Ann Diagn Pathol. 2018 Apr;33:6-10. doi: 10.1016/j.anndiagpath.2017.11.005. Epub 2017 Nov 8. PubMed PMID: 29566950.

INTRODUCTION: Biphenotypic sinonasal sarcoma (BSNS) is a recently described mesenchymal tumor exclusive to the sinonasal region. It is a low grade sarcoma, displaying evidence of myogenic and neural differentiation. Role of β-catenin immunohistochemistry in distinguishing it from its morphological mimics is not well-established. We conducted this study to identify cases of BSNS from our archives, and to examine immunopositivity for β-catenin in them as well as in its close differential diagnosis.
METHODS: All cases of nasal cavity and paranasal sinus mesenchymal neoplasms were identified. Histopathological features were reviewed. Cases showing smooth muscle actin (SMA) and S-100 immunopositivity, and typical morphology were reclassified as BSNS. β-catenin immunoexpression was assessed.
RESULTS: Twenty-one mesenchymal tumors, including 12 sinonasal hemangiopericytoma (SNHPC), five solitary fibrous tumors (SFT), three BSNS, and one synovial sarcoma were identified. Three SNHPC cases were reclassified as BSNS. BSNS patients included one male and five females, with mean age of 51years. Five BSNS cases (83.3%) showed nuclear β-catenin immunopositivity. SNHPC cases also were β-catenin positive (60%).
CONCLUSION: BSNS is a rare sinonasal neoplasm, frequently misdiagnosed as SNHPC and SFT. β-catenin immunopositivity is seen in majority of cases, indicating a role in pathogenesis. However, due to positivity in other tumors like SNHPC, it has limited role in differential diagnosis.

DOI: 10.1016/j.anndiagpath.2017.11.005
PMID: 29566950

63: Kalra S, Verma K, Singh Balhara YP. The sixth vital sign in diabetes. J Pak Med Assoc. 2017 Nov;67(11):1775-1776. PubMed PMID: 29171582.

The vital signs are an integral part of clinical methods. In diabetes, determination of plasma glucose can be taken as the fifth vital sign. The sixth vital sign is well being, which can easily be measured by two item questionnaires designed to assess distress, depression and coping skills. This sign is essential for the screening and follow up of persons living with diabetes, as it provides an idea of quality of care, helps plan therapeutic interventions, and serves as a surrogate for prognosis or outcome. Inclusion of the sixth vital sign reflects the relevance of the bio-psychosocial model of health to diabetes care.

PMID: 29171582

64: Kaur A, Kharbanda OP, Kapoor P, Kalyanasundaram D. A review of biomarkers in peri-miniscrew implant crevicular fluid (PMICF). Prog Orthod. 2017 Nov 27;18(1):42. doi: 10.1186/s40510-017-0195-8. Review. PubMed PMID: 29177754; PubMed Central PMCID: PMC5702602.

BACKGROUND: The temporary anchorage devices (TADs) which include miniscrew implants (MSIs) have evolved as useful armamentarium in the management of severe malocclusions and assist in complex tooth movements. Although a multitude of factors is responsible for the primary and secondary stability of miniscrew implants, contemporary research highlights the importance of biological interface of MSI with bone and soft tissue in augmenting the success of implants. The inflammation and remodeling associated with MSI insertion or loading are reflected through biomarkers in peri-miniscrew implant crevicular fluid (PMICF) which is analogous to the gingival crevicular fluid. Analysis of biomarkers in PMICF provides indicators of inflammation at the implant site, osteoclast differentiation and activation, bone resorption activity and bone turnover. The PMICF for assessment of these biomarkers can be collected non-invasively via paper strips, periopaper or micro capillary pipettes and analysed by enzyme-linked immunosorbent assay (ELISA) or immunoassays. The markers and mediators of inflammation have been previously studied in relation to orthodontic tooth movement include interleukins (IL-1β, IL-2, IL-6 and IL-8), growth factors and other proteins like tumour necrosis factor (TNF-α), receptor activator of nuclear factor kappa-B ligand (RANKL), chondroitin sulphate (CS) and osteoprotegerin (OPG). Studies have indicated that successful and failed MSIs have different concentrations of biomarkers in PMICF. However, there is a lack of comprehensive information on this aspect of MSIs. Therefore, a detailed review was conducted on the subject.
RESULTS: A literature search revealed six relevant studies: two on IL-1β; one on IL-2, IL-6 and IL-8; one on TNF-α; one on CS; and one on RANKL/OPG ratio. One study showed an increase in IL-1β levels upon MSI loading, peak in 24 hours (h), followed by a decrease in 21 days to reach baseline in 300 days. A 6.87% decrease in IL-2 levels was seen before loading and a 5.97% increase post-loading. IL-8 showed a 6.31% increase after loading and IL-6 increased by 3.08% before MSI loading and 15.06% after loading. RANKL/OPG ratio increased in loaded compared to unloaded MSIs.
CONCLUSIONS: Cytokines (mainly ILs and TNF-α) and RANKL/OPG ratio showed alteration in PMICF levels upon loading of MSIs as direct or indirect anchorage.

DOI: 10.1186/s40510-017-0195-8
PMCID: PMC5702602
PMID: 29177754

65: Kaushik N, Subramani C, Anang S, Muthumohan R, Shalimar, Nayak B, Ranjith-Kumar CT, Surjit M. Zinc Salts Block Hepatitis E Virus Replication by Inhibiting the Activity of Viral RNA-Dependent RNA Polymerase. J Virol. 2017 Oct 13;91(21). pii: e00754-17. doi: 10.1128/JVI.00754-17. Print 2017 Nov 1. PubMed PMID: 28814517; PubMed Central PMCID: PMC5640865.

Hepatitis E virus (HEV) causes an acute, self-limiting hepatitis in healthy individuals and leads to chronic disease in immunocompromised individuals. HEV infection in pregnant women results in a more severe outcome, with the mortality rate going up to 30%. Though the virus usually causes sporadic infection, epidemics have been reported in developing and resource-starved countries. No specific antiviral exists against HEV. A combination of interferon and ribavirin therapy has been used to control the disease with some success. Zinc is an essential micronutrient that plays crucial roles in multiple cellular processes. Zinc salts are known to be effective in reducing infections caused by few viruses. Here, we investigated the effect of zinc salts on HEV replication. In a human hepatoma cell (Huh7) culture model, zinc salts inhibited the replication of genotype 1 (g-1) and g-3 HEV replicons and g-1 HEV infectious genomic RNA in a dose-dependent manner. Analysis of a replication-defective mutant of g-1 HEV genomic RNA under similar conditions ruled out the possibility of zinc salts acting on replication-independent processes. An ORF4-Huh7 cell line-based infection model of g-1 HEV further confirmed the above observations. Zinc salts did not show any effect on the entry of g-1 HEV into the host cell. Furthermore, our data reveal that zinc salts directly inhibit the activity of viral

RNA-dependent RNA polymerase (RdRp), leading to inhibition of viral replication. Taken together, these studies unravel the ability of zinc salts in inhibiting HEV replication, suggesting their possible therapeutic value in controlling HEV infection.IMPORTANCE Hepatitis E virus (HEV) is a public health concern in resource-starved countries due to frequent outbreaks. It is also emerging as a health concern in developed countries owing to its ability to cause acute and chronic infection in organ transplant and immunocompromised individuals. Although antivirals such as ribavirin have been used to treat HEV cases, there are known side effects and limitations of such therapy. Our discovery of the ability of zinc salts to block HEV replication by virtue of their ability to inhibit the activity of viral RdRp is important because these findings pave the way to test the efficacy of zinc supplementation therapy in HEV-infected patients. Since zinc supplementation therapy is known to be safe in healthy individuals and since high-dose zinc is used in the treatment of Wilson's disease, it may be possible to control HEV-associated health problems following a similar treatment regimen.

DOI: 10.1128/JVI.00754-17
PMCID: PMC5640865
PMID: 28814517 [Indexed for MEDLINE]

66: Kayal EB, Kandasamy D, Khare K, Alampally JT, Bakhshi S, Sharma R, Mehndiratta A. Quantitative Analysis of Intravoxel Incoherent Motion (IVIM) Diffusion MRI using Total Variation and Huber Penalty Function. Med Phys. 2017 Nov;44(11):5849-5858. doi: 10.1002/mp.12520. Epub 2017 Oct 11. PubMed PMID: 28817196.

PURPOSE: Quantitative analysis in intravoxel incoherent motion (IVIM) imaging commonly uses voxel-wise estimation of the bi-exponential model, which might not be reliable for clinical interpretation. Improving model fitting performance and qualitative and quantitative parametric estimation, two novel methodologies are proposed here.
METHODS: Five IVIM analyses methodologies: (a) Bi-exponential (BE) model, (b) Segmented BE method with two-parameter fitting (BEseg-2), (c) Segmented BE method with one-parameter fitting (BEseg-1), (d) BE with adaptive Total Variation penalty function (BE+TV) and (e) BE with adaptive Huber penalty function (BE+HPF) were evaluated. Relative root-mean-square error (RRMSE), relative bias (RB) and relative parameters (Drel,Drel*,&frel) were calculated to estimate the accuracy of methods in simulations. Empirical datasets from 14 patients with bone tumor were analyzed using these methodologies. Coefficient of variation (CV) were estimated for each IVIM parameter in tumor volume to measure the precision of the estimation methods in vivo.
RESULTS: Both BE+TV and BE+HPF showed consistently lower RRMSE (~10-42%) and lower RB (-4 to 8%) at all noise levels, compared to BE, BEseg-2 and BEseg-1 (RRMSE: ~15-120% and RB: -20 to 62%). Estimated Drel,Drel*&frel for both BE+TV and BE+HPF methods were ~1 (0.96-1.08), whereas BE, BEseg-2 and BEseg-1 showed sub-optimal parameter estimation (0.80-1.62). For clinical data BE+TV and BE+HPF showed 30-50% improved CV in estimating D, D*, and f than BE and improved CV in estimating D* (7-23%) and f (26-30%) than BEseg-2 and BEseg-1.
CONCLUSIONS: Bi-exponential model with penalty function showed quantitatively and qualitatively improved IVIM parameter estimation for both simulated and clinical dataset of bone tumors, thus potentially making this approach suitable for clinical applications in future.

DOI: 10.1002/mp.12520
PMID: 28817196 [Indexed for MEDLINE]

67: Kedia S, Sharma R, Makharia GK, Ahuja V, Desai D, Kandasamy D, Eapen A,

Ganesan K, Ghoshal UC, Kalra N, Karthikeyan D, Madhusudhan KS, Philip M, Puri AS, Puri S, Sinha SK, Banerjee R, Bhatia S, Bhat N, Dadhich S, Dhali GK, Goswami BD, Issar SK, Jayanthi V, Misra SP, Nijhawan S, Puri P, Sarkar A, Singh SP, Srivastava A, Abraham P, Ramakrishna BS; for Indian Society of Gastroenterology Task Force on Inflammatory Bowel Disease. Imaging of the small intestine in Crohn's disease: Joint position statement of the Indian Society of Gastroenterology and Indian Radiological and Imaging Association. Indian J Gastroenterol. 2017 Nov;36(6):487-508. doi: 10.1007/s12664-017-0804-y. Epub 2018 Jan 6. PubMed PMID: 29307029.

The Indian Society of Gastroenterology (ISG) Task Force on Inflammatory Bowel Disease and the Indian Radiological and Imaging Association (IRIA) developed combined ISG-IRIA evidence-based best-practice guidelines for imaging of the small intestine in patients with suspected or known Crohn's disease. These 29 position statements, developed through a modified Delphi process, are intended to serve as reference for teaching, clinical practice, and research.

DOI: 10.1007/s12664-017-0804-y
PMID: 29307029 [Indexed for MEDLINE]

68: Khan MFJ, Little J, Abelli L, Mossey PA, Autelitano L, Nag TC, Rubini M. Muscle fiber diameter assessment in cleft lip using image processing. Oral Dis. 2018 Apr;24(3):476-481. doi: 10.1111/odi.12790. Epub 2017 Nov 1. PubMed PMID: 28975726.

OBJECTIVE: To pilot investigation of muscle fiber diameter (MFD) on medial and lateral sides of the cleft in 18 infants with cleft lip with or without cleft palate (CL/P) using image processing.
MATERIAL AND METHODS: Formalin-fixed paraffin-embedded (FFPE) tissue samples from the medial and lateral sides of the cleft were analyzed for MFD using an image-processing program (ImageJ). For within-case comparison, a paired Student's t test was performed. For comparisons between classes, an unpaired t test was used.
RESULTS: Image processing enabled rapid measurement of MFD with majority of fibers showing diameter between 6 and 11 μm. There was no significant difference in mean MFD between the medial and lateral sides, or between CL and CLP. However, we found a significant difference on the medial side (p = .032) between males and females.
CONCLUSION: The image processing on FFPE tissues resulted in easy quantification of MFD with finding of a smaller MFD on the medial side in males suggesting possible differences in orbicularis oris (OO) muscle between the two sexes in CL that warrants replication using larger number of cases. Moreover, this finding can aid subclinical phenotyping and potentially in the restoration of the anatomy and function of the upper lip.

DOI: 10.1111/odi.12790
PMID: 28975726

69: Khan SH, Islam A, Hassan MI, Sharma S, Singh TP, Ahmad F. Effect of conservative mutations (L94V and L94I) on the structure and stability of horse cytochrome c. Arch Biochem Biophys. 2017 Nov 1;633:40-49. doi: 10.1016/j.abb.2017.08.015. Epub 2017 Aug 26. PubMed PMID: 28851624.

A sequence alignment of horse cytochrome c (cyt c) with all known cyts c shows that Leu at position 94 is conserved, except in 14 species which have either Val or Ile at this position. It is also known that Leu94 of the mammalian cyt c plays an important role in folding and stability. The important question here is as to what will happen in terms of folding and stability if Leu94 of the mammalian cyt

c is substituted by Val or Ile. To answer this question, we introduced natural substitutes of Leu94 by Val and Ile in horse cyt c. The purified L94V and L94I mutants under native condition (pH 6.0, 25 °C) were characterized using far-UV, near-UV and Soret- circular dichroism, visible absorbance, Trp and ANS (1-anilino-8-napthaline sulphonate) fluorescence and dynamic light scattering measurements. Furthermore, stability parameters Tm (mid-point of denaturation) and ΔGD0 (Gibbs free energy change at 25 °C) were also determined using spectroscopic and differential scanning calorimetric methods. All these measurements led us to conclude that both mutants exist as molten globule and are less stable than the wild-type protein. These observations are supported well by examining the structure of horse cyt c (PDB ID, 1HRC).

DOI: 10.1016/j.abb.2017.08.015
PMID: 28851624 [Indexed for MEDLINE]

70: Khandelwal A, Sokhal N, Kumar N, Singh S, Sokhal S. Phenytoin-induced Excessive Sedation During Awake Craniotomy: An Unusual Observation. J Neurosurg Anesthesiol. 2017 Nov 10. doi: 10.1097/ANA.0000000000000475. [Epub ahead of print] PubMed PMID: 29135699.

71: Khandelwal P, Sinha A, Jain V, Houghton J, Hari P, Bagga A. Fanconi syndrome and neonatal diabetes: phenotypic heterogeneity in patients with GLUT2 defects. CEN Case Rep. 2018 May;7(1):1-4. doi: 10.1007/s13730-017-0278-x. Epub 2017 Nov 8. PubMed PMID: 29116606; PubMed Central PMCID: PMC5886911.

Fanconi-Bickel syndrome, caused by mutations in SLC2A2 encoding the glucose transporter 2 (GLUT2), is characterized by generalized proximal renal tubular dysfunction manifesting in late infancy. We describe phenotypic heterogeneity of Fanconi-Bickel syndrome in three siblings, including early and atypical presentation with transient neonatal diabetes mellitus in one. The second-born of a non-consanguineous couple, evaluated for polyuria and growth retardation, had rickets, hepatomegaly and proximal tubular dysfunction from 4 to 6 months of age. A male sibling, who expired at 4 months, also had hepatomegaly and growth retardation. The third sibling had polyuria, glucosuria and mild proteinuria on day 3 of life. Hyperglycemia was detected 2 weeks later, which required therapy with insulin for 3 months. Mild metabolic acidosis was present at 2 weeks; hypercalciuria, phosphaturia and aminoaciduria were seen at 6 months. Sanger sequencing showed a homozygous missense mutation in SLC2A2 (exon 7, c.952G>A), causing glycine to arginine substitution; both parents were heterozygous carriers. Patients with SLC2A2 mutations may present either with isolated neonatal diabetes or with hepatomegaly and the renal Fanconi syndrome. Fanconi-Bickel syndrome shows phenotypic heterogeneity and may manifest early with subtle or atypical features, mandating a high index of suspicion.

DOI: 10.1007/s13730-017-0278-x
PMCID: PMC5886911
PMID: 29116606

72: Khandpur S, Singh S, Mallick S, Sharma VK, Iyer V, Seth A, Kumawat M. Urocytological evaluation of pemphigus patients on long term cyclophosphamide therapy: A cross sectional study. Indian J Dermatol Venereol Leprol. 2017 Nov-Dec;83(6):667-672. doi: 10.4103/ijdvl.IJDVL_625_16. PubMed PMID: 29035286.

OBJECTIVES: To study the urocytological profile of pemphigus patients on long-term cyclophosphamide therapy.
MATERIALS AND METHODS: In a cross-sectional study, consecutive patients who had received cyclophosphamide therapy for pemphigus for more than 12 months were included. All patients were subjected to urinalysis including microscopy,

culture, and urine cytology. Immunocytochemical staining for cytokeratin 20 (CK-20) on urine sediments and ELISA (enzyme-linked immunosorbent assay) for nuclear membrane protein-22 (NMP-22) were performed in all cases. In patients with urinary symptoms, microscopic hematuria, or those detected with abnormal urine sediment cytology, NMP-22, and CK-20 positivity, cystoscopy, and other relevant investigations were also done.
RESULTS: A total of 44 patients (43 of pemphigus vulgaris and one of pemphigus foliaceus) were recruited. Mean duration of cyclophosphamide intake was 2.9 ± 1.7 years (range 1-8 years) with a mean cumulative dose of 53 ± 28.4 g (range 6.5-141 g). Twenty-one cases (47.7%) each were asymptomatic and symptomatic with episodic urinary symptoms [of which two had urinary tract infection (UTI)] and two patients had gross hematuria. Urine cytology revealed mild urothelial nucleomegaly with hyperchromasia in four patients. However, CK-20 and NMP-22 were negative in all samples. Cystoscopy was performed in 21 cases and did not reveal any sign of bladder malignancy.
LIMITATIONS: A relatively small sample size and lack of long-term follow-up were limitations.
CONCLUSIONS: In our study, no serious urologic complications were found in pemphigus cases on chronic cyclophosphamide therapy.

DOI: 10.4103/ijdvl.IJDVL_625_16
PMID: 29035286 [Indexed for MEDLINE]

73: Khanna K, Sharma S, Gupta DK. Hydrometrocolpos etiology and management: past beckons the present. Pediatr Surg Int. 2018 Mar;34(3):249-261. doi: 10.1007/s00383-017-4218-9. Epub 2017 Nov 24. Review. PubMed PMID: 29177625.

Hydrometrocolpos is a rare condition in which the uterus and the vagina are grossly distended with a retained fluid other than pus or blood. It may present during the neonatal period or later at puberty. Most cases reported earlier were stillbirths and were diagnosed only on autopsy. Antenatal diagnosis is now possible with the advent of ultrasound. An early diagnosis and speedy management is the key to survival. Many previous case reports have focused on the varied clinical presentations, multiple causes, associated syndromes and/or the radiological diagnosis of this condition. However, management options for different types of hydrometrocolpos have not yet been concisely discussed. We have reviewed the literature and tried to summarize the management options applicable to most case scenarios of hydrometrocolpos.

DOI: 10.1007/s00383-017-4218-9
PMID: 29177625

74: Khanna K, Sharma S, Pabalan N, Singh N, Gupta DK. A review of genetic factors contributing to the etiopathogenesis of anorectal malformations. Pediatr Surg Int. 2018 Jan;34(1):9-20. doi: 10.1007/s00383-017-4204-2. Epub 2017 Nov 1. Review. PubMed PMID: 29094201.

BACKGROUND: Anorectal malformation (ARM) is a common congenital anomaly with a wide clinical spectrum. Recently, many genetic and molecular studies have been conducted worldwide highlighting the contribution of genetic factors in its etiology. We summarize the current literature on such genetic factors.
MATERIALS AND METHODS: Literature search was done using different combinations of terms related to genetics in anorectal malformations. From 2012 to June 2017, articles published in the English literature and studies conducted on human population were included.
OBSERVATIONS AND RESULTS: A paradigm shift was observed from the earlier studies concentrating on genetic aberrations in specific pathways to genome wide arrays exploring single nucleotide polymorphisms (SNPs) and copy number variations (CNVs) in ARM patients. Rare CNVs (including 79 genes) and SNPs have been found to genetically contribute to ARM. Out of disrupted 79 genes one such putative gene is DKK4. Down regulation of CDX-1 gene has also been implicated in isolated

ARM patients. In syndromic ARM de novo microdeletion at 17q12 and a few others have been identified.
CONCLUSION: Major genetic aberrations proposed in the pathogenesis of ARM affect members of the Wnt, Hox (homebox) genes, Sonic hedgehog (Shh) and Gli2, Bmp4, Fgf and CDX1 signalling pathways; probable targets of future molecular gene therapy.

DOI: 10.1007/s00383-017-4204-2
PMID: 29094201 [Indexed for MEDLINE]

75: Khokhar S, Pillay G, Agarwal E. Pediatric Cataract - Importance of Early Detection and Management. Indian J Pediatr. 2018 Mar;85(3):209-216. doi: 10.1007/s12098-017-2482-2. Epub 2017 Nov 9. Review. PubMed PMID: 29119464.

Pediatric cataract is often diagnosed and managed late. This delay may be due to the ignorance on the part of the community, financial constraints, delay in the diagnosis and lack of tertiary care facilities. There is an urgent need to include rubella vaccination in the universal immunization program. A Simple Red Reflex test to detect a cataract and guiding the parent for early intervention will go a long way in achieving the target of eliminating cataract as a cause of childhood blindness. The importance of early detection and quick referral to a multispecialty center can save the child of lot many blind-years. These children have the potential to achieve the best possible visual acuity if managed early.

DOI: 10.1007/s12098-017-2482-2
PMID: 29119464

76: Khokhar S, Pillay G, Sen S, Agarwal E. Clinical spectrum and surgical outcomes in spherophakia: a prospective interventional study. Eye (Lond). 2018 Mar;32(3):527-536. doi: 10.1038/eye.2017.229. Epub 2017 Nov 3. PubMed PMID: 29099498; PubMed Central PMCID: PMC5848272.

PurposeTo study the varied clinical presentations of patients with spherophakia, their management using surgical methods, and the clinical outcomes.Patients and methodsA prospective interventional study of 13 patients of spherophakia who presented to us from January 2014 and were followed up over the course of their treatment, and the data were documented for analysis.ResultsIn all, 26 eyes of 13 patients were reviewed and the median age of presentation was 12±12.05 years. All patients had a bilateral presentation with 22 eyes having lenticular myopia with a mean refractive error of -11.5±12.945 DS. Ten eyes presented with glaucoma of which six had raised intraocular pressure (IOP) >21 mm Hg. A total of 23 eyes underwent lens extraction for dislocation/subluxation. Lens extraction helped lower overall IOP. Refractive rehabilitation was done with ACIOL, posterior chamber intraocular lens (PCIOL) with capsular tension ring, and scleral-fixated intraocular lens (SFIOL) in respective cases with ACIOLs being the most commonly used option.ConclusionsSpherophakia is a rare condition, which exhibits a varying degree of lenticular myopia, glaucoma, and subluxation of the crystalline lens. Lensectomy with proper rehabilitation using ACIOL, PCIOL, or SFIOL is a method of managing subluxation and unacceptable myopia. Lensectomy may also be a viable option of controlling glaucoma alongside medications and glaucoma surgery for the management of glaucoma in such cases.

DOI: 10.1038/eye.2017.229
PMCID: PMC5848272 [Available on 2019-03-01]
PMID: 29099498

77: Kilambi R, Singh AN, Madhusudhan KS, Das P, Pal S. Choledochal cyst of the proximal cystic duct: a taxonomical and therapeutic conundrum. Ann R Coll Surg Engl. 2018 Feb;100(2):e34-e37. doi: 10.1308/rcsann.2017.0201. Epub 2017 Nov 28. PubMed PMID: 29181996; PubMed Central PMCID: PMC5838701.

Isolated choledochal cysts involving the cystic duct are rare. We present a case

of a choledochal cyst involving only the proximal cystic duct, and discuss the taxonomic and therapeutic challenges. There is a need for a clearly defined classification system for these cysts as they may be categorised as either type II or type VI cysts. The optimal treatment remains debatable, with some authors recommending a bilioenteric reconstruction owing to the wide cystic duct-bile duct junction. However, we suggest that a cholecystectomy should be performed with examination of the specimen and frozen section in case of any abnormality rather than upfront bile duct excision. In addition, given the rarity of this condition and the paucity of long-term data, we recommend meticulous follow-up for development of any malignancy.

DOI: 10.1308/rcsann.2017.0201
PMCID: PMC5838701 [Available on 2019-02-01]
PMID: 29181996 [Indexed for MEDLINE]

78: Kotnala A, Senthilkumari S, Halder N, Kumar A, Velpandian T. Microwave assisted synthesis for A2E and development of LC-ESI-MS method for quantification of ocular bisretinoids in human retina. J Chromatogr B Analyt Technol Biomed Life Sci. 2018 Jan 15;1073:10-18. doi: 10.1016/j.jchromb.2017.11.021. Epub 2017 Nov 26. PubMed PMID: 29232606.

PURPOSE: To develop a microwave assisted method for the rapid synthesis of A2E and also to develop a method to quantify N-retinylidene-N-retinylethanolamine(A2E), all-trans retinal dimer (ATRD), A2-glycerophospho ethanolamine (A2GPE), dihydropyridine phosphatidyl ethanolamine (A2DHPE) and monofuran A2E (MFA2E) in age matched retina.
METHODS: The development of microwave assisted synthesis of A2E, its purification and characterization for its utility in quantification in human retina. The semi-quantitative method development using LC-ESI-MS, LC-ESI-MS/MS and LC-APCI-MS/MS from pooled macula and peripheral retina for the bisretinoid analysis has been done.
RESULTS: Maximum A2E conversion using microwave assisted process took place at 80°C for 45min with a yield of 55.01%. Highly sensitive and specific mass spectrometric method was developed using reverse phase C-18 separation with positive electrospray ionization and positive atmospheric phase chemical ionization of tandom mass spectrometry. A gradient mobile phase separation was achieved using water and methanol with 0.1% TFA. Multiple reaction monitoring acquisition for ESI and APCI was performed at ATRD m/z 551.2/522.2, A2GPE m/z 746.4/729.5, A2DHPEm/z 594.4/576.5, MFA2E m/z 608.2/591.2, A2E m/z 592.4/418.2. Method was validated using LC-ESI-SIM mode to determine selectivity, linearity, sensitivity, precision and accuracy.
CONCLUSION: An attempt towards optimization of the synthetic procedure of A2E was made so as to reduce the lengthy reaction time without compromising the yield. Developed method was capable enough for the detection of low level of bisretinids in retina.

DOI: 10.1016/j.jchromb.2017.11.021
PMID: 29232606 [Indexed for MEDLINE]

79: ---

80: Kumar P, Misra P, Thakur CP, Saurabh A, Rishi N, Mitra DK. T cell suppression in the bone marrow of visceral leishmaniasis patients: impact of parasite load. Clin Exp Immunol. 2018 Mar;191(3):318-327. doi: 10.1111/cei.13074. Epub 2017 Nov 20. PubMed PMID: 29058314; PubMed Central PMCID: PMC5801524.

Visceral leishmaniasis (VL) is a disseminated and lethal disease of reticulo-endothelial system caused by protozoan parasites Leishmania donovani and L. infantum, which are known to induce host T cell suppression. To understand the

impact of parasite load on T cell function, the present was focused on parasite load with T cell function in bone marrow of 26 VL patients. We observed significant enrichment of forkhead box protein 3 (FoxP3)+ (P=0·0003) and interleukin (IL)-10+ FoxP3+ regulatory T cells (Treg) (P=0·004) in the bone marrow (BM) of patients with high parasite load (HPL) compared with low parasite load (LPL). Concordantly, T effector cells producing interferon (IFN)-γ (P=0·005) and IL-17A (P=0·002) were reduced in the BM of HPL. Blocking of Treg -cell derived suppressive cytokines [(IL-10 and transforming growth factor (TGF)-β] rescued the effector T cells and their functions. However, it was observed that TGF-β levels were dominant, favouring Treg cell differentiation. Furthermore, the low ratio of IL-6/TGF-β favours the suppressive milieu in HPL patients. Here we show the change in levels of various cytokines with the parasitic load during active VL, which could be helpful in devising newer immunotherapeutic strategies against this disease.

DOI: 10.1111/cei.13074
PMCID: PMC5801524 [Available on 2019-03-01]
PMID: 29058314

81: Kumar S, Singh MB, Shukla G, Vishnubhatla S, Srivastava MVP, Goyal V, Prasad K, Patterson V. Effective clinical classification of chronic epilepsy into focal and generalized: A cross sectional study. Seizure. 2017 Dec;53:81-85. doi: 10.1016/j.seizure.2017.11.002. Epub 2017 Nov 9. PubMed PMID: 29149669.

PURPOSE: Investigations such as EEG and brain imaging are often difficult to obtain in primary care settings of resource-limited regions impacting millions of epilepsy patients. We wanted to test the hypothesis that classification of chronic epilepsy into focal and generalized based on clinical history and examination alone would be comparable to making such a classification with additional inputs from EEG and brain imaging.
METHODS: Two investigators independently classified consecutive chronic epilepsy patients into focal, generalized and unclassified epilepsy. Investigator 1 made this determination using clinical history and examination alone whereas Investigator II additionally used EEG and brain imaging too. We calculated inter observer agreement between the two investigators and also looked at the predictors of focal and generalized epilepsy.
RESULTS: Five hundred and twelve patients were recruited. Inter observer agreement between the two investigators in making the focal versus generalized classification was 96.8%, kappa 0.91 (p<0.0001). When EEG and neuroimaging findings were added to clinical information, there was a change in classification in 3.2% patients. Several predictors of focal and generalized epilepsy were identified.
CONCLUSIONS: Classification of chronic epilepsy into focal and generalized can be done reliably in most patients using clinical information alone. Investigating chronic epilepsy patients with EEG and brain imaging may not be necessary in every patient. The results of our study are especially significant for epilepsy patients living in resource-limited regions where such investigations may not always be available.

DOI: 10.1016/j.seizure.2017.11.002
PMID: 29149669

82: Kumar S, Kumar R, Khan L, Makhdoomi MA, Thiruvengadam R, Mohata M, Agarwal M, Lodha R, Kabra SK, Sinha S, Luthra K. CD4-Binding Site Directed Cross-Neutralizing scFv Monoclonals from HIV-1 Subtype C Infected Indian Children. Front Immunol. 2017 Nov 15;8:1568. doi: 10.3389/fimmu.2017.01568.

eCollection 2017. PubMed PMID: 29187855; PubMed Central PMCID: PMC5694743.

Progression of human immunodeficiency virus type-1 (HIV-1) infection in children is faster than adults. HIV-1 subtype C is responsible for more than 50% of the infections globally and more than 90% infections in India. To date, there is no effective vaccine against HIV-1. Recent animal studies and human Phase I trials showed promising results of the protective effect of anti-HIV-1 broadly neutralizing antibodies (bnAbs). Interaction between CD4 binding site (CD4bs) on the HIV-1 envelope glycoprotein and CD4 receptor on the host immune cells is the primary event leading to HIV-1 infection. The CD4bs is a highly conserved region, comprised of a conformational epitope, and is a potential target of bnAbs such as VRC01 that is presently under human clinical trials. Recombinant scFvs can access masked epitopes due to their small size and have shown the potential to inhibit viral replication and neutralize a broad range of viruses. Pediatric viruses are resistant to many of the existing bnAbs isolated from adults. Therefore, in this study, pooled peripheral blood mononuclear cells from 9 chronically HIV-1 subtype C infected pediatric cross-neutralizers whose plasma antibodies exhibited potent and cross-neutralizing activity were used to construct a human anti-HIV-1 scFv phage library of 9×108 individual clones. Plasma mapping using CD4bs-specific probes identified the presence of CD4bs directed antibodies in 4 of these children. By extensive biopanning of the library with CD4bs-specific antigen RSC3 core protein, we identified two cross-neutralizing scFv monoclonals 2B10 and 2E4 demonstrating a neutralizing breadth and GMT of 77%, 17.9µg/ml and 32%, 51.2µg/ml, respectively, against a panel of 49 tier 1, 2 and 3 viruses. Both scFvs competed with anti-CD4bs bnAb VRC01 confirming their CD4bs epitope specificity. The 2B10 scFv was effective in neutralizing the 7 subtype C and subtype A pediatric viruses tested. Somatic hypermutations in the VH gene of scFvs (10.1-11.1%) is comparable with that of the adult antibodies. These cross-neutralizing CD4bs-directed scFvs can serve as potential reagents for passive immunotherapy. A combination of cross-neutralizing scFvs of diverse specificities with antiretroviral drugs may be effective in suppressing viremia at an early stage of HIV-1 infection and prevent disease progression.

DOI: 10.3389/fimmu.2017.01568
PMCID: PMC5694743
PMID: 29187855

83: Kumar V, Kumar P, Garg G, Damodaran S. Vitrectomy for full-thickness macular hole in adult-onset Coats' disease. Indian J Ophthalmol. 2017 Nov;65(11):1246-1248. doi: 10.4103/ijo.IJO_546_17. PubMed PMID: 29133668; PubMed Central PMCID: PMC5700610.

The occurrence of full thickness macular hole in Coats' disease is extremely rare. The purpose of this case report is to report pars plana vitrectomy for the treatment of full thickness macular hole in a patient with adult onset Coats disease. A young male presented with decreased vision in his right eye because of full thickness macular hole. The macular hole was found to be associated with adult onset Coats' disease that was evident on ultra-wide field imaging. The patient underwent laser photocoagulation to the vascular telangiectasia followed by pars plana vitrectomy, large internal limiting membrane peeling and gas tamponade. This resulted in regression of exudation, closure of macular hole and improvement in vision. Coats disease of adult onset can present with decreased vision because of full thickness macular hole. Vitrectomy with internal limiting membrane peeling can result in excellent visual outcome.

DOI: 10.4103/ijo.IJO_546_17
PMCID: PMC5700610
PMID: 29133668 [Indexed for MEDLINE]

84: Kumar V. Optical coherence tomography changes following vitrectomy for long standing premacular hemorrhage in Valsalva retinopathy. Int J Ophthalmol. 2017

Nov 18;10(11):1779-1782. doi: 10.18240/ijo.2017.11.23. eCollection 2017. PubMed PMID: 29181326; PubMed Central PMCID: PMC5686381.

85: Kumari N, Chaturvedi SK, Khan R, Sharma A, Khan RH, Yadav S. Characterization of CNL like protein fragment (CNL-LPF) from mature Lageneria siceraria seeds. Int J Biol Macromol. 2017 Nov;104(Pt A):1194-1203. doi: 10.1016/j.ijbiomac.2017.06.086. Epub 2017 Jul 1. PubMed PMID: 28676339.

Coiled coil domain-nucleotide binding site-leucine rich repeat (CC-NBS-LRR; CNL) proteins are highly conserved family of plant disease resistance proteins, remarkably comprise of coiled-coil domain, which plays significant role in plant innate immunity. The present study reports that moderately elicited oligomerization of plant CNL like protein fragment (CNL-LPF) in presence of ATP/Mg using various biophysical methods Circular dichroism (CD) results depicted a substantial increase in β-sheet structure content of CNL-LPF. ATP/Mg induced conformational change in protein was observed by increase in blue shift with extrinsic fluorescence measurement, which indicates the exposure of hydrophobic regions of CNL-LPF and leads to self-association i.e. oligomerization. Likewise, cluster of protein oligomer and alteration in protein surface morphology were observed in presence of ATP/Mg by Transmission electron microscopy (TEM) and Atomic force microscopy (AFM), respectively. Also, augmented antiproliferation of HT1376 cells (urinary bladder cancer cell lines) was observed by CNL-LPF in presence of ATP/Mg. In conclusion, the current study illustrates that extent of CNL-LPF oligomerization was enhanced in presence of ATP/Mg (as compared to its absence). Utilization of enhanced oligomerization property of CNL-LPF as an anti-proliferative agent needs more assessment.

DOI: 10.1016/j.ijbiomac.2017.06.086
PMID: 28676339 [Indexed for MEDLINE]

86: Kumawat BL, Chawla R, Venkatesh P, Tripathy K. Inflammatory optic disc neovascularisation managed with oral steroids/immunosuppressants and intravitreal ranibizumab. BMJ Case Rep. 2017 Nov 3;2017. pii: bcr-2017-222262. doi: 10.1136/bcr-2017-222262. PubMed PMID: 29102974.

Inflammatory optic disc neovascularisation (NVD) has been treated with periocular or systemic steroids, immunosuppressants, panretinal photocoagulation and bevacizumab. However, the role of intravitreal ranibizumab in inflammatory NVD has not been explored in the peer-reviewed indexed literature. In case 1, NVD and associated subhyaloid haemorrhage showed rapid and dramatic regression after intravitreal ranibizumab. Recurrence was noted 8 weeks after injection which was managed by oral steroids. In case 2, intravitreal ranibizumab led to partial resolution of NVD. The addition of steroids, azathioprine and panretinal photocoagulation led to further fibrosis of the neovascularisation. Ranibizumab may be an important adjunct to anti-inflammatory therapy in the management of inflammatory NVD.

DOI: 10.1136/bcr-2017-222262
PMID: 29102974 [Indexed for MEDLINE]

Conflict of interest statement: Competing interests: None declared.

87: Lal C, Kaur M, Jaryal AK, Deepak KK, Bhowmik D, Agarwal SK. Reduced Baroreflex Sensitivity, Decreased Heart Rate Variability with Increased Arterial

Stiffness in Predialysis. Indian J Nephrol. 2017 Nov-Dec;27(6):446-451. doi: 10.4103/ijn.IJN_63_17. PubMed PMID: 29217881; PubMed Central PMCID: PMC5704409.

High cardiovascular morbidity and mortality is observed in predialytic chronic kidney disease (CKD) patients. The underlying mechanism of cardiovascular dysfunction often remains unclear. The present study was designed to perform multiparametric assessment of baroreflex sensitivity (BRS), arterial stiffness indices, and cardiovascular variabilities (heart rate variability [HRV] and blood pressure variability [BPV]) together in predialytic CKD patients; compare it with normal healthy controls; and determine their relationships in predialytic nondiabetic CKD patients. Thirty CKD Stage 4 and 5 predialytic non-diabetic patients and 30 healthy controls were enrolled in the study. BRS was determined by spontaneous sequence method. Short-term HRV and BPV were assessed using 5 min beat-to-beat data of RR intervals and blood pressure by time domain and frequency domain analysis. Arterial stiffness indices - carotid-femoral pulse wave velocity (PWV) and augmentation index - were measured using SphygmoCor Vx device (AtCor Medical, Australia). Predialytic CKD patients had significantly low BRS, high PWV, and low HRV as compared to healthy controls. Independent predictors of reduced systolic BRS in predialytic CKD patient group on multiple regression analysis emerged to be increase in calcium-phosphate product, increase in BPV, and decrease in HRV. Predialytic nondiabetic CKD Stage 4 and 5 patients have poor hemodynamic profile (higher PWV, lower HRV, and reduced BRS) than healthy controls. Reduced HRV and altered calcium-phosphate homeostasis emerged to be significant independent predictors of reduced BRS.

DOI: 10.4103/ijn.IJN_63_17
PMCID: PMC5704409
PMID: 29217881

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

88: Madan K, Tiwari P, Arava S, Hadda V, Mohan A, Guleria R. Tracheobronchial puncture-site nodular reaction (TPNR) following endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA): Systematic review of case reports. Lung India. 2017 Nov-Dec;34(6):532-537. doi: 10.4103/lungindia.lungindia_12_17. Review. PubMed PMID: 29098999; PubMed Central PMCID: PMC5684811.

Endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) is a minimally invasive and efficacious diagnostic modality for lung cancer staging and evaluation of undiagnosed mediastinal lymphadenopathy. Procedure-related complications are uncommon. We herein report an infrequently described phenomenon following EBUS-TBNA in which two patients developed nodular granulation tissue at the tracheobronchial puncture site. On systematic review, we found description of such phenomena by terminologies such as endobronchial inflammatory polyp, granuloma, and endobronchial mass. The endobronchial inflammatory polyp has been one of the most commonly used terminologies for these; but in most cases, the classical features of an inflammatory polyp are lacking. We propose the term, tracheobronchial puncture-site nodular reaction (TPNR) with further classification into granulomatous and nongranulomatous subtypes, for standardized reporting of such reactions following transbronchial needle aspiration procedures. Knowledge of this entity and standardized nomenclature shall help in better characterization of the outcomes and risk factors for the occurrence of these reactions.

DOI: 10.4103/lungindia.lungindia_12_17
PMCID: PMC5684811
PMID: 29098999

89: 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 ≥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 ≥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 ≥15 mm Hg compared with TDI. E/Ds ≥11 and E/10DSr ≥12 had higher sensitivity and specificity (96.77%, 93.26%; 100%, 96.63%, respectively; area under the curve [AUC] = 0.99) than E/e'≥13 (74%,75%; AUC = 0.84) for prediction of LVEDP ≥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.

DOI: 10.1053/j.jvca.2017.11.047
PMID: 29290381

90: Maharana PK, Singhal D, Sahay P, Titiyal JS. Tenon patch graft for corneal fistula: a rare entity treated by a simple technique. BMJ Case Rep. 2017 Nov 23;2017. pii: bcr-2017-222790. doi: 10.1136/bcr-2017-222790. PubMed PMID: 29170188.

A 50-year-old patient presented with dull aching pain with some discomfort in his right eye for the past 2 weeks. History revealed the patient had a past episode of infective keratitis managed medically in a local hospital. The last follow-up record suggested a diagnosis of healed keratitis with corneoiridic scar. On examination, the patient had visual acuity of hand movement and a corneoiridic scar of 7×7 mm with an inferotemporal translucent cystic area measuring 3×4 mm in size with underlying uveal tissue visible. Seidel test was found to be positive confirming leakage. For this, a tenon patch over the area of defect along with anterior chamber formation was done. On postoperative day 1, the graft was well attached and anterior chamber was formed with no leak on Seidel test. Intraocular pressure was 16 mm Hg.

DOI: 10.1136/bcr-2017-222790
PMID: 29170188

Conflict of interest statement: Competing interests: None declared.

91: Majumdar A, Ahmad F, Sheikh T, Bhagat R, Pathak P, Joshi SD, Seth P, Tandon V, Tripathi M, Saratchandra P, Sarkar C, Sen E. miR-217-casein kinase-2 cross talk regulates ERK activation in ganglioglioma. J Mol Med (Berl). 2017 Nov;95(11):1215-1226. doi: 10.1007/s00109-017-1571-z. Epub 2017 Aug 25. PubMed PMID: 28840260.

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

DOI: 10.1007/s00109-017-1571-z
PMID: 28840260 [Indexed for MEDLINE]

92: Marwaha RK, Garg MK, Mahalle N, Bhadra K, Tandon N. Role of Parathyroid Hormone in Determination of Fat Mass in Patients with Vitamin D Deficiency. Indian J Endocrinol Metab. 2017 Nov-Dec;21(6):848-853. doi: 10.4103/ijem.IJEM_42_17. PubMed PMID: 29285447; PubMed Central PMCID: PMC5729672.

Background: Obesity has become a global epidemic and it is rising is Asia. Vitamin D deficiency (VDD) is widely prevalent in the Indian subcontinent. Studies have linked VDD to obesity and shown correlation between parathyroid hormone (PTH), 25-hydroxy Vitamin D (25(OH)D), and fat mass (FM). However, studies on the role of PTH among subjects with VDD are lacking.
Objective: The objective of this study is to study the role of PTH in the determination of FM in participants with VDD.
Subjects: Five hundred and fifty-one adults (m:247, f:304) were included in this study.
Materials and Methods: Total and regional (trunk, arm, and leg) FM was assessed by dual X-ray absorptometry. Biochemical and hormonal parameters such as calcium, phosphorus, alkaline phosphatase, ionic calcium, 25(OH)D, and PTH were also analyzed.
Results: The mean age of the study population was 58.8 ± 15.8 years (Male: [63.3 ± 13.1], Female: [55.2 ± 16.9]). FM and body mass index were significantly lower in females with higher levels of serum 25(OH)D. Total FM was negatively correlated with serum 25(OH)D ($r = -0.363$, $P < 0.0001$) and positively correlated with serum PTH (r: 0.262, $P < 0.0001$) in females only. Females with VDD and secondary hyperparathyroidism had higher FM than those with normal PTH.

Conclusions: Females with VDD had higher total and regional FM. However, this correlation was evident only in those with high serum PTH levels, suggesting a potential role of PTH in the accumulation of FM.

DOI: 10.4103/ijem.IJEM_42_17
PMCID: PMC5729672
PMID: 29285447

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

93: Mehndiratta A, Sharma S, Gupta NP, Sankar MJ, Cluzeau F. Adapting clinical guidelines in India-a pragmatic approach. BMJ. 2017 Nov 17;359:j5147. doi: 10.1136/bmj.j5147. PubMed PMID: 29150419; PubMed Central PMCID: PMC5691554.

Conflict of interest statement: Competing interests: We have read and understood BMJ policy on declaration of interests and declare the following interests: FC is a member of the AGREE Collaboration that developed the AGREEII Instrument. She also contributed to the development of the adaptation of guideline methodology at NICE. MoHFW, India funded the work. The technical assistance provided by Global Health and Development Group was funded by the UK Department for International Development.

94: Memon SS, Tandon N, Mahajan S, Bansal VK, Krishna A, Subbiah A. The Prevalence of New Onset Diabetes Mellitus after Renal Transplantation in Patients with Immediate Posttransplant Hyperglycemia in a Tertiary Care Centre. Indian J Endocrinol Metab. 2017 Nov-Dec;21(6):871-875. doi: 10.4103/ijem.IJEM_309_17. PubMed PMID: 29285451; PubMed Central PMCID: PMC5729676.

Objectives: This study aimed to determine the prevalence of immediate posttransplant hyperglycemia and new onset diabetes after renal transplantation (NODAT). It also aims at answering whether posttransplant hyperglycemia per se is a risk factor for future development of NODAT.
Methods: A retrospective study was conducted among patients undergoing kidney transplantation under a single surgical unit in a tertiary care hospital in the past 5 years. All known patients with diabetes were excluded from the study. Immediate postoperative hyperglycemia was defined as random blood sugar (RBS) ≥200 mg/dl or requirement of insulin. NODAT was defined as fasting plasma glucose ≥126 mg/dl or RBS ≥200 mg/dl or if the patient is receiving therapy for glycemic control at 6 weeks or 3 months posttransplantation.
Results: The study population included 191 patients. The overall prevalence of posttransplant hyperglycemia and NODAT was 31.4% and 26.7%, respectively. NODAT developed in 28 patients (46.7%) of those who had posttransplant hyperglycemia. Thus, posttransplant hyperglycemia was associated with a fourfold increased risk of NODAT (P = 0.000). Posttransplant hyperglycemia was associated with increased infections (P = 0.04) and prolonged hospital stay (P = 0.0001). Increased age was a significant risk factor for NODAT (P = 0.000), whereas gender, acute rejection episodes, cadaveric transplant, hepatitis C virus status, human leukocyte antigen mismatch, and high calcineurin levels were not significantly associated with the future development of NODAT.
Conclusion: The significant risk of NODAT posed by posttransplant hyperglycemia makes it prudent to follow up these patients more diligently in a resource-limited setting wherein routine monitoring in all patients is cumbersome.

DOI: 10.4103/ijem.IJEM_309_17
PMCID: PMC5729676
PMID: 29285451

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

95: Menon V, Shanmuganathan B, Thamizh JS, Arun AB, Kuppili PP, Sarkar S.

Personality traits such as neuroticism and disability predict psychological distress in medically unexplained symptoms: A three-year experience from a single centre. Personal Ment Health. 2018 May;12(2):145-154. doi: 10.1002/pmh.1405. Epub 2017 Nov 17. PubMed PMID: 29148230.

BACKGROUND: People with medically unexplained symptoms (MUS) may have psychological co-morbidities.
AIMS: Our objectives were to assess the rates and identify correlates of psychological distress in MUS.
METHODS: A total of 171 subjects with MUS seeking treatment at a tertiary care facility were assessed over a 3-year period. Psychological distress was assessed using the Tamil version of General Health Questionnaire-12. Apart from socio-demographic factors, personality, coping, perceived social support and subjective disability were assessed using standard instruments.
RESULTS: Ninety subjects (52.6%) endorsed symptoms of psychological distress. MUS subjects with psychological distress reported higher levels of neuroticism ($p < 0.001$), lower extraversion ($p < 0.001$), lower perceived social support ($p = 0.002$), higher disability ($p < 0.001$), lower problem focused engagement ($p = 0.378$) and higher emotion focused engagement ($p = 0.009$). In multivariate analysis, high neuroticism scores (odds ratio 1.579, 95% CI 1.108 to 2.251) and high disability (odds ratio 1.302, 95% CI 1.147 to 1.478) emerged as independent predictors of psychological distress in MUS.
CONCLUSION: More than half of subjects with MUS have associated psychological distress. High levels of neuroticism and disability are potential markers of psychological distress in MUS. Copyright © 2017 John Wiley & Sons, Ltd.

DOI: 10.1002/pmh.1405
PMID: 29148230

96: Mian A, Jorwal P. Congenital non-syndromic anonychia totalis with acroosteolysis. BMJ Case Rep. 2017 Nov 8;2017. pii: bcr-2017-222743. doi: 10.1136/bcr-2017-222743. PubMed PMID: 29122908.

97: Mishra A, Devi S, Saxena R, Gupta N, Kabra M, Chowdhury MR. Frequency of primary mutations of Leber's hereditary optic neuropathy patients in North Indian population. Indian J Ophthalmol. 2017 Nov;65(11):1156-1160. doi: 10.4103/ijo.IJO_380_17. PubMed PMID: 29133642; PubMed Central PMCID: PMC5700584.

PURPOSE: Leber's hereditary optic neuropathy (LHON) is an inherited optic neuropathy characterized by subacute painless vision loss. The majority of LHON is caused due to one of the three primary mutations in the mitochondrial DNA (m.G3460A, m.G11778A, and m.T14484C). The frequency of these mutations differs in different populations. The purpose of this study is to observe the frequency of three common primary mutations in the North Indian population.
METHODS: Forty LHON patients within the age group of 10-50 years underwent molecular testing for primary mutations. For two patients, testing for mother and other siblings was also carried out, using bidirectional sequencing.
RESULTS: A total of 11 out of 40 (27.5%) patients were found to be carrying m.G11778A mutation. Siblings of two probands were also positive for the same mutation. In one family, two primary mutations (m.G11778A and m.T14484C) were found in the proband and in the mother as well.
CONCLUSION: In this study, 27.5% mutation was detected in North Indian LHON families. These results suggest that m.G11778A mutation is more frequent in this population. The results of the present study are compatible with studies of an Asian population and Northern European population.

DOI: 10.4103/ijo.IJO_380_17

PMCID: PMC5700584
PMID: 29133642 [Indexed for MEDLINE]

98: Mishra S, Mohan JC, Nair T, Chopra VK, Harikrishnan S, Guha S, Ramakrishnan S, Ray S, Sethi R, Samal UC, Sarat Chandra K, Hiremath MS, Banerjee AK, Kumar S, Das MK, Deb PK, Bahl VK. Management protocols for chronic heart failure in India. Indian Heart J. 2018 Jan - Feb;70(1):105-127. doi: 10.1016/j.ihj.2017.11.015. Epub 2017 Nov 22. PubMed PMID: 29455764; PubMed Central PMCID: PMC5903070.

Heart failure is a common clinical syndrome and a global health priority. The burden of heart failure is increasing at an alarming rate worldwide as well as in India. Heart failure not only increases the risk of mortality, morbidity and worsens the patient's quality of life, but also puts a huge burden on the overall healthcare system. The management of heart failure has evolved over the years with the advent of new drugs and devices. This document has been developed with an objective to provide standard management guidance and simple heart failure algorithms to aid Indian clinicians in their daily practice. It would also inform the clinicians on the latest evidence in heart failure and provide guidance to recognize and diagnose chronic heart failure early and optimize management.

DOI: 10.1016/j.ihj.2017.11.015
PMCID: PMC5903070 [Available on 2019-01-01]
PMID: 29455764

99: 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-kB 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-α, caspase-3, Nrf-2, HO-1, and NF-kBp65) 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.

DOI: 10.1007/s10787-017-0413-5
PMID: 29094308

100: Mittal R, Balawat AS, Manhas V, Roy A, Singh NK. Habitual patellar dislocation in children: Results of surgical treatment by modified four in one technique. J Clin Orthop Trauma. 2017 Nov;8(Suppl 2):S82-S86. doi: 10.1016/j.jcot.2017.03.008. Epub 2017 May 1. PubMed PMID: 29339848; PubMed Central PMCID: PMC5761693.

Background: Habitual patellar dislocation is a rare condition affecting children. The growth plates are open in children and any surgical intervention should take that in to consideration. We are describing a modified four in one technique for habitual patellar dislocation, which is a soft tissue procedure without the use of any implant.
Method: In this study we included 6 children (4 females and 2 males) with open growth plates, which were diagnosed with habitual patellar dislocation. The average age of the patients were 9.6 years (range 5-13 years). Our technique included lateral retinaculum release, vastus medialis obliques (VMO) advancement, partial patellar tendon transposition and reconstruction of medial patellofemoral ligament (MPFL). Patients were evaluated with Kujala scoring pre and post operatively. The average follow up period was 12 months (range 7-24 months).
Results: There were no recurrence of patellar instability in any of the cases. The mean Kujala score was 48 before surgery and it improved to 95 after 12 months of average follow-up after surgery.
Conclusion: We conclude that our method of treatment of habitual patellar dislocation by using modified four in one technique in children with open physis reproduced excellent functional outcome. It is simple, cheap and does not require any image guidance.
Therapeutic study: Level of evidence IV.

DOI: 10.1016/j.jcot.2017.03.008
PMCID: PMC5761693 [Available on 2018-11-01]
PMID: 29339848

101: Mittal S, Madan K. Montelukast in acute asthma exacerbations: Interpreting too far?? Lung India. 2017 Nov-Dec;34(6):576. doi: 10.4103/lungindia.lungindia_274_17. PubMed PMID: 29099012; PubMed Central PMCID: PMC5684824.

102: Mittal S, Jain A, Arava S, Hadda V, Mohan A, Guleria R, Madan K. A 26-year-old man with dyspnea and chest pain. Lung India. 2017 Nov-Dec;34(6):562-566. doi: 10.4103/lungindia.lungindia_111_17. PubMed PMID: 29099006; PubMed Central PMCID: PMC5684818.

A 26-year-old smoker male presented with a history of sudden onset dyspnea and right-sided chest pain. Chest radiograph revealed large right-sided pneumothorax which was managed with tube thoracostomy. High-resolution computed tomography thorax revealed multiple lung cysts, and for a definite diagnosis, a video-assisted thoracoscopic surgery-guided lung biopsy was performed followed by pleurodesis. This clinicopathologic conference discusses the clinical and radiological differential diagnoses, utility of lung biopsy, and management options for patients with such a clinical presentation.

DOI: 10.4103/lungindia.lungindia_111_17
PMCID: PMC5684818
PMID: 29099006

103: Moorthy S, Garg K, Aggarwal A, Kale SS, Sharma BS, Mahapatra AK. Spontaneous resolution of a spinal arachnoid cyst. Neurol India. 2017 Nov-Dec;65(6):1416-1417. doi: 10.4103/0028-3886.217944. PubMed PMID: 29133729.

104: Nandi R, Basu SR, Sarkar S, Garg R. A comparison of haemodynamic responses between clinical assessment-guided tracheal intubation and neuromuscular block monitoring-guided tracheal intubation: A prospective, randomised study. Indian J Anaesth. 2017 Nov;61(11):910-915. doi: 10.4103/ija.IJA_93_17. PubMed PMID: 29217857; PubMed Central PMCID: PMC5703005.

Background and Aims: Haemodynamic responses to laryngoscopy and endotracheal intubation and their hazards are well documented. The purpose of the study was to compare the effects of laryngoscopy and intubation on cardiovascular responses when the appropriate moment for intubation was directed by either clinical judgment or train-of-four assessment.
Methods: A total of 68 patients, posted for laparoscopic cholecystectomy, were randomised into two groups. In Group M patients, the trachea was intubated after train of four counts became zero in adductor pollicis muscle, whereas in Group C patients, the trachea was intubated after the clinical judgment of jaw muscle relaxation. Changes in heart rate (HR) and mean arterial pressure, intubating conditions and the time between the administration of a neuromuscular blocking agent and endotracheal intubation were recorded. Results were analysed by the Analysis of variance and chi-square tests.
Results: HR and mean arterial pressure were significantly higher in Group C as compared to Group M after laryngoscopy and tracheal intubation ($P < 0.05$). The mean time required for intubation was significantly shorter in Group C compared to Group M (175 ± 7 s vs. 385 ± 101 s). Excellent and good intubation conditions were observed in all Group M patients, whereas 24 out of 34 patients (70%) in Group C showed excellent and good intubation conditions.
Conclusion: Haemodynamic responses to laryngoscopy and tracheal intubation can be significantly attenuated if tracheal intubation is performed following complete paralysis of laryngeal muscles, detected by neuromuscular monitoring of adductor pollicis muscle.

DOI: 10.4103/ija.IJA_93_17
PMCID: PMC5703005
PMID: 29217857

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

105: Neelapu BC, Kharbanda OP, Sardana V, Gupta A, Vasamsetti S, Balachandran R, Rana SS, Sardana HK. A pilot study for segmentation of pharyngeal and sino-nasal airway subregions by automatic contour initialization. Int J Comput Assist Radiol Surg. 2017 Nov;12(11):1877-1893. doi: 10.1007/s11548-017-1650-1. Epub 2017 Jul 28. PubMed PMID: 28755036.

PURPOSE: The objective of the present study is to put forward a novel automatic segmentation algorithm to segment pharyngeal and sino-nasal airway subregions on 3D CBCT imaging datasets.
METHODS: A fully automatic segmentation of sino-nasal and pharyngeal airway subregions was implemented in MATLAB programing environment. The novelty of the algorithm is automatic initialization of contours in upper airway subregions. The algorithm is based on boundary definitions of the human anatomy along with shape constraints with an automatic initialization of contours to develop a complete algorithm which has a potential to enhance utility at clinical level. Post-initialization; five segmentation techniques: Chan-Vese level set (CVL), localized Chan-Vese level set (LCVL), Bhattacharya distance level set (BDL), Grow Cut (GC), and Sparse Field method (SFM) were used to test the robustness of automatic initialization.
RESULTS: Precision and F-score were found to be greater than 80% for all the regions with all five segmentation methods. High precision and low recall were observed with BDL and GC techniques indicating an under segmentation. Low precision and high recall values were observed with CVL and SFM methods indicating an over segmentation. A Larger F-score value was observed with SFM method for all the subregions. Minimum F-score value was observed for

naso-ethmoidal and sphenoidal air sinus region, whereas a maximum F-score was observed in maxillary air sinuses region. The contour initialization was more accurate for maxillary air sinuses region in comparison with sphenoidal and naso-ethmoid regions.
CONCLUSION: The overall F-score was found to be greater than 80% for all the airway subregions using five segmentation techniques, indicating accurate contour initialization. Robustness of the algorithm needs to be further tested on severely deformed cases and on cases with different races and ethnicity for it to have global acceptance in Katradental radKatraiology workflow.

DOI: 10.1007/s11548-017-1650-1
PMID: 28755036 [Indexed for MEDLINE]

106: Nehate C, Moothedathu Raynold AA, Koul V. ATRP Fabricated and Short Chain Polyethylenimine Grafted Redox Sensitive Polymeric Nanoparticles for Codelivery of Anticancer Drug and siRNA in Cancer Therapy. ACS Appl Mater Interfaces. 2017 Nov 15;9(45):39672-39687. doi: 10.1021/acsami.7b11716. Epub 2017 Oct 31. PubMed PMID: 29048878.

To overcome the limitations of conventional chemotherapy, nanoparticle-mediated combinatorial delivery of siRNA and drugs represents a new approach to overcome its associated side effects. Designing safe and efficient vehicles for their codelivery has emerged as a potential challenge in the clinical translation of these formulations. Herein, we have demonstrated a novel "two-in-one" polyplex nanosystem developed from redox sensitive, short chain polyethylenimine modified poly[(poly(ethylene)glycol methacrylate]-s-s-polycaprolactone copolymer synthesized by atom-transfer free-radical polymerization (ATRP), which can deliver doxorubicin and polo-like kinase I (plk1) siRNA, simultaneously for an enhanced chemotherapeutic effect. The nanoparticles were found to be stable at physiological buffer with and without fetal bovine serum (FBS). The developed polymeric nanosystem was found to be biocompatible and hemocompatible in vitro and in vivo at repeated dose administrations. The polymer could easily self-assemble into ~100 nm spherical nanoparticles with enhanced doxorubicin loading (~18%) and effective siRNA complexation at a polymer to siRNA weight ratio of 15. The doxorubicin loaded nanoparticles exhibited ~4-fold higher drug release in endosomal pH (pH 5) containing 10 mmol of GSH compared to pH 7.4, depicting their redox-sensitive behavior. The polyplexes were capable of delivering both cargos simultaneously to cancer cells in vitro as observed by their excellent colocalization in the cytoplasm of MDA-MB-231 and HeLa cells using confocal laser microscopy. Moreover, in vitro transfection of the cells with polyplexes exhibited 50-70% knockdown of plk1-mRNA expression in both cell lines. In vivo administration of the drug loaded polyplexes to EAT tumor bearing (EAT, Ehrlich ascites tumor) Swiss albino mice showed a ~29-fold decrease in percent tumor volume in comparison to the control group. The results highlight the therapeutic potential of the polyplexes as a combined delivery of doxorubicin and plk1-siRNA in cancer therapy.

DOI: 10.1021/acsami.7b11716
PMID: 29048878

107: Nevrekar V, Panda PK, Wig N, Pandey RM, Agarwal P, Biswas A. An Interventional Quality Improvement Study to Assess the Compliance to Cardiopulmonary Resuscitation Documentation in an Indian Teaching Hospital. Indian J Crit Care Med. 2017 Nov;21(11):758-764. doi: 10.4103/ijccm.IJCCM_249_17. PubMed PMID: 29279637; PubMed Central PMCID: PMC5699004.

Background: Cardiopulmonary resuscitation (CPR) should be performed as per the international guidelines; however, compliance to these guidelines is difficult to assess. This study was conducted to determine the compliance to American Heart Association (2010) guideline on CPR documentation by among resident physicians before and after resident training (two arms).

Methods: This pre-postinterventional quality improvement study was conducted in a referral center, North India. Data of hospitalized in-hospital CPR patients were collected in the form of quality indicators (checklists) as defined by the guideline and compared between two arms of before-after resident training. Residents were given appropriate training in CPR technique as per the guideline. The compliance of CPR documentation was assessed pre- and post-intervention.
Results: The baseline arm compliance of various components of CPR documentation was low. The postintervention arm compliances of all components significantly increased (baseline, 2.5% to postintervention, 15.11%, P = 0.03). Individual components assessed were documentation of assessment of responsiveness (65% to 77.9%, P = 0.19), assessment of breathing (37.5% to 58.1%, P = 0.03), assessment of carotid pulse (62.5% to 79%, P = 0.05), rate of chest compressions (20% to 39.5%, P = 0.04), airway management (62.5% to 82.5%, P = 0.02), and compressions to breaths ratio (12.5% to 31.4%, P = 0.02). Documentation of chest compression rate compared to nondocumentation (12 of 42 vs. 11 of 84, P = 0.04) was independently associated with a higher rate of return of spontaneous circulation. The study however did not show any survival benefits.
Conclusions: This study establishes that the compliance to CPR documentation is poor as assessed by CPR documentation content and quality, which improves after physician training, but not up to the mark level (100%) that may be due to busy Indian hospital settings and human behavioral factors. Due to ethical constraints of live CPR assessment, this document checklist approach may be considered as an internal quality assessment method for CPR compliance. Furthermore, correct instruction in CPR technique along with proper documentation of the procedure is required, followed up with periodic re-education during the residency period and beyond.

DOI: 10.4103/ijccm.IJCCM_249_17
PMCID: PMC5699004
PMID: 29279637

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

108: Ojha A, Gupta YK. Study of commonly used organophosphate pesticides that induced oxidative stress and apoptosis in peripheral blood lymphocytes of rats. Hum Exp Toxicol. 2017 Nov;36(11):1158-1168. doi: 10.1177/0960327116680273. Epub 2016 Dec 9. PubMed PMID: 27941166.

In a previous study, we have found that organophosphate (OP) pesticides such as chlorpyrifos (CPF), methyl parathion (MPT), and malathion (MLT) significantly induced genotoxicity in peripheral blood lymphocytes of rats. To explore the mechanism of OP-induced genotoxicity, we measured the formation of DNA interstrand cross-links (DICs) and apoptosis in peripheral blood lymphocytes of rats. Peripheral blood lymphocytes of rats were treated with CPF, MPT, and MLT individually and in combination at concentrations of 0.1 and 0.25 LC50 for 2, 4, 8, and 12 h at 37°C. Lipid peroxidation (LPO) was measured as a biomarker of oxidative stress. Apoptosis induced by CPF, MPT, and MLT individually and in combination was determined by measuring the intracellular level of active caspase-3 and caspase-9 by spectrofluorimetry. We found significant dose- and time-dependent increases in LPO, DICs formation and increase of intracellular active caspase-3 and caspase-9 in exposed peripheral blood lymphocytes of rats. These findings suggest that the studied pesticides have potential to induce oxidative stress, cause DNA adduct formation, and cause failure of adduct repair, which leads to apoptosis that is partially mediated by activation of intracellular caspase-3 and caspase-9.

DOI: 10.1177/0960327116680273
PMID: 27941166 [Indexed for MEDLINE]

109: Paliwal D, Joshi P, Panda SK. Hepatitis E Virus (HEV) egress: Role of BST2 (Tetherin) and interferon induced long non- coding RNA (lncRNA) BISPR. PLoS One.

2017 Nov 1;12(11):e0187334. doi: 10.1371/journal.pone.0187334. eCollection 2017. PubMed PMID: 29091957; PubMed Central PMCID: PMC5665557.

BACKGROUND: The biology of Hepatitis E Virus (HEV), a common cause of epidemic and sporadic hepatitis, is still being explored. HEV exits liver through bile, a process which is essential for its natural transmission by feco-oral route. Though the process of this polarised HEV egress is not known in detail, HEV pORF3 and hepatocyte actin cytoskeleton have been shown to play a role.
METHODS: Our transcriptome analysis in Hepatitis E virus (HEV) replicon transfected Huh7 cells at 24 and 72 hrs indicated that at 24hrs, both LncBISPR and BST2, expressed by a bidirectional promoter were highly upregulated whereas at 72 hrs, BST2 expression was comparatively reduced accompanied by normal levels of BISPR. These findings were confirmed by qPCR analysis. Co-localisation of BST2 and HEV pORF2 was confirmed in HEV transfected Huh7 by confocal microscopy. To investigate the role of BISPR/BST2 in HEV life cycle, particularly virus egress, we generated Huh7 cells with ~8kb deletion in BISPR gene using Crispr-Cas9 system. The deletion was confirmed by PCR screening, Sanger sequencing and Real time PCR. Virus egress in ΔBISPR Huh7 and Huh7 cells was compared by measuring HEV positive strand RNA copy numbers in cell lysates and culture supernatants at 24 and 72 hrs post HEV replicon transfection and further validated by western blot for HEV pORF2 capsid protein.
RESULTS: ΔBISPR Huh7 cells showed ~8 fold increase in virus egress at 24 hrs compared to Huh7 cells. No significant difference in virus egress was observed at 72hrs. Immunohistochemistry in histologically normal liver and HEV associated acute liver failure revealed BST2 overexpression in HEV infected hepatocytes and a dominant canalicular BST2 distribution in normal liver in addition to the cytoplasmic localisation reported in literature.
CONCLUSIONS: These findings lead us to believe that BISPR and BST2 may regulate egress of HEV virions into bile in vivo. This system may also be used to scale up virus production in vitro.

DOI: 10.1371/journal.pone.0187334
PMCID: PMC5665557
PMID: 29091957 [Indexed for MEDLINE]

110: Pandey AK, Bisht CS, Sharma PD, ArunRaj ST, Taywade S, Patel C, Bal C, Kumar R. Identification of optimal mask size parameter for noise filtering in 99mTc-methylene diphosphonate bone scintigraphy images. Nucl Med Commun. 2017 Nov;38(11):1015-1018. doi: 10.1097/MNM.0000000000000745. PubMed PMID: 28885541.

Tc-methylene diphosphonate (Tc-MDP) bone scintigraphy images have limited number of counts per pixel. A noise filtering method based on local statistics of the image produces better results than a linear filter. However, the mask size has a significant effect on image quality. In this study, we have identified the optimal mask size that yields a good smooth bone scan image. Forty four bone scan images were processed using mask sizes 3, 5, 7, 9, 11, 13, and 15 pixels. The input and processed images were reviewed in two steps. In the first step, the images were inspected and the mask sizes that produced images with significant loss of clinical details in comparison with the input image were excluded. In the second step, the image quality of the 40 sets of images (each set had input image, and its corresponding three processed images with 3, 5, and 7-pixel masks) was assessed by two nuclear medicine physicians. They selected one good smooth image from each set of images. The image quality was also assessed quantitatively with a line profile. Fisher's exact test was used to find statistically significant differences in image quality processed with 5 and 7-pixel mask at a 5% cut-off. A statistically significant difference was found between the image quality processed with 5 and 7-pixel mask at P=0.00528. The identified optimal mask size to produce a good smooth image was found to be 7 pixels. The best mask size for the John-Sen Lee filter was found to be 7×7 pixels, which yielded Tc-methylene diphosphonate bone scan images with the highest acceptable smoothness.

DOI: 10.1097/MNM.0000000000000745
PMID: 28885541 [Indexed for MEDLINE]

111: Pandey H, Talukdar A, Gangte JS, Gupta SD, Chandra NC. Cholesterol homeostasis and cell proliferation by mitogenic homologs: insulin, benzo-α-pyrene and UV radiation. Cell Biol Toxicol. 2018 Aug;34(4):305-319. doi: 10.1007/s10565-017-9415-8. Epub 2017 Nov 3. PubMed PMID: 29101605.

Low-Density Lipoprotein (LDL) is known to promote the unregulated proliferation of cells that is progression of cancer. We aimed to investigate the effect of mitogens on the expression of cell cycle proteins, nuclear cholesterol and cell proliferation. We observed that insulin and benzo-α-pyrene (BaP) induced the expression of Low-Density Lipoprotein receptor (LDLR) on HepG2 cells, thereby enhancing the uptake of LDL. The internalized LDL increased the concentration of cholesterol in the cytoplasm and nucleus of the cell. At the same time, insulin and BaP also stimulated the expression of cell cycle proteins viz., Cyclin E and Cdk2, and thus induced more incorporation of Bromodeoxyuridine (BrdU) in cultured cells indicating increased DNA synthesis. Increased expression of cell cycle proteins and DNA synthesis are the indications of DNA replication and new cell synthesis. This suggests a link between the enhanced nuclear cholesterol concentration and new cell formation. On the other hand, UV irradiation with selectively given dose of cell death eventually decreases nuclear cholesterol concentration and LDLR expression. Reduced LDLR shows low functional activity. This, again, repeated the plausibility of the same link between intracellular cholesterol concentration and cell population. The biasness of adverse effect observed by UV irradiation has been compromised by inactivating LDLR with anti-LDLR antibody, resulting in similar effects on Cyclin E expression in the cultured cells. Hence, we concluded that in all the conditions, LDLR expression was found to be a translational event of its transcription factor, SREBP-2, by the induction of insulin, BaP and UV irradiation.

DOI: 10.1007/s10565-017-9415-8
PMID: 29101605

112: Prabhoo R, Garg B. Legends of Indian Orthopedics: Dr. Brij Bhushan Joshi. Indian J Orthop. 2017 Nov-Dec;51(6):722-723. doi: 10.4103/ortho.IJOrtho_587_17. PubMed PMID: 29200494; PubMed Central PMCID: PMC5688872.

113: Prasad K, Singh N. Predicting and explaining outcome after stroke. Neurol India. 2017 Nov-Dec;65(6):1262-1263. doi: 10.4103/0028-3886.217998. PubMed PMID: 29133698.

114: Prasad SN, Chaudhary U, Kumari M, Lal H. Giant calvarial haemangioma with classical radiological features. BMJ Case Rep. 2017 Nov 4;2017. pii: bcr-2017-223029. doi: 10.1136/bcr-2017-223029. PubMed PMID: 29103014.

115: Pujari A, Bajaj MS, Shabeer B. Proboscis Lateralis. Ophthalmic Plast Reconstr Surg. 2017 Nov/Dec;33(6):e171. doi: 10.1097/IOP.0000000000000846. PubMed PMID: 27997461.

116: Raheja A, Mahapatra AK. Rachipagus parasitic twin. Neurol India. 2017 Nov-Dec;65(6):1443-1444. doi: 10.4103/0028-3886.217969. PubMed PMID: 29133743.

117: Rajeshwari M, Singh V, Nambirajan A, Mridha AR, Jain D. Carcinoma showing thymus like elements: Report of a case with EGFR T790M mutation. Diagn Cytopathol. 2018 May;46(5):413-418. doi: 10.1002/dc.23859. Epub 2017 Nov 8. PubMed PMID: 29115061.

Carcinoma showing thymus-like differentiation of the thyroid (CASTLE) is a rare tumor involving the thyroid and perithyroidal soft tissues. It shares

morphological, immunohistochemical and molecular similarities with thymic carcinomas. Due to its relatively better prognosis, it needs differentiation from other primary and metastatic tumors of this region. A 40-year-old lady presented with a gradually progressive anterior neck swelling for one year. Imaging showed bulky right and left lobes of thyroid along with a solid soft tissue mass in the pretracheal region. Fine needle aspiration smears showed features of poorly differentiated carcinoma. Total thyroidectomy with excision of the mass revealed histopathological features characteristic of CASTLE, with evidence of thyroiditis in adjoining thyroid. Epidermal growth factor receptor (EGFR) assay revealed presence of EGFR T790M somatic mutation in exon 20. The same was not detectable on direct sequencing. We present a rare case of CASTLE, occurring in association with Hashimoto thyroiditis, with emphasis on cytological features and report for the first time the presence of a low level somatic mutation in EGFR (EGFR T790M mutation).

DOI: 10.1002/dc.23859
PMID: 29115061

118: Ram Purakayastha D, Vishnubhatla S, Rai SK, Broor S, Krishnan A. Estimation of Burden of Influenza among under-Five Children in India: A Meta-Analysis. J Trop Pediatr. 2017 Nov 3. doi: 10.1093/tropej/fmx087. [Epub ahead of print] PubMed PMID: 29112737.

Background: We estimated the burden of influenza-related acute respiratory tract infection (ARI) among under-fives in India through meta-analysis.
Methodology: We estimated pooled incidence and proportional positivity of laboratory-diagnosed influenza among under-fives using data from observational studies published from 1 January 1961 to 31 December 2016. Death due to influenza was estimated using a multiplier model.
Results: Influenza-associated ARI incidence was estimated as 132 per 1000 child-years (115-149). The patients positive for influenza among ARI in outpatients and inpatients were estimated to be 11.2% (8.8-13.6) and 7.1% (5.5-8.8), respectively. We estimated total influenza cases during 2016 as 16 009 207 (13 942 916-18 082 769) in India. Influenza accounted for 10 913 476 (9 504 666-12 362 310) outpatient visits and 109 431 (83 882-134 980) hospitalizations. A total of 27 825 (21 382-34 408) influenza-associated under-five deaths were estimated in India in 2016.
Conclusion: Influenza imposes a substantial burden among under-fives in India. Public health approach for its prevention and control needs to be explored.

DOI: 10.1093/tropej/fmx087
PMID: 29112737

119: Ravani R, Chawla R, Jain S, Kumar A. "Dye front reciprocation" in combined central retinal vein occlusion with cilioretinal artery infarction. Indian J Ophthalmol. 2017 Nov;65(11):1211-1212. doi: 10.4103/ijo.IJO_552_17. PubMed PMID: 29133654; PubMed Central PMCID: PMC5700596.

120: Ray S, Vibha D, Gupta G, Prasad K, Srivastava AK, Shukla G. Ophthalmoplegia due to concurrent thyrotoxicosis and myasthenia gravis. Neuromuscul Disord. 2018 Mar;28(3):277. doi: 10.1016/j.nmd.2017.11.011. Epub 2017 Nov 27. PubMed PMID: 29398296.

121: Roy KK, Lingampally A, Kansal Y, Bharti J, Kumar S, Vanamail P, Singhal S, Meena J. A Pilot Study Comparing Hysteroscopic Adhesiolysis by Conventional Resectoscope Versus Mini-resectoscope. Oman Med J. 2017 Nov;32(6):492-498. doi: 10.5001/omj.2017.94. PubMed PMID: 29218126; PubMed Central PMCID: PMC5702989.

Objectives: To compare the feasibility and efficacy of the mini-resectoscope with the conventional resectoscope in terms of the operative, menstrual, and reproductive outcome in hysteroscopic adhesiolysis in infertile women.
Methods: We conducted a parallel prospective randomized study at All India Institute of Medical Sciences, New Delhi. A total of 60 patients underwent hysteroscopic adhesiolysis using either conventional resectoscope (n = 30) or mini-resectoscope (n = 30). The primary outcome measures were pregnancy-related indicators. Secondary outcome measures were the operative parameters (cervical dilatation time, operation time, postoperative pain scores, fluid deficit, and preoperative and postoperative sodium levels), second-look hysteroscopy findings, and improvement in the menstrual pattern after surgery.
Results: Cervical dilatation time and pain score 30 minutes after the procedure were significantly lower in the mini-resectoscope group. Out of the total 21 cases with hypomenorrhea, 12 cases (57.1%) started having normal menstrual flow postsurgery. All amenorrheic patients resumed menstruation after surgery. However, nine cases continued to have hypomenorrhea. Over long-term follow-up, 16 patients out of 60 had conceived (seven in the conventional resectoscope group and nine in the mini-resectoscope group). There were three ongoing pregnancies, three abortions, one ectopic pregnancy, and nine term pregnancies. The difference between the two groups was not statistically significant.
Conclusions: The use of mini-resectoscope for hysteroscopic adhesiolysis is associated with reduced operative morbidity. Use of the mini-resectoscope is an effective and safe alternative to the conventional system.

DOI: 10.5001/omj.2017.94
PMCID: PMC5702989
PMID: 29218126

122: Saha S, Goswami R, Ramakrishnan L, Vishnubhatla S, Mahtab S, Kar P, Srinivasan S, Singh N, Singh U. Vitamin D and calcium supplementation, skeletal muscle strength and serum testosterone in young healthy adult males: Randomized control trial. Clin Endocrinol (Oxf). 2018 Feb;88(2):217-226. doi: 10.1111/cen.13507. Epub 2017 Nov 24. PubMed PMID: 29095521.

BACKGROUND: Cholecalciferol and/or calcium supplementation might increase skeletal muscle strength and serum testosterone in young adult males.
OBJECTIVE: We performed a randomized control trial assessing the effect of cholecalciferol/calcium on skeletal muscle strength and serum testosterone in vitamin D deficient young males.
DESIGN: Two-by-two factorial RCT.
SUBJECT AND INTERVENTION: Two-hundred and twenty-eight young males were block-randomized to (i) double-placebo, (ii) calcium/placebo, (iii) cholecalciferol/placebo and (iv) cholecalciferol/calcium. Doses for cholecalciferol were 60 000 IU/wk for 8 weeks followed by 60 000 IU/fortnightly, and doses for elemental calcium were 500 mg/twice daily for 6 months. A total of 180 subjects completed the study protocol. Their ean age, body mass index and baseline 25(OH)D were 20.2 ± 2.2 years, 23.0 ± 3.6 kg/m2 and 21.5 ± 9.5 nmol/L, respectively.
MEASUREMENTS: Handgrip (primary outcome), pinch-grip strength, distance walked in 6 minutes, dyspnoea-score, quality of life by Short Form 36, serum 25(OH)D, 1,25(OH)2 D, iPTH, total testosterone and free androgen index (FAI).
RESULTS: After intervention, mean serum 25(OH)D was >75.0 nmol/L in cholecalciferol groups. However, the handgrip strength (29.7 ± 4.4, 29.3 ± 4.6, 30.6 ± 5.0 and 28.8 ± 4.3 kg, P = .28) was comparable in the 4 groups. Subgroups analysis among subjects with baseline serum 25OH)D < 25.0 and <12.0 nmol/L showed similar results. The mean serum testosterone decreased significantly at 6 months;

however, delta change was similar in 4 groups. Change in handgrip strength and other outcomes was similar in 4 groups with and without adjustment for delta testosterone and FAI.
CONCLUSIONS: Six months of cholecalciferol/calcium supplementation had no significant effect on skeletal muscle strength and serum testosterone in young adult males.

DOI: 10.1111/cen.13507
PMID: 29095521

123: Sahoo RK, Kumar L. Midostaurin in FLT3-Mutated Acute Myeloid Leukemia. N Engl J Med. 2017 Nov 9;377(19):1901-2. doi: 10.1056/NEJMc1711340. PubMed PMID: 29120133.

124: Saini M, Sharma P, Gaur N, Singh J. Selective aplasia of global fibres of all extraocular muscles in congenital fibrosis of extraocular muscles (CFEOM): a rare presentation. BMJ Case Rep. 2017 Nov 9;2017. pii: bcr-2017-221622. doi: 10.1136/bcr-2017-221622. PubMed PMID: 29127124.

125: Saxena A. Pediatric cardiac care in India: current status and the way forward. Future Cardiol. 2018 Jan;14(1):1-4. doi: 10.2217/fca-2017-0084. Epub 2017 Nov 23. PubMed PMID: 29168647.

126: Senguttuvan NB, Mishra S, Kim SW. Utility of OCT In a patient with chronic stable angina- "All that is seen using dye is not true". Indian Heart J. 2018 Jan - Feb;70(1):135-136. doi: 10.1016/j.ihj.2017.11.008. Epub 2017 Nov 7. PubMed PMID: 29455768; PubMed Central PMCID: PMC5903069.

127: Sharma VK, Gupta V, Pahadiya P, Vedi KK, Arava S, Ramam M. Dermoscopy and patch testing in patients with lichen planus pigmentosus on face: A cross-sectional observational study in fifty Indian patients. Indian J Dermatol Venereol Leprol. 2017 Nov-Dec;83(6):656-662. doi: 10.4103/ijdvl.IJDVL_469_16. PubMed PMID: 29035285.

BACKGROUND: Lichen planus pigmentosus (LPP) is a common cause of facial melanosis in the dark-skinned population. At present, information on dermoscopy and patch testing in LPP is limited.
OBJECTIVES: To describe dermoscopic findings and study the role of patch testing in patients with LPP on the face.
METHODS: Facial lesions of 50 patients with LPP were studied dermoscopically, followed by histological evaluation. Patch and photopatch tests with the Indian Standard Series and Scandinavian series, respectively, and patient's own cosmetics were performed on all patients.
RESULTS: The most common dermoscopic finding was dots and/or globules (43/50, 86%) in different patterns: hem-like (20.9%), arcuate (18.6%), incomplete reticular (39.5%), complete reticular (7%), and not otherwise specified (14%). Other patterns were exaggerated pseudoreticular pattern, accentuation of pigmentation around follicular openings, targetoid appearance, and obliteration of the pigmentary network. There were 26 relevant patch tests in 17 (34%) patients: para-phenylenediamine (n = 5), nickel (n = 3), colophony, perfume mix and fragrance mix (n = 2 each), thiuram mix and 3,3,4,5-tetrachlorosalicylanilide (n = 1 each), and patients' own products (n = 9). The only positive photopatch test was to fentichlor. No clinical or histological finding differed significantly based on patch test results. The only dermoscopic finding to be statistically associated with a positive patch test was the non-characteristic arrangement of dots/globules (P = 0.042).

LIMITATIONS: Dermoscopic features were not correlated with clinical features or disease duration. Implications of patch testing on the management of LPP cannot be commented upon as ours was a cross-sectional study.
CONCLUSIONS: The present study describes the dermoscopic findings of facial lesions in LPP. Our patch test results suggest a probable role of allergens in causing LPP on the face.

DOI: 10.4103/ijdvl.IJDVL_469_16
PMID: 29035285 [Indexed for MEDLINE]

128: Shekhar S, Dharmshaktu P. On the Palms of His Hands: ACTH-Induced Hyperpigmentation. Am J Med. 2018 Feb;131(2):144-145. doi: 10.1016/j.amjmed.2017.10.037. Epub 2017 Nov 7. PubMed PMID: 29126827.

129: Shukla A, Das Bhowmik A, Hebbar M, Rajagopal KV, Girisha KM, Gupta N, Dalal A. Homozygosity for a nonsense variant in AIMP2 is associated with a progressive neurodevelopmental disorder with microcephaly, seizures, and spastic quadriparesis. J Hum Genet. 2018 Jan;63(1):19-25. doi: 10.1038/s10038-017-0363-1. Epub 2017 Nov 16. PubMed PMID: 29215095.

We ascertained two unrelated consanguineous families with two affected children each having microcephaly, refractory seizures, intellectual disability, and spastic quadriparesis. Magnetic resonance imaging showed atrophy of cerebrum, cerebellum and spinal cord, prominent cisterna magna, symmetric T2 hypo-intensities in the bilateral basal ganglia and thinning of corpus callosum. Whole-exome sequencing of three affected individuals revealed c.105C>A [p.(Tyr35Ter)] variant in AIMP2. The variant lies in a common homozygous region of 940 kb on chromosome 7 and is likely to have been inherited from a common ancestor. The phenotype noted in our subjects' shares marked similarity with that of hypomyelinating leukodystrophy-3 caused by mutations in closely related gene AIMP1. We hereby report the first human disease associated with deleterious mutations in AIMP2.

DOI: 10.1038/s10038-017-0363-1
PMID: 29215095

130: Shukla S, Srivastava A, Kumar S, Singh U, Goswami S, Chawla B, Bajaj MS, Kashyap S, Kaur J. Expression of multidrug resistance proteins in retinoblastoma. Int J Ophthalmol. 2017 Nov 18;10(11):1655-1661. doi: 10.18240/ijo.2017.11.04. eCollection 2017. PubMed PMID: 29181307; PubMed Central PMCID: PMC5686362.

AIM: To elucidate the mechanism of multidrug resistance in retinoblastoma, and to acquire more insights into in vivo drug resistance.
METHODS: Three anticancer drug resistant Y79 human RB cells were generated against vincristine, etoposide or carboplatin, which are used for conventional chemotherapy in RB. Primary cultures from enucleated eyes after chemotherapy (PCNC) were also prepared. Their chemosensitivity to chemotherapeutic agents (vincristine, etoposide and carboplatin) were measured using MTT assay. Western blot analysis was performed to evaluate the expression of p53, Bcl-2 and various multidrug resistant proteins in retinoblastoma cells.
RESULTS: Following exposure to chemotherapeutic drugs, PCNC showed less sensitivity to drugs. No significant changes observed in the p53 expression, whereas Bcl-2 expression was found to be increased in the drug resistant cells as well as in PCNC. Increased expression of P-glycoprotein (P-gp) was observed in drug resistant Y79 cells; however there was no significant change in the expression of P-gp found between primary cultures of primarily enucleated eyes and PCNC. Multidrug resistance protein 1 (Mrp-1) expression was found to be elevated in the drug resistant Y79 cells as well as in PCNC. No significant change in the expression of lung resistance associated protein (Lrp) was observed in the drug resistant Y79 cells as well as in PCNC.
CONCLUSION: Our results suggest that multidrug resistant proteins are

intrinsically present in retinoblastoma which causes treatment failure in managing retinoblastoma with chemotherapy.

DOI: 10.18240/ijo.2017.11.04
PMCID: PMC5686362
PMID: 29181307

131: Singh A, Bhari N, Bhari A. Dermoscopy of pseudoxanthoma elasticum. BMJ Case Rep. 2017 Nov 9;2017. pii: bcr-2017-221365. doi: 10.1136/bcr-2017-221365. PubMed PMID: 29127123.

132: Singh G, Sankanagoudar S, Dogra P, Chandra NC. Interlink between cholesterol & cell cycle in prostate carcinoma. Indian J Med Res. 2017 Nov;146(Suppl):S38-S44. doi: 10.4103/ijmr.IJMR_1639_15. PubMed PMID: 29578193; PubMed Central PMCID: PMC5890594.

Background & objectives: Earlier reports have shown hypocholesterolaemia in cancer patients and high number of lipid rafts in cancer cells. The primary objective of this study was to compare the intracellular cholesterol turnover in non-cancerous (benign) prostatic hyperplasia (BPH) and carcinoma prostate (CAP) with normal prostate cells obtained from patients undergoing radical cystectomy for carcinoma bladder (sham control).
Methods: ELISA-based estimation of prostate-specific antigen (PSA), evaluation of expression of low-density lipoprotein receptor (LDLR), peripheral-type benzodiazepine receptor (PBR) and cyclin E, immunohistochemistry and confocal microscopy, measurement of integrated optical density of the diaminobenzidine (DAB)-stained immunohistograms, isolation of nucleus and cell cytoplasm from prostate tissue by ultracentrifugation followed by estimation of cholesterol spectrophotometrically in isolated nuclear and cytoplasmic fractions were performed.
Results: Seventy five individuals, 25 for each group (BPH n=25; CAP n=25 and sham control n=25), were included in the study. Cholesterol was increased in the cytoplasm and nucleus of the prostate cancer cells along with elevated expression of LDLR. Increased cholesterol concentration in the cell nucleus was found comparable with the increased expression of cholesterol transporter viz. PBR in the prostate tumour tissues as compared to its expression in normal prostate cells obtained from individuals undergoing radical cystectomy for carcinoma bladder. Cell cycle protein cyclin E was also highly expressed in cancer tissues.
Interpretation & conclusions: The present findings along with increased expression of cell cycle protein cyclin E in the cell nucleus of the tumour tissue suggested the possibility of an intriguing role of cholesterol in the mechanism of cell cycle process of prostate cell proliferation.

DOI: 10.4103/ijmr.IJMR_1639_15
PMCID: PMC5890594
PMID: 29578193

Conflict of interest statement: None

133: Singh M, Garg K. Pallidal deep brain stimulation in dystonia. Neurol India. 2017 Nov-Dec;65(6):1232-1233. doi: 10.4103/0028-3886.217992. PubMed PMID: 29133690.

134: Singh PK, Iqbal N, Sirohi HV, Bairagya HR, Kaur P, Sharma S, Singh TP. Structural basis of activation of mammalian heme peroxidases. Prog Biophys Mol Biol. 2018 Mar;133:49-55. doi: 10.1016/j.pbiomolbio.2017.11.003. Epub 2017 Nov 22. Review. PubMed PMID: 29174286.

The mammalian heme peroxidases including lactoperoxidase (LPO), myeloperoxidase (MPO), eosinophil peroxidase (EPO) and thyroid peroxidase (TPO) contain a

covalently linked heme moiety. Initially, it was believed that the heme group was fully cross-linked to protein molecule through at least two ester linkages involving conserved glutamate and aspartate residues with 1-methyl and 5-methyl groups of pyrrole rings A and C respectively. In MPO, an additional sulfonium ion linkage was present between 2-vinyl group of pyrrole ring A of the heme moiety and a methionine residue of the protein. These linkages were formed through a self processing mechanism. Subsequently, biochemical studies indicated that the heme moiety was partially attached to protein. The recent structural studies have shown that the covalent linkage involving glutamate and 1-methyl group of pyrrole ring of heme moiety was partially formed. When glutamate is not covalently linked to heme moiety, its side chain occupies a position in the substrate binding site on the distal heme side and blocks the substrate binding site leading to inactivation. However, an exposure to H2O2 converts it to a fully covalently linked state with heme. Thus in mammalian heme peroxidases, the Glu-heme linkage is essential for catalytic action.

DOI: 10.1016/j.pbiomolbio.2017.11.003
PMID: 29174286

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

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

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

136: Singh PM, Borle A, McGavin J, Trikha A, Sinha A. Comparison of the Recovery Profile between Desflurane and Sevoflurane in Patients Undergoing Bariatric

Surgery-a Meta-Analysis of Randomized Controlled Trials. Obes Surg. 2017 Nov;27(11):3031-3039. doi: 10.1007/s11695-017-2929-6. Review. PubMed PMID: 28916989.

Early and clear recovery from anesthesia is the crux for preventing perioperative complications in the obese undergoing bariatric surgery. Volatile inhalation agents by virtue of high lipid solubility are expected to produce residual anesthetic effects. Prospective randomized trials comparing desflurane and sevoflurane used for anesthesia maintenance (electroencephalograph guided) during bariatric surgery published till 1st of July 2017 were searched in the medical database. Comparisons were made for surrogate markers of recovery from anesthesia that included time to eye-opening (TEo), time to tracheal-extubation (TEx), and Aldrete scores on immediately shifting to recovery (Ald-I). Five trials were included in the final analysis. Patients receiving desflurane began to respond faster by opening eyes on command (five trials) by 3.80 min (95%CI being 1.83-5.76) (random effects, P < 0.01, I2 = 78.61%), and tracheal extubation was also performed earlier (four trials) by 4.97 min (95%CI being 1.34-8.59). This meant a reduction of 37% in TEo and 33.60% in TEx over sevoflurane. Ald-I scores were higher/better with desflurane by 0.52 (95%CI being 0.19-0.84) (Fixed-effects, P < 0.01, I2 = 6.67%). Publication bias is likely for TEo (Egger's Test, X-intercept = - 8.57, P = 0.02). No airway-related complications were reported with desflurane's expedited recovery. Use of desflurane compared to sevoflurane for maintenance of anesthesia in morbidly obese patients allows attaining verbal contact faster, and tracheal extubating can be performed earlier without compromising safety. The benefits of better recovery extend into the immediate postoperative phase with patients being more awake upon shifting to the recovery.

DOI: 10.1007/s11695-017-2929-6
PMID: 28916989 [Indexed for MEDLINE]

137: Singh S, Sondhi P, Yadav S, Ali F. Tinea barbae presenting as kerion. Indian J Dermatol Venereol Leprol. 2017 Nov-Dec;83(6):741. doi: 10.4103/ijdvl.IJDVL_1104_16. PubMed PMID: 29035288.

138: Singh S, Sondhi P, Sethuraman G. Palmoplantar keratoderma with curly hair. Pediatr Dermatol. 2017 Nov;34(6):724-725. doi: 10.1111/pde.13307. PubMed PMID: 29144042.

139: Singla V, Aggarwal S, Garg H, Kashyap L, Shende DR, Agarwal S. Outcomes in Super Obese Patients Undergoing Laparoscopic Sleeve Gastrectomy. J Laparoendosc Adv Surg Tech A. 2018 Mar;28(3):256-262. doi: 10.1089/lap.2017.0536. Epub 2017 Nov 3. PubMed PMID: 29099314.

BACKGROUND: Super obese patients remain a challenge for management because of large liver size resulting in decreased work space and associated comorbidities.
OBJECTIVES: To study outcomes in super obese patients undergoing Laparoscopic sleeve gastrectomy (LSG).
METHODS: Retrospective data of 123 patients undergoing LSG from January 2008 to March 2015 were analyzed prospectively.
RESULTS: Mean age and body mass index (BMI) of 123 patients (±2 standard deviation [SD]) were 39.9±23.3 years and 55.6±10.54 kg/m2, respectively. Mean percentage excess weight loss (%EWL) (±2 SD) at 1, 3, 5, and 7 years was 63%±36.7%, 62.3%±29.0%, 56.5%±35.8%, and 58.6%±40.3%, respectively. The preoperative BMI correlated with %EWL at 1 year (r2=0.0397, P=.044). Staple line leak, bleeding, deep venous thrombosis, and 30-day mortality occurred in 1.6%, 0%, 0.8%, and 0% of the patients, respectively. Stricture formation and new onset gastroesophageal reflux disease (GERD) occurred in 0.8% patients each. Of the diabetic patients, 72.2% had remission and the rest required decreased dosage of oral hypoglycemic medications. Hypertension, obstructive sleep apnea, and GERD improved in 68.2%, 100%, and 25% of the patients, respectively. However, 25% of

patients had worsening in GERD symptoms.
CONCLUSIONS: Super obese patients undergoing LSG as the primary procedure have reasonable weight loss of 62% and 56% at 3 and 5 years, respectively, with significant resolution of comorbidities.

DOI: 10.1089/lap.2017.0536
PMID: 29099314

140: Sinha B, Chowdhury R, Upadhyay RP, Taneja S, Martines J, Bahl R, Sankar MJ. Integrated Interventions Delivered in Health Systems, Home, and Community Have the Highest Impact on Breastfeeding Outcomes in Low- and Middle-Income Countries. J Nutr. 2017 Nov;147(11):2179S-2187S. doi: 10.3945/jn.116.242321. Epub 2017 Sep 13. Review. PubMed PMID: 28904116.

Background: Improving breastfeeding rates is critical. In low- and middle-income countries (LMICs), only subtle improvements in breastfeeding rates have been observed over the past decade, which highlights the need for accelerating breastfeeding promotion interventions.Objective: The objective of this article is to update evidence on the effect of interventions on early initiation of and exclusive (<1 and 1-5 mo) and continued (6-23 mo) breastfeeding rates in LMICs when delivered in health systems, in the home or in community environments, or in a combination of settings.Methods: A systematic literature search was conducted in PubMed, Cochrane, and CABI databases to identify new articles relevant to our current review, which were published after the search date of our earlier meta-analysis (October 2014). Nine new articles were found to be relevant and were included, in addition to the other 52 studies that were identified in our earlier meta-analysis. We reported the pooled ORs and corresponding 95% CIs as our outcome estimates. In cases of high heterogeneity, random-effects models were used and causes were explored by subgroup analysis and meta-regression.Results: Early initiation of and exclusive (<1 and 1-5 mo) and continued (6-23 mo) breastfeeding rates in LMICs improved significantly as a result of interventions delivered in health systems, in the home or community, or a combination of these. Interventions delivered concurrently in a combination of settings were found to show the largest improvements in desired breastfeeding outcomes. Counseling provided in any setting and baby-friendly support in health systems appear to be the most effective interventions to improve breastfeeding.Conclusions: Improvements in breastfeeding practices are possible in LMICs with judicious use of tested interventions, particularly when delivered in a combination of settings concurrently. The findings can be considered for inclusion in the Lives Saved Tool model.

DOI: 10.3945/jn.116.242321
PMID: 28904116 [Indexed for MEDLINE]

Conflict of interest statement: Author disclosures: BS, RC, RPU, ST, JM, RB, and MJS, no conflicts of interest.

141: Sinha R, Bansal M, Sharma N, Dada T, Tandon R, Titiyal JS. Transscleral Suture-Fixated Versus Intrascleral Haptic-Fixated Intraocular Lens: A Comparative Study. Eye Contact Lens. 2017 Nov;43(6):389-393. doi: 10.1097/ICL.0000000000000287. PubMed PMID: 27243351.

PURPOSE: To compare the clinical outcomes between sutured transscleral-fixated and intrascleral haptic-fixated posterior chamber intraocular lens (IOL).
SETTING: Dr Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi.
DESIGN: A comparative case series.
METHODS: Forty eyes of 40 patients were included; 20 in each group. Patients in group 1 underwent sutured transscleral-fixated IOL and those in group 2 underwent

intrascleral haptic-fixated IOL augmented by fibrin glue. Parameters evaluated were uncorrected visual acuity (UCVA), best corrected visual acuity (BCVA), intraocular pressure (IOP), central macular thickness (CMT), IOL tilt on ultrasound biomicroscopy (UBM), and pseudophakodonesis on slitlamp and UBM.
RESULTS: The most common cause of aphakia was complicated cataract surgery (50%). The mean preoperative UCVA in logarithm of minimum angle of resolution (logMAR) was 1.59±0.24 and 1.63±0.26 in group 1 and 2, respectively (P=0.45). There was significant improvement in UCVA in both groups (P=0.001) at 6 months (group 1: 0.33±0.17; group 2: 0.22±0.10); the improvement being greater in group 2 (P<0.05). Mean percentage endothelial cell loss and IOP change were comparable. Mean CMT (μm) was 250.95±23.98 and 225.85±21.13 in group 1 and 2, respectively (P=0.009). Pseudophakodonesis was more in group 1 as assessed on slitlamp (P=0.037) and as assessed on UBM (P=0.046). Macular edema was the most common complication seen more in group 1.
CONCLUSIONS: Intrascleral haptic-fixated IOL provides more stable fixation, better visual outcome, and lesser complication in comparison with sutured transscleral-fixated IOL.

DOI: 10.1097/ICL.0000000000000287
PMID: 27243351 [Indexed for MEDLINE]

142: Sinha S, Raheja A, Samson N, Goyal K, Bhoi S, Selvi A, Sharma P, Sharma BS. A randomized placebo-controlled trial of progesterone with or without hypothermia in patients with acute severe traumatic brain injury. Neurol India. 2017 Nov-Dec;65(6):1304-1311. doi: 10.4103/0028-3886.217973. PubMed PMID: 29133706.

OBJECTIVE: Among newer neuroprotectant modalities, hypothermia and progesterone have shown a beneficial role in preliminary studies enrolling patients with severe traumatic brain injury (sTBI). The primary objective of this study was to evaluate the efficacy of progesterone with or without prophylactic hypothermia in acute sTBI patients.
MATERIALS AND METHODS: This is a prospective, outcome assessor, statistician blinded, randomized, and placebo-controlled phase II trial of progesterone with or without hypothermia (factorial design). All adult patients (18-65 years) with acute sTBI (Glasgow coma score of 4-8) and presenting to trauma center within 8 h after injury were included in the trial. Computer-generated randomization was done after exclusion; sequentially numbered, opaque, sealed envelope technique was used for allocation concealment. The enrollment duration was from January 2012 to October 2014. The primary endpoint was dichotomized Glasgow outcome score (GOS) [poor recovery = GOS 1-3; good recovery = GOS 4-5], and secondary endpoints were functional independence measure (FIM) score and mortality rate at 6 and 12 months follow-up after recruitment.
RESULTS: A total of 107 patients were randomized into four groups (placebo [n = 27], progesterone [n = 26], hypothermia alone [n = 27], and progesterone + hypothermia [n = 27]). The study groups were comparable in baseline parameters except for a higher incidence of decompressive craniectomy in the placebo group (P = 0.001). The analysis of GOS at 6 months revealed statistically significant better outcome in the hypothermia group (82%; P = 0.01) and a weaker evidence for progesterone group (74%; P = 0.07) as compared with the placebo group (44%). However, the outcome benefit was marginal at 1-year follow-up for the hypothermia group (82% vs. 58%, P = 0.17). The adjusted odds ratio of poor recovery at 6 months in the hypothermia group was 0.21 (confidence interval = 0.05-0.84, P = 0.03), as compared with the placebo group. Although mean FIM scores at 6 and 12 months respectively were marginally higher in the hypothermia and progesterone groups compared with the placebo group (P = 0.06 and 0.27), the proportion of functionally independent individuals were similar in all the groups (P = 0.79 and 0.51). The mortality rates were similar in all the groups at 6 and 12 months (P = 0.78 and 0.52 respectively).
CONCLUSIONS: A strong evidence for prophylactic hypothermia and a weak evidence for progesterone therapy was observed for a better primary outcome at 6 months as compared to the placebo. A similar trend was observed at a 1-year follow-up.

Contrary to our hypothesis, prophylactic hypothermia therapy suppressed the beneficial effects of progesterone therapy in sTBI patients. The complex cascades of factors responsible for such interactions are still unknown and need to be further determined.

DOI: 10.4103/0028-3886.217973
PMID: 29133706

143: Sofi NY, Jain M, Kapil U, Seenu V, R L, Yadav CP, Pandey RM, Sareen N. Reproductive factors, nutritional status and serum 25(OH)D levels in women with breast cancer: A case control study. J Steroid Biochem Mol Biol. 2018 Jan;175:200-204. doi: 10.1016/j.jsbmb.2017.11.003. Epub 2017 Nov 11. Review. PubMed PMID: 29137944.

The study was conducted with an objective to investigate the association between reproductive factors, nutritional status and serum 25(OH)D levels among women diagnosed with breast cancer (BC). A total of 200 women with BC attending a tertiary healthcare institute of Delhi, India matched with 200 healthy women for age (±2years) and socio economic status were included in the study. Data was collected on socio-demographic profile, reproductive factors, physical activity and dietary intake (24h dietary recall and food frequency questionnaire) using interviewer administered structured questionnaires and standard tools. Non fasting blood samples (5ml) were collected for the biochemical estimation of serum 25(OH)D and calcium levels by chemiluminescent immunoassay and colorimetric assay technique. Data was analyzed by univariable conditional logistic regression and significant variables with ($p<0.05$), were analyzed in final model by conditional multivariable logistic regression analysis. The mean age of patients at diagnosis of BC was 45±10years. Results of multivariable conditional logistic regression analysis revealed significantly higher odds of BC for reproductive factors like age at marriage (more than 23 years), number of abortions, history or current use of oral contraceptive pills (OCP), with [OR (95% CI)] of [2.4 (1.2-4.9)], [4.0 (1.6-12.6)], [2.4 (1.2-5.0)]. Women with physically light activities and occasional consumption of eggs were found to have higher odds of BC [4.6 (1.6-13.0)] and [3.2 (1.6-6.3)]. Women with serum 25(OH)D levels less than 20ng/ml and calcium levels less than 10.5mg/dl had higher odds of having BC [2.4 (1.2-5.1)] and [3.7 (1.5-8.8)]. A protective effect of urban areas as place of residence and energy intake greater than 50% of Recommended Dietary Allowance (RDA) per day against BC was observed ($p<0.05$). The findings of the present study revealed a significant association of reproductive and dietary factors in addition to sedentary physical activity and low serum 25(OH)D levels in women diagnosed with BC.

DOI: 10.1016/j.jsbmb.2017.11.003
PMID: 29137944 [Indexed for MEDLINE]

144: Sondhi P, Bhari N, Taneja N, Gupta S. Transplantation of In a Vivo-Harvested Epidermal Cell Suspension for Acute Cutaneous Lupus Erythematosus-Induced Depigmentation. Dermatol Surg. 2017 Nov;43(11):1407-1410. doi: 10.1097/DSS.0000000000001101. PubMed PMID: 28291065.

Experimental and clinical evidence have demonstrated aberrant expression of cytokines/chemokines and their receptors in patients with hippocampal sclerosis (HS) and focal cortical dysplasia (FCD). However, there is limited information regarding the modulation of cytokine/chemokine-regulatory networks, suggesting contribution of miRNAs and downstream transcription factors/receptors in these pathologies. Hence, we studied the levels of multiple inflammatory mediators (IL1β, IL1Ra, IL6, IL10, CCL3, CCL4, TNFα and VEGF) along with transcriptional changes of nine related miRNAs and mRNA levels of downstream effectors of significantly altered cytokines/chemokines in brain tissues obtained from

patients with HS (n=26) and FCD (n=26). Up regulation of IL1β, IL6, CCL3, CCL4, STAT-3, C-JUN and CCR5, and down regulation of IL 10 were observed in both HS and FCD cases ($p<0.05$). CCR5 was significantly up regulated in FCD as compared to HS ($p<0.001$). Both, HS and FCD presented decreased miR-223-3p, miR-21-5p, miR-204-5p and let-7a-5p and increased miR-155-5p expression ($p<0.05$). As compared to HS, miR-204-5p (upstream to CCR5 and IL1β) and miR-195-5p (upstream to CCL4) were significantly decreased in FCD patients ($p<0.01$). Our results suggest differential alteration of cytokine/chemokine regulatory networks in HS and FCD and provide a rationale for developing pathology specific therapy.

DOI: 10.1038/s41598-017-16041-w
PMCID: PMC5698416
PMID: 29162878

145: Srivastava A, Dixit AB, Paul D, Tripathi M, Sarkar C, Chandra PS, Banerjee J. Comparative analysis of cytokine/chemokine regulatory networks in patients with hippocampal sclerosis (HS) and focal cortical dysplasia (FCD). Sci Rep. 2017 Nov 21;7(1):15904. doi: 10.1038/s41598-017-16041-w. PubMed PMID: 29162878; PubMed Central PMCID: PMC5698416.

146: Sundberg F, Barnard K, Cato A, de Beaufort C, DiMeglio LA, Dooley G, Hershey T, Hitchcock J, Jain V, Weissberg-Benchell J, Rami-Merhar B, Smart CE, Hanas R. ISPAD Guidelines. Managing diabetes in preschool children. Pediatr Diabetes. 2017 Nov;18(7):499-517. doi: 10.1111/pedi.12554. Epub 2017 Jul 20. PubMed PMID: 28726299.

147: Takkar B, Azad S, Shakrawal J, Gaur N, Venkatesh P. Blood flow pattern in a choroidal hemangioma imaged on swept-source-optical coherence tomography angiography. Indian J Ophthalmol. 2017 Nov;65(11):1240-1242. doi: 10.4103/ijo.IJO_504_17. PubMed PMID: 29133666; PubMed Central PMCID: PMC5700608.

This report demonstrates the blood flow pattern in a case of choroidal hemangioma (CH) using swept-source-optical coherence tomography angiography (SS-OCTA). Fluorescein angiography, SS-OCT, and SS-OCTA images of a patient with CH were obtained using a standard protocol. The internal vascular pattern of the tumor was identified on both OCT and OCTA. Dark areas were identified in the CH. These were interspersed between areas of visible blood flow, as imaged on SS-OCTA. Peripheral vascular arcades were also identified within the tumor. SS-OCTA should be evaluated as an imaging tool to study the blood flow within choroidal tumors.

DOI: 10.4103/ijo.IJO_504_17
PMCID: PMC5700608
PMID: 29133666 [Indexed for MEDLINE]

148: Takkar B, Temkar S, Gaur N, Venkatesh P, Chawla R, Kumar A. Retinal shortening: Ultrasonic evaluation of proliferative vitreoretinopathy. Indian J Ophthalmol. 2017 Nov;65(11):1172-1177. doi: 10.4103/ijo.IJO_481_17. PubMed PMID: 29133645; PubMed Central PMCID: PMC5700587.

PURPOSE: To evaluate the effect of extraretinal proliferative vitreoretinopathy (PVR) on retinal shortening in eyes with rhegmatogenous retinal detachment (RD) using ultrasound (USG) and objectively prove the presence of intraretinal PVR (iPVR).
METHODS: This is a double-masked pilot prospective controlled case series. Patients with total RD planned for vitreoretinal surgery were included in the study. USG was used to determine retinal-to-choroidal length ratios (RCRs) in all the quadrants. Group 1 included 10 patients with preoperative PVR more than Grade B while Group 2 had 14 with PVR of Grades A or B. Severe retinal shortening was defined as RCR < 0.8. Primary outcome measures were severe retinal shortening and an early unexplained recurrence of RD within 15 days of surgery.

RESULTS: Mean RCRs were significantly low in all the four quadrants of Group 1 upon comparison with Group 2. The mean RCR had a good negative correlation with number of quadrants of PVR (R = -0.66, P ≤ 0.001). Overall, severe quadrantic retinal shortening was detected in nine patients. In these 9 patients, 11 of the 36 retinal quadrants had severe retinal shortening in the absence of extraretinal PVR (ePVR). Six patients developed early unexplained RD, and all of these belonged to Group 1. Severe quadrantic retinal shortening had the highest odds ratio of developing early unexplained RD (odds ratio = 58, P = 0.01).
CONCLUSION: Retinal shortening occurs both due to ePVR and iPVR, and iPVR occurs independently at least in some cases. Severe quadrantic retinal shortening indicates poor primary anatomical prognoses.

DOI: 10.4103/ijo.IJO_481_17
PMCID: PMC5700587
PMID: 29133645 [Indexed for MEDLINE]

149: Talwar S, Siddharth B, Gupta SK, Choudhary SK, Kothari SS, Juneja R, Saxena A, Airan B. Aortopulmonary window: results of repair beyond infancy. Interact Cardiovasc Thorac Surg. 2017 Nov 1;25(5):740-744. doi: 10.1093/icvts/ivx158. PubMed PMID: 28633352.

OBJECTIVES: To study the anatomic and haemodynamic data and results of surgery in patients undergoing surgical repair of aortopulmonary window beyond infancy.
METHODS: Between July 2005 and December 2015, 23 patients, older than 1 year undergoing surgery for aortopulmonary window were analysed retrospectively. Postoperative clinical and echocardiography follow-up were performed.
RESULTS: Median age and weight at repair was 4 years (range 14 months-12 years) and 12 kg (range 3.5-22 kg), respectively. Fifteen patients had Richardson's Type I, 6 patients had Type II and 2 patients had Type III aortopulmonary window. Six patients had associated defects. Baseline mean systolic pulmonary artery pressure was 101 ± 14.9 mmHg (range 80-130, median 100 mmHg) and pulmonary vascular resistance index was 9.6 ± 5.9 (median 7.7 Wood units/m2, range 3.7-23.5 Wood units/m2). Patch repair of aortopulmonary window was performed using the sandwich method (transwindow) (n = 15), transaortic (n = 3) and transpulmonary artery (n = 2) approaches; 2 patients underwent double ligation and 1 underwent division and suturing. Two patients underwent valved patch closure of aortopulmonary window and 1 patient underwent valved patch closure of associated ventricular septal defect. There were 2 in-hospital deaths: one due to intractable pulmonary hypertension and the other due to low cardiac output. Mean follow-up was 36 months (range 2-119 months). Eighteen patients were in NYHA Class I at last follow-up. There were no late deaths or reoperation.
CONCLUSIONS: Surgery can be safely undertaken beyond infancy in carefully selected patients of aortopulmonary window with acceptable early and mid-term outcomes.

DOI: 10.1093/icvts/ivx158
PMID: 28633352 [Indexed for MEDLINE]

150: Tewari N, Mathur VP, Yadav VS, Chaudhari P. Leukocyte adhesion defect-I: rare primary immune deficiency. Spec Care Dentist. 2017 Nov;37(6):309-313. doi: 10.1111/scd.12249. Epub 2017 Nov 15. PubMed PMID: 29139565.

Leukocyte adhesion defect I is a rare disorder (1:1,000,000) caused by diminished expression of CD-18 β2 integrins on leukocytes leading to abnormal adhesion, migration, and chemotaxis. Clinical manifestations include delayed separation of umbilical cord, omphalitis, recurrent severe infections, impaired wound healing, persistent oral ulcers, and severe periodontitis in primary and permanent dentition. A 5-year-old girl, second-born child to parents with consanguinity,

presented with pain and mobility of lower teeth. There was history of recurrent infections and multiple hospital admissions with CD18 level-3% and frame shift mutation in ITGB2, on 21q22.3. There were scars on hands and feet. Oral examination revealed multiple missing teeth and periodontitis in primary dentition. Oral prophylaxis and palliative treatments were performed with periodic follow-ups. Interdisciplinary care is ubiquitous for patients with immune deficiencies. Early consultation with pediatric dentists and exploration of medical history is essential for diagnosis and treatment of rare diseases.

DOI: 10.1111/scd.12249
PMID: 29139565

151: Thottian AG, Mallick S, Venkatesulu B, Kumar R, Haresh K, Gupta S, Sharma DN, Julka PK, Rath GK. Surviving Triple Trouble: Synchronous Breast and Cervical Cancer, HIV Infection and Myocardial Infarction. Breast J. 2017 Nov;23(6):731-735. doi: 10.1111/tbj.12718. Epub 2016 Nov 25. PubMed PMID: 27886418.

Breast and cervical cancer are the two most common cancers in female. However, owing to the contrasting risk factors, synchronous breast and cervical cancer has very rarely been reported. However, noncommunicable disease like cardiovascular disease and different infections has tended to make situations complicated because of complex interaction. In recent years, such cases are being seen frequently and their management is challenging. We report such a case of synchronous breast and cervical cancer complicated by HIV infection and myocardial infarction. This highlights the importance of a wide spectrum of clinical knowledge and skill and interdisciplinary coordination.

DOI: 10.1111/tbj.12718
PMID: 27886418 [Indexed for MEDLINE]

152: Titiyal JS, Kaur M, Ramesh P, Shah P, Falera R, Bageshwar LMS, Kinkar A, Sharma N. Impact of Clear Corneal Incision Morphology on Incision-Site Descemet Membrane Detachment in Conventional and Femtosecond Laser-Assisted Phacoemulsification. Curr Eye Res. 2018 Mar;43(3):293-299. doi: 10.1080/02713683.2017.1396616. Epub 2017 Nov 9. PubMed PMID: 29120231.

PURPOSE: To assess intraoperative morphology of clear corneal incisions (CCI) and its impact on incision-site descemet membrane detachment (DMD) in conventional phacoemulsification and femtosecond laser-assisted cataract surgery (FLACS).
METHODS: Prospective comparative study of 129 eyes that underwent either conventional phacoemulsification (Group I, n = 77) or FLACS (Group II, n = 52) was undertaken at an apex tertiary care ophthalmic setup. In group I, a 2.2-mm metal keratome was used to create a biplanar CCI. In group II, femtosecond laser-assisted biplanar CCI was created with 2.2 mm diameter. Incision architecture and incision-site DMD were assessed using microscope-integrated intraoperative OCT (iOCT) and anterior segment OCT on postoperative day (POD) 1 and 30. Visual acuity was assessed on POD 1 and 30.
RESULTS: Smooth slit (SS) or ragged slit (RS) morphology of the proximal opening of CCI was observed immediately after creation [Group I: 68.8% SS, 31.2% RS; Group II: 86.5% SS, 13.5% RS]. DMD was observed in 87.1% cases with RS and 16.3% cases with SS morphology ($p < 0.001$). DMD was more frequent in group I (Group I = 38/77, Group II = 5/52; $p < 0.001$) and most commonly observed during the step of stromal hydration (83.7%). DMD was self-resolving and did not persist in any group at 1 month. Visual acuity was comparable in both groups on POD 1 and 30.
CONCLUSION: Ragged morphology of proximal opening of CCI is the most important predictive factor for incision-site DMD. Femtosecond-laser CCIs have less

incision-site DMD as compared to keratome-assisted CCIs. iOCT provides real-time assessment of CCI morphology and DMD.

DOI: 10.1080/02713683.2017.1396616
PMID: 29120231

153: Titiyal JS, Kaur M, Rathi A, Falera R, Chaniyara M, Sharma N. Learning Curve of Small Incision Lenticule Extraction: Challenges and Complications. Cornea. 2017 Nov;36(11):1377-1382. doi: 10.1097/ICO.0000000000001323. PubMed PMID: 28799958.

PURPOSE: To describe the intraoperative complications observed during the initial learning curve of small incision lenticule extraction (SMILE) and their management.
METHODS: Prospective evaluation of 100 consecutive eyes (50 patients) undergoing SMILE was performed at an apex tertiary care ophthalmic center. Patients older than 18 years with a stable refractive error ranging from -1.0 to -10.0 D myopia and up to 3.0 D astigmatism were included. Any intraoperative complications and their management were noted. Postoperative examination including visual acuity was performed on day 1, 1 week, and 1 month.
RESULTS: Intraoperative difficulties observed in the initial 100 eyes included suction loss (2%), black spots (11%), opaque bubble layer (19%), epithelial defect (2%), and difficult lenticule extraction (9%). Difficult lenticule dissection and extraction was the most surgically challenging step and resulted in posterior stromal damage, anterior cap tear (1%), side-cut tears (4%), partially retained lenticule (1%), and completely retained lenticule (2%). Its incidence decreased from 16% (8/50) in the initial 50 cases to 2% (1/50) in the next 50 cases. Two eyes with completely retained lenticule were re-treated with flap-based excimer laser ablation after 3 months. Optimal visual and anatomical outcomes could be achieved, and no sight-threatening complication was observed in any case.
CONCLUSIONS: The learning curve of SMILE is surgically challenging. Lenticule dissection and extraction is the most difficult step and leads to a multitude of complications. Most complications that result in delayed visual recovery are observed in the initial 50 cases.

DOI: 10.1097/ICO.0000000000001323
PMID: 28799958 [Indexed for MEDLINE]

154: Tripathy K, Chawla R. Inverse hypopyon (hyperoleon) at the posterior segment in pathological myopia. BMJ Case Rep. 2017 Nov 27;2017. pii: bcr-2017-223416. doi: 10.1136/bcr-2017-223416. PubMed PMID: 29183904.

155: Tripathy K, Chawla R, Vohra R. Evaluation of the fundus in poorly dilating diabetic pupils using ultrawide field imaging. Clin Exp Optom. 2017 Nov;100(6):735-736. doi: 10.1111/cxo.12484. Epub 2016 Oct 5. PubMed PMID: 27704602.

156: Unnikrishnan R, Jaganathan S, Wadhwani P, Bhalla S, Kumar P, Sinha S, Bhatla N, Venkatram P, Ghosh K, Mittal A, Prabhakaran D, Tandon N, Mohan V, Ram U. Gestational Diabetes Mellitus Training: A Well-grounded Approach for Safeguarding Two Generations. Indian J Endocrinol Metab. 2017 Nov-Dec;21(6):934-935. doi: 10.4103/ijem.IJEM_221_17. PubMed PMID: 29285466; PubMed Central PMCID: PMC5729691.

157: Venkatesh P. Editorial: Pediatric Ophthalmology. Indian J Pediatr. 2017 Dec;84(12):922-923. doi: 10.1007/s12098-017-2541-8. Epub 2017 Nov 4. PubMed PMID: 29101628.

158: Venugopal G, Mechenro J, Makharia G, Singh A, Pugazhendhi S, Balamurugan R, Ramakrishna BS. Sequential testing with different tissue transglutaminase antibodies, a new approach for diagnosis of celiac disease. Indian J Gastroenterol. 2017 Nov;36(6):481-486. doi: 10.1007/s12664-017-0803-z. Epub 2017 Dec 22. PubMed PMID: 29270909.

BACKGROUND: The diagnosis of celiac disease (CeD) in clinical practice relies on serological testing for IgA antibodies to human tissue transglutaminase (anti-tTG) which diagnose CeD autoimmunity. We compared three kits for their performance in diagnosis of the disease and evaluated the point prevalence of CeD autoimmunity in a South Indian urban population.
METHODS: In the first part of the study, sera from 90 patients with documented CeD and 92 healthy controls were tested for anti-tTG using three different kits. One thousand nine hundred and seventeen healthy adults residing in urban areas of Vellore and Kancheepuram districts were tested for CeD autoimmunity using a sequential two-test strategy.
RESULTS: The sensitivity, specificity, false positivity, false negativity, positive predictive value, and negative predictive value for the three assays respectively were as follows: 95.5%, 82.6%, 17.3%, 4.4%, 84.3%, and 95% for the Aeskulisa New Generation Assay; 85.5%, 100%, 0%, 14.4%, 100%, and 87.6% for Quanta Lite; and 71.1%, 100%, 0%, 28.8%, 100%, and 71% for Celiac Microlisa. The ROC curves showed good discrimination for all three ELISAs with an AUC of 0.947, 0.950, and 0.886 for the Aeskulisa, Quanta Lite, and Celiac Microlisa, respectively. Of 1917 (males 908, females 1009) healthy adults, 113 (5.89%) were seropositive for IgA anti-htTG in the Aeskulisa test. Two of the latter tested positive in the Quanta Lite assay and/or the Celiac Microlisa assay. The CeD autoimmunity prevalence in this urban population was 1.0 per thousand (95% confidence interval 0.3 to 3.7 per thousand).
CONCLUSION: Sequential testing for anti-tTG using first a highly sensitive assay followed by a very specific assay is a new strategy for screening for CeD in clinical practice.

DOI: 10.1007/s12664-017-0803-z
PMID: 29270909 [Indexed for MEDLINE]

159: Verma P, K Sharma A, Shankar H, Sharma A, Rao DN. Role of Trace Elements, Oxidative Stress and Immune System: a Triad in Premature Ovarian Failure. Biol Trace Elem Res. 2017 Nov 27. doi: 10.1007/s12011-017-1197-6. [Epub ahead of print] PubMed PMID: 29181820.

The risk of premature ovarian failure (POF) increases in association with alteration in immunological parameters and oxidative stress (OS). Adequate intake of trace elements is required for antioxidant property and immune defense mechanism. The aim of this study was to explore the involvement of trace elements, OS, and immunological parameters in POF. This was a cross-sectional, case-control study, involving 65 participants divided into the POF (n = 35) and control (n = 30) groups. Serum levels of Se, Zn, and Cu were determined along with hormonal, OS, and immunological markers. POF group had significantly lower levels of Zn, Cu, Se, and Zn:Cu ratio. However, Se:Cu ratio was not significant between the groups. FSH and LH levels were negatively correlated with Zn and Cu levels and positively correlated with Se levels. Estrogen levels were negatively correlated with all the studied trace elements. Inter-element association between Zn and Se was significant in POF ($r = -0.39$, $p = 0.02$) compared to control group ($r = -0.078$, $p = 0.65$). In all the POF patients, SOD and GPx activities were significantly ($p < 0.05$) lower and MDA level was higher ($p > 0.05$) than control group. B cell marker CD19 was significantly ($p < 0.0001$) high in POF group. There are involvement of trace elements in hormonal regulation and antioxidant defense mechanism, which once gets altered leads to high ROS generation and affect functions of the immune system. Exaggereative immune system causing higher expression of B cell associated markers (CD19) leading to autoimmune condition in POF.

DOI: 10.1007/s12011-017-1197-6
PMID: 29181820

160: Vyas V, Kumar A, Jain V. Growth Hormone Deficiency in Children: From Suspecting to Diagnosing. Indian Pediatr. 2017 Nov 15;54(11):955-960. PubMed PMID: 29217803.

Isolated Growth hormone deficiency is an important and treatable cause of short stature. However, it is often difficult to diagnose the condition with certainty due to the lack of a single robust diagnostic test. Short children, other than those with the classical phenotype of immature chubby facies, truncal obesity and micropenis in boys, or those with history of cranial lesions with known association with hypopituitarism, should be evaluated for growth hormone deficiency only after excluding the other more common conditions. These children typically have height markedly below that expected for their midparental height with low height velocity and delayed bone age. Growth hormone levels should be checked by provocative testing, after ensuring that the child is euthyroid, and after priming with sex steroids if indicated. Low levels of Insulin-like growth factor 1 and Insulin-like growth factor binding protein 3 and pituitary abnormalities on neuroimaging provide important corroborative evidence to the diagnosis.

PMID: 29217803 [Indexed for MEDLINE]

161: Wadhwani M, Ranjan A, Gangwani K, Das P. An Unusual Presentation of Esthesioneuroblastoma in a Young Pregnant Female. Ocul Oncol Pathol. 2018 Apr;4(3):192-195. doi: 10.1159/000481507. Epub 2017 Nov 18. PubMed PMID: 29765954; PubMed Central PMCID: PMC5939674.

Background: Esthesioneuroblastoma is a rare neuroepithelial tumor arising from the olfactory epithelium in the cribriform plate or nasal cavity. It accounts for 1-5% of cases of malignant neoplasms of the nasal cavity.
Methods: A 20-year-old pregnant female presented with painful loss of vision in both eyes, on imaging diagnosed as meningioma. There was a progressive increase in pain along with diminution of vision to the extent of complete loss of vision in the right eye.
Results: In view of increasing proptosis with progressive complete loss of vision in the left eye also, she consulted the neurosurgery department at a tertiary care hospital where a follow-up of contrast-enhanced computerised tomography was made. Histopathology of fluid obtained after craniotomy showed esthesioneuroblastoma. In view of intracranial space-occupying lesion applying pressure on the optic nerve, intravenous methylprednisolone (1 g, IV stat X 3 days) was given. She underwent extensive radiotherapy but died within 3 months of diagnosis.
Conclusion: This case highlights the progressive and fatal course of olfactory neuroblastoma. As it can present with the complex symptoms related to ocular and nasal sites, timely referral of patients presenting with visual symptoms along with nasal involvement (frequent epistaxis) to otorhinolaryngologists is very important.

DOI: 10.1159/000481507
PMCID: PMC5939674 [Available on 2019-04-01]
PMID: 29765954

162: Wyse JM, Battat R, Sun S, Saftoiu A, Siddiqui AA, Leong AT, Arturo Arias BL, Fabbri C, Adler DG, Santo E, Kalaitzakis E, Artifon E, Mishra G, Okasha HH, Poley JW, Guo J, Vila JJ, Lee LS, Sharma M, Bhutani MS, Giovannini M, Kitano M, Eloubeidi MA, Khashab MA, Nguyen NQ, Saxena P, Vilmann P, Fusaroli P, Garg PK, Ho S, Mukai S, Carrara S, Sridhar S, Lakhtakia S, Rana SS, Dhir V, Sahai AV. Practice guidelines for endoscopic ultrasound-guided celiac plexus neurolysis.

Endosc Ultrasound. 2017 Nov-Dec;6(6):369-375. doi: 10.4103/eus.eus_97_17. PubMed PMID: 29251270; PubMed Central PMCID: PMC5752758.

OBJECTIVES: The objective of guideline was to provide clear and relevant consensus statements to form a practical guideline for clinicians on the indications, optimal technique, safety and efficacy of endoscopic ultrasound guided celiac plexus neurolysis (EUS-CPN).
METHODS: Six important clinical questions were determined regarding EUS-CPN. Following a detailed literature review, 6 statements were proposed attempting to answer those questions. A group of expert endosonographers convened in Chicago, United States (May 2016), where the statements were presented and feedback provided. Subsequently a consensus group of 35 expert endosonographers voted based on their individual level of agreement. A strong recommendation required 80% voter agreement. The modified GRADE (Grading of Recommendations Assessment, Development, and Evaluation) criteria were used to rate the strength of recommendations and the quality of evidence.
RESULTS: Eighty percent agreement was reached on 5 of 6 consensus statements, 79.4% agreement was reached on the remaining one.
CONCLUSIONS: EUS-CPN is efficacious, should be integrated into the management of pancreas cancer pain, and can be considered early at the time of diagnosis of inoperable disease. Techniques may still vary based on operator experience. Serious complications exist, but are rare.

DOI: 10.4103/eus.eus_97_17
PMCID: PMC5752758
PMID: 29251270

163: Yadav S, Gupta S. A simple device for ablation of keloidal tissue and serial deposition of intralesional drugs. J Am Acad Dermatol. 2018 May;78(5):e107-e109. doi: 10.1016/j.jaad.2017.10.029. Epub 2017 Nov 2. PubMed PMID: 29102488.

164: Yadav S, Pujari A, Bajaj MS, Behera S. Orbitonasal metallic foreign body. BMJ Case Rep. 2017 Nov 14;2017. pii: bcr-2017-223253. doi: 10.1136/bcr-2017-223253. PubMed PMID: 29141936.

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

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

hydrochloride (ADPH) and
N-(3-methylthiophene-2-carboxylicacid)-N'-((3-hydroxy-2-naphthalenyl) methylene) hydrazide (MCMH) are 0.29±0.09μM, 0.37±0.08μM, 0.35±0.09μM and 1.20±0.08μM respectively. The corresponding values obtained using fluorescence spectroscopic methods were 0.22±0.06μM, 0.68±0.07μM, 0.44±0.07μM and 0.75±0.05μM respectively.

DOI: 10.1016/j.bbapap.2017.08.011
PMID: 28844736 [Indexed for MEDLINE]