

List of publications of AIIMS, New  
Delhi for the month of JANUARY, 2016  
[Source: [www.pubmed.com](http://www.pubmed.com)].

1: Agarwal B, Mohod M, Bhutia O, Roychoudhury A. Stylo-mandibular fusion complicating recurrent bilateral temporomandibular joint ankylosis. *Br J Oral Maxillofac Surg.* 2016 Jan 30. pii: S0266-4356(15)00766-4. doi: 10.1016/j.bjoms.2015.12.023. [Epub ahead of print] PubMed PMID: 26837637.

Ankylosis of the temporomandibular joint (TMJ) is debilitating, and difficult to manage because it recurs. Recurrent bilateral ankylosis is further complicated by the fusion of the styloid process and the mandible. We report such a case, and to our knowledge no similar case has been reported previously.

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PMID: 26837637 [PubMed - as supplied by publisher]

2: Agarwal B, Pandey S, Bhutia O, Roychoudhury A. Use of thermoplasticised nasal splint in naso-orbitoethmoid fractures: a technical note. *Br J Oral Maxillofac Surg.* 2016 Jan;54(1):e3-4. doi: 10.1016/j.bjoms.2015.09.032. Epub 2015 Oct 25. PubMed PMID: 26507675.

3: Agarwal KK, Roy SG, Kumar R. Diuretic 18F-Fluorodeoxyglucose PET/Computed Tomography in Evaluation of Genitourinary Malignancies. *PET Clin.* 2016 Jan;11(1):39-46. doi: 10.1016/j.cpet.2015.07.005. Epub 2015 Sep 5. Review. PubMed PMID: 26590442.

The interpretation of fluorodeoxyglucose (FDG) PET/computed tomography (CT) is often challenging for pelvic pathologies because of the physiologic bowel and urinary tract activity. Intense radiotracer activity in urinary tract interferes in image interpretation and leads to false-negative results in diagnosis and detection of local recurrence and regional lymph node metastases. It is imperative to minimize unnecessary urinary bladder activity to improve the diagnostic yield of PET/CT. All the techniques described in the literature have their pros and cons. This article discusses FDG PET/CT in evaluation of urinary bladder cancer, cervical cancer, and ovarian cancer.

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4: Agarwal KK, Seth R, Behra A, Jana M, Kumar R. 18F-Fluorodeoxyglucose PET/CT in Langerhans cell histiocytosis: spectrum of manifestations. *Jpn J Radiol.* 2016 Apr;34(4):267-76. doi: 10.1007/s11604-016-0517-7. Epub 2016 Jan 13. Review. PubMed PMID: 26759026.

The objective of this article is to provide an illustrative tutorial highlighting the utility of 18F-FDG PET/CT imaging to detect the spectrum of manifestations in patients with Langerhans cell histiocytosis. FDG PET/CT is a powerful tool for making an early diagnosis; it allows higher diagnostic confidence with regard to lesions, measuring the extent of disease (staging) and assessing disease activity, and is consequently useful for evaluating the response to therapy in patients with Langerhans cell histiocytosis.

5: Agarwal N, Gupta M, Kriplani A, Bhatla N, Singh N. Comparison of combined hormonal vaginal ring with ultralow-dose combined oral contraceptive pills in the management of heavy menstrual bleeding: A pilot study. *J Obstet Gynaecol.* 2016 Jan;36(1):71-5. doi: 10.3109/01443615.2015.1024210. Epub 2015 Jul 23. PubMed PMID: 26204126.

The aim of this study was to compare combined hormonal vaginal ring with ultralow-dose combined oral contraceptive (COC) pills in management of heavy menstrual bleeding (HMB). Fifty patients were randomised into Group I: vaginal ring (n = 25) and group II: COC pills (n = 25). Menstrual blood loss (MBL) was assessed at baseline, 1, 3 and 6 months (while on treatment) and at 9 months (3 months after stopping therapy). There was significant reduction in baseline

pictorial blood loss assessment chart (PBAC) score from  $440 \pm 188$  (Mean  $\pm$  SD) to  $178 \pm 95$ ,  $139 \pm 117$ ,  $112 \pm 84$  and  $120 \pm 108$  in group I and from  $452 \pm 206$  to  $204 \pm 152$ ,  $179 \pm 125$ ,  $176 \pm 164$  and  $202 \pm 167$  in group II at 1, 3, 6 and 9 months, respectively ( $p = 0.001$ ). Reduction in MBL was 72% and 62% at 6 months and up to 71% and 55% at 9 months in group I and group II, respectively ( $p = 0.001$ ). Reduction in MBL with ring was greater at higher baseline PBAC score but lesser in patients with fibroid  $> 2$  cm. Combined vaginal hormonal treatment for HMB is as effective as oral hormonal therapy, with minor and transient side effects and persistence of response after cessation of therapy.

6: Aggarwal P, Agarwal N, Das N, Dalal K. Association of polymorphisms in angiotensin-converting enzyme gene with gestational diabetes mellitus in Indian women. *Int J Appl Basic Med Res*. 2016 Jan-Mar;6(1):31-7. doi: 10.4103/2229-516X.174006. PubMed PMID: 26958520; PubMed Central PMCID: PMC4765272.

BACKGROUND: Numerous genes have been reported in relation with gestational diabetes mellitus (GDM), but the findings were not consistently replicated across populations, or there have been no detailed studies on them. Previous literatures suggested that, out of all angiotensin converting enzyme (ACE) gene polymorphisms, only ACE insertion/deletion (I/D) gene polymorphism has a strong association with GDM in Asian Indian women.

AIM: This study was devoted to evaluate the association of four single nucleotide polymorphisms (SNPs) ACE A240T, C1237T, G2350A and I/D with GDM and Type 2 diabetes mellitus.

MATERIALS AND METHODS: This study recruited 105 GDM cases, 119 Type 2 diabetes mellitus subjects and 120 controls. PCR-RFLP was used for identifying genotypes of ACE A240T, C1237T and G2350A and PCR was performed in the case of ACE I/D.

RESULTS: Significant associations of ACE SNP's, C1237T, and G2350A with GDM were observed. Haplotype analysis revealed the remarkably significant evidence of association with SNP combination ACE A240T, C1237T, G2350A, and I/D with GDM patients ( $P = 0.024$ ). Individuals possessing haplotype "TTAI" (frequency 30% in GDM and 0 in controls) derived from these SNPs had 185 fold increased risk of developing GDM (95% of confidence interval: 11.13-3102.15), which was highest when compared with other 15 haplotypes.

CONCLUSION: Shorter-range haplotypes were also significant, but the only consistently associated alleles were found to be in ACE C1237T, G2350A, and I/D. These results suggested that the variant in close proximity to ACE C1237T, G2350A and/or I/D modulates susceptibility to GDM and noninsulin dependent diabetes mellitus in Indian women.

7: Aggarwal R, Gogtay N, Kumar R, Sahni P; Indian Association of Medical Journal Editors. The revised guidelines of the Medical Council of India for academic promotions: Need for a rethink. *J Anaesthesiol Clin Pharmacol*. 2016 Jan-Mar;32(1):1-4. doi: 10.4103/0970-9185.175616. PubMed PMID: 27006532; PubMed Central PMCID: PMC4784186.

8: Aggarwal R, Gogtay N, Kumar R, Sahni P. The revised guidelines of the Medical Council of India for academic promotions: need for a rethink. *Indian J Med Ethics*. 2016 Jan-Mar;13(1):2-5. PubMed PMID: 26826653.

Measuring academic achievements is never an easy task. This is particularly so when individuals are assessed for promotions in several fields with differing job descriptions. Assessment by peers is time-consuming and may be prone to bias; thus, objective criteria are required to minimise these concerns.

9: Indian Association of Medical Journal Editors, Aggarwal R, Gogtay N, Kumar R, Sahni P. The Revised Guidelines of the Medical Council of India for Academic Promotions: Need for a Rethink. *Indian Pediatr*. 2016 Jan 8;53(1):23-6. PubMed PMID: 26840666.

10: Aggarwal R, Gogtay N, Kumar R, Sahni P; Indian Association of Medical Journal

Editors. The revised guidelines of the Medical Council of India for academic promotions: Need for a rethink. *Indian J Gastroenterol*. 2016 Jan;35(1):3-6. doi: 10.1007/s12664-015-0617-9. Epub 2016 Feb 5. PubMed PMID: 26846881.

11: Aggarwal S, Praneeth K, Rathore Y, Waran V, Singh P. Laparoscopic management of mesh erosion into small bowel and urinary bladder following total extra-peritoneal repair of inguinal hernia. *J Minim Access Surg*. 2016 Jan-Mar;12(1):79-82. doi: 10.4103/0972-9941.169956. PubMed PMID: 26917927; PubMed Central PMCID: PMC4746983.

Mesh erosion into visceral organs is a rare complication following laparoscopic mesh repair for inguinal hernia with only 15 cases reported in English literature. We report the first case of complete laparoscopic management of mesh erosion into small bowel and urinary bladder. A 62-year-male underwent laparoscopic total extra-peritoneal repair of left inguinal hernia at another centre in April 2012. He presented to our centre 21 months later with persistent lower urinary tract infection (UTI). On evaluation mesh erosion into bowel and urinary bladder was suspected. At laparoscopy, a small bowel loop was adhered to the area of inflammation in the left lower abdomen. After adhesiolysis, mesh was seen to be eroding into small bowel. The entire infected mesh was pulled out from the pre-peritoneal space and urinary bladder wall using gentle traction. The involved small bowel segment was resected, and bowel continuity restored using endoscopic linear cutter. The resected bowel along with the mesh was extracted in a plastic bag. Intra-operative test for leak from urinary bladder was found to be negative. The patient recovered uneventfully and is doing well at 12 months follow-up with resolution of UTI. Laparoscopic approach to mesh erosion is feasible as the plane of mesh placement during laparoscopic hernia repair is closer to peritoneum than during open hernia repair.

12: Alam MS, Rathore S, Tyagi RK, Sharma YD. Host-parasite interaction: multiple sites in the Plasmodium vivax tryptophan-rich antigen PvTRAg38 interact with the erythrocyte receptor band 3. *FEBS Lett*. 2016 Jan;590(2):232-41. doi: 10.1002/1873-3468.12053. Epub 2016 Jan 23. PubMed PMID: 26823170.

Tryptophan-rich antigens of malarial parasites interact with host molecules and play an important role in parasite survival. Merozoite expressed Plasmodium vivax tryptophan-rich antigen PvTRAg38 binds to human erythrocytes and facilitates parasite growth in a heterologous Plasmodium falciparum culture system. Recently, we identified band 3 in human erythrocytes as one of its receptors, although the receptor-ligand binding mechanisms remain unknown. In the present study, using synthetic mutated peptides of PvTRAg38, we show that multiple amino acid residues of its 12 amino acid domain (KWVQWKNDKIRS) at position 197-208 interact with three different ectodomains of band 3 receptor on human erythrocytes. Our findings may help in the design of new therapeutic approaches for malaria.

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13: Angmo D, Nongpiur ME, Sharma R, Sidhu T, Sihota R, Dada T. Clinical utility of anterior segment swept-source optical coherence tomography in glaucoma. *Oman J Ophthalmol*. 2016 Jan-Apr;9(1):3-10. doi: 10.4103/0974-620X.176093. Review. PubMed PMID: 27013821; PubMed Central PMCID: PMC4785705.

Optical coherence tomography (OCT), a noninvasive imaging modality that uses low-coherence light to obtain a high-resolution cross-section of biological structures, has evolved dramatically over the years. The Swept-source OCT (SS-OCT) makes use of a single detector with a rapidly tunable laser as a light source. The Casia SS-1000 OCT is a Fourier-domain, SS-OCT designed specifically for imaging the anterior segment. This system achieves high resolution imaging of 10 $\mu$ m (Axial) and 30 $\mu$ m (Transverse) and high speed scanning of 30,000 A-scans per second. With a substantial improvement in scan speed, the anterior chamber angles can be imaged 360 degrees in 128 cross sections (each with 512 A-scans) in about 2.4 seconds. We summarize the clinical applications of anterior segment SS-OCT in

Glaucoma.LITERATURE SEARCH: We searched PubMed and included Medline using the phrases anterior segment optical coherence tomography in ophthalmology, swept-source OCT, use of AS-OCT in glaucoma, use of swept-source AS-OCT in glaucoma, quantitative assessment of angle, filtering bleb in AS-OCT, comparison of AS-OCT with gonioscopy and comparison of AS-OCT with UBM. Search was made for articles dating 1990 to August 2015.

14: Arava S, Breta M, Madan K, Nath D, Mehta S, Jain D. Sclerosing liposarcoma of the anterior mediastinum: An unusual case. *Indian J Pathol Microbiol.* 2016 Jan-Mar;59(1):69-71. doi: 10.4103/0377-4929.178226. PubMed PMID: 26960640.

Liposarcomas are extremely rare in the mediastinum. Patients usually present late due to the compressive effect of the tumor on the adjacent structures. Severity of the symptoms depend mainly on the size of the tumor and the structure it infiltrates. Well differentiated slow growing liposarcomas are the most common ones in the mediastinum followed by dedifferentiated and poorly differentiated ones. These tumors have bad prognosis because of incomplete surgical excision due to its inaccessible location. Hence these patients should be kept under close follow up because of high recurrent rates. Here we are presenting a rare case of anterior mediastinal sclerosing liposarcoma in a 77 year old male.

15: Arora B, Velpandian T, Saxena R, Lalwani S, Dogra TD, Ghose S. Development and validation of an ESI-LC-MS/MS method for simultaneous identification and quantification of 24 analytes of forensic relevance in vitreous humour, whole blood and plasma. *Drug Test Anal.* 2016 Jan;8(1):87-98. doi: 10.1002/dta.1797. Epub 2015 Apr 27. PubMed PMID: 25914398.

Detection and quantification of drugs from various biological matrices are of immense importance in forensic toxicological analysis. Despite the various reported methods, development of a new method for the detection and quantification of drugs is still an active area of research. However, every method and biological matrix has its own limitation, which further encourage forensic toxicologists to develop new methods and to explore new matrices for the analysis of drugs. In this study, an electrospray ionization-liquid chromatograph-tandem mass spectrometry (ESI-LC-MS/MS) method is developed and validated for simultaneous identification and quantification of 24 drugs of forensic relevance in various body fluids, namely, whole blood, plasma and vitreous humour. The newly developed method has been validated for intra-day and inter-day accuracy, precision, selectivity and sensitivity. Absolute recovery shows a mean of 84.5, 86.2, and 103% in the vitreous humour, whole blood and plasma respectively, which is suitable for the screening procedure. Further, the absolute matrix effect (AME) shows a mean of 105, 96.5, and 109% in the vitreous humour, whole blood and plasma, respectively. In addition, to examine the practical utility of this method, it has been applied for screening of drugs in post-mortem samples of the vitreous humour, whole blood and plasma collected at autopsy from ten cadavers. Experimental results show that the newly developed method is well applicable for screening of analytes in all the three matrices. Copyright © 2015 John Wiley & Sons, Ltd.

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16: Bagchi S, Mittal P, Singh G, Agarwal SK, Singh L, Bhowmik D, Mahajan S, Dinda A. Pattern of biopsy-proven kidney disease in the elderly in a tertiary care hospital in India: a clinicopathological study. *Int Urol Nephrol.* 2016 Apr;48(4):553-60. doi: 10.1007/s11255-015-1193-8. Epub 2016 Jan 12. PubMed PMID: 26759328.

BACKGROUND: An aging population is an important demographic issue in India. The knowledge base about kidney diseases among the elderly Indians is inadequate. We aim to delineate the clinical profile and spectrum of biopsy-proven kidney disease in elderly patients.

METHODS: Records of all elderly patients ( $\geq 60$  years) who had undergone kidney biopsy in the nephrology department from January 2010 to December 2014 were reviewed. Their clinical details and laboratory investigations at the time of

biopsy were noted. Details of kidney biopsy were recorded from their biopsy reports.

**RESULTS:** In total, 1728 patients underwent kidney biopsy during this period and 124 were elderly (7.2 %). Their mean age was  $64.9 \pm 4.9$  years, and they were predominantly males (63.7 %). Mean serum creatinine was  $3.0 \pm 2.8$  mg/dl, proteinuria was  $4.0 \pm 2.7$  g/day, and 39.5 % had microscopic hematuria. The most common indications for biopsy were nephrotic syndrome (NS)-39.5 % and acute kidney injury/rapidly progressive glomerulonephritis (AKI/RPGN)-24.2 %. Another 8.1 % patients had NS with AKI. MN (39.0 %) was the chief cause of NS, and pauci-immune crescentic glomerulonephritis (GN) (28.2 %) was the leading cause of AKI/RPGN. MN, pauci-immune crescentic GN and acute on chronic tubulointerstitial nephritis (A/CTIN) and acute tubular injury (ATI) were more common in the elderly, while MCD, FSGS, IgA nephropathy and lupus nephritis were more frequent in the younger patients. 68.5 % of the elderly patients biopsied were diagnosed with a renal disease which was potentially amenable to specific treatment.

**CONCLUSION:** The spectrum of biopsy-proven kidney disease in the elderly Indians seen in our tertiary care hospital varies from the younger population. Kidney biopsy provides useful information with therapeutic and prognostic implications in these patients. The percentage of elderly patients among the total biopsied population is low in India, and these patients present late with renal dysfunction. Prospective studies are needed to assess the outcome of the commonly seen kidney diseases in elderly patients.

17: Bagchi S, Agarwal S, Kalaivani M, Bhowmik D, Singh G, Mahajan S, Dinda A. Primary FSGS in Nephrotic Adults: Clinical Profile, Response to Immunosuppression and Outcome. *Nephron*. 2016;132(2):81-5. doi: 10.1159/000442999. Epub 2016 Jan 23. PubMed PMID: 26799973.

**AIM:** Primary focal segmental glomerulosclerosis (FSGS) is a common cause of nephrotic proteinuria in adults. Most studies on FSGS have combined pediatric and adult patients. This study aims at assessing the response to immunosuppression and its impact on renal survival in adults with primary FSGS.

**METHODS:** Patients with nephrotic proteinuria with primary FSGS seen from January 2010 to December 2014 were included. Clinical, laboratory and treatment details were recorded. Deterioration in renal function was defined as  $\geq 50\%$  decline in estimated glomerular filtration rate (eGFR) or progression to end-stage renal disease.

**RESULTS:** There were 116 patients with median follow-up of 23.6 (6-65.1) months. Baseline proteinuria was  $5.1 \pm 2.6$  g/day and eGFR was  $96.9 \pm 35.1$  ml/min/1.73 m<sup>2</sup>. One hundred one (94.4%) patients had received angiotensin converting enzyme inhibitor/angiotensin receptor blocker (ACEi/ARB). One hundred fourteen patients received steroids. Forty two of 114 patients (36.8%) were steroid resistant. Thirty eight received calcineurin inhibitors (CNI). Seventeen (44.7%) were CNI resistant of which 2 achieved remission with alternate immunosuppression. Eleven (9.5%) patients had worsening renal function - 9 had no remission, 2 had PR with none in CR (30 vs. 5.6% vs. 0, respectively, log-rank,  $p < 0.001$ ). ACEi/ARBs use and remission of proteinuria were independently associated with better renal survival.

**CONCLUSION:** Achieving remission, whether complete or partial, is the critical factor in predicting renal survival in nephrotic adults with primary FSGS. Steroid-resistant patients have reasonable renal survival, if proteinuria is reduced with timely use of alternate immunosuppression. CNI resistance is a major hurdle in management with limited treatment options.

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18: Baidya A, Ghosh A, Chopra S, Garg A, Sood S, Kapil A, Das BK. Congenital syphilis in the era of decreasing seroprevalence. *Indian J Med Microbiol*. 2016 Jan-Mar;34(1):111-2. doi: 10.4103/0255-0857.167674. PubMed PMID: 26776135.

19: Balhara YP, Dayal P. Development of Hindi Version of Alcohol Use Disorder Identification Test (AUDIT): An Update. *Indian J Psychol Med*. 2016 Jan-Feb;38(1):85-6. doi: 10.4103/0253-7176.175138. PubMed PMID: 27011414; PubMed

Central PMCID: PMC4782457.

20: Baliyan V, Shylendran S, Ajay KY, Kumar A, Gamanagatti S, Sinha S. Unusual cord transection in a patient with traumatic spondylolisthesis. *Asian J Neurosurg.* 2016 Jan-Mar;11(1):72. doi: 10.4103/1793-5482.165803. PubMed PMID: 26889291; PubMed Central PMCID: PMC4732254.

Spinal cord injury is one of the most debilitating injuries in patients with spinal trauma. Cord injury may range from simple cord edema to frank transection. Cord transection is the most severe form of cord injury as it results in complete and irreversible loss of all neural functions. Generally, it is a result of unstable spinal fractures with associated spondylolisthesis or spondyloptosis. Generally, the level of cord transection corresponds to the level of spinal fracture/spondylolisthesis. However, here we are presenting a case having a traumatic spinal fracture with spondylolisthesis where the level of cord transection was much higher than the level of the spinal fracture. Due to the traumatic traction, the cord distal to transection is displaced inferior leaving behind a long segment of the empty thecal sac.

21: Bansal K, Goyal M, Dhingra R. Association of severe early childhood caries with iron deficiency anemia. *J Indian Soc Pedod Prev Dent.* 2016 Jan-Mar;34(1):36-42. doi: 10.4103/0970-4388.175508. PubMed PMID: 26838146.

**BACKGROUND:** Severe tooth decay is known to affect the health and well-being of young children. However, there has been minimal research showing the association of severe early childhood caries (S-ECC) and iron deficiency anemia (IDA). **AIMS:** The primary aim of this study was to investigate an association between S-ECC with IDA. The secondary objective was to find an association between severe caries and body weight of the child. The oral health-related quality of life of children with S-ECC was also assessed.

**MATERIALS AND METHODS:** Following the ethical approval, 60 children aged 2-6 years (30 with S-ECC and 30 controls with caries status <2) were recruited for this cross-sectional association study. Each child received a clinical examination for dental caries status using deft index and a blood investigation to determine various parameters; hemoglobin (Hb), mean corpuscular volume (MCV), mean corpuscular hemoglobin concentration, and packed cell volume (PCV). Children underwent venipuncture after due parental consent, and 2.5 mL blood was collected from each child to evaluate the above parameters. Following this, the parents filled up a 10 point questionnaire to determine the child's quality of life. Data were then analyzed by t-test and Fischer's exact t-test.

**RESULT:** On comparison of percentage of children with IDA in S-ECC and control group, it was found that children with S-ECC were more likely to have IDA odds ratio (95% confidence interval): 10.77 (2.0, 104.9), (P = 0.001). In addition to this, S-ECC children were significantly more likely to have low Hb, MCV, and PCV levels (P < 0.001) which imply that S-ECC may be a risk marker for the development of anemia. More children (93%) with severe caries were found to have less body weight than ICMR standard weight for age as compared to children with low caries (P < 0.05%).

**CONCLUSION:** S-ECC is strongly associated with the anemia due to iron deficiency, and efforts should be made toward the preventive and curative aspects of ECC, which may improve the general well-being and quality of life of a child.

22: Bansal P, Garg S, Sharma Y, Venkatesh P. Posterior Segment Drug Delivery Devices: Current and Novel Therapies in Development. *J Ocul Pharmacol Ther.* 2016 Apr;32(3):135-44. doi: 10.1089/jop.2015.0133. Epub 2016 Jan 26. PubMed PMID: 26811883.

Ocular drug delivery by conventional routes of administration does not maintain therapeutic drug concentrations in the target tissues for a long duration because of various anatomical and physiological barriers. Treatment of diseases of the posterior segment of the eye requires novel drug delivery systems that can overcome these barriers for efficacious delivery, provide controlled release for the treatment of chronic diseases, and increase patient's and doctor's

convenience to reduce the dosing frequency and associated side effects. Thereby, an increasing number of sustained-release drug delivery devices using different mechanisms have been developed. This article discusses various current and future sustained-release drug delivery systems for the posterior segment disorders.

23: Barik M, Late Sir A. P. J. Abdul Kalam no more: Still he alive in our heart. *Ann Card Anaesth.* 2016 Jan-Mar;19(1):156-7. doi: 10.4103/0971-9784.173038. PubMed PMID: 26750692.

24: Batra A, Pushker N, Venkatesh P, Arora T, Tewari R, Bakhshi S. Long-term visual outcomes in intraocular retinoblastoma with eye preservation. *Clin Transl Oncol.* 2016 Jan 19. [Epub ahead of print] PubMed PMID: 26781471.

**PURPOSE:** Inconsistent data exist on long-term visual outcomes in survivors of retinoblastoma. No studies have been reported on role of ocular coherence tomography (OCT) in predicting visual acuity. We assessed visual acuity in patients with retinoblastoma treated at our center in whom affected eyes were preserved.

**METHODS:** Patients who had completed a 2-year follow-up and were more than 5 years of age at assessment were included. Clinical data were obtained from database and factors predicting visual acuity were analyzed. OCT was performed in these patients to assess central macular thickness (CMT).

**RESULTS:** Visual outcomes were assessed in 45 eyes of 43 patients, of which 38 (88 %) had bilateral retinoblastoma. The median age at diagnosis was 12 months. Sixty percent (27/45) had International classification of retinoblastoma group C or D disease with 40 % eyes showing macular lesions. The far visual acuity was better than 6/12 in 53 % (24/45), 6/12 to 6/60 in 40 % (18/45) and 6/60 in 7 % (6/60). Macular location and International classification of retinoblastoma predicted poor vision ( $p = 0.06$  and  $0.07$ , respectively). CMT was less than 200  $\mu\text{m}$  in 3 of 36 eyes (8 %) and 1 eye showed epiretinal membrane. Radiotherapy was associated with foveal thinning ( $p = 0.003$ ). Two of 3 eyes with foveal thinning had a vision of 6/60.

**CONCLUSIONS:** Good visual outcomes were observed in half of retinoblastoma patients treated with eye preservation. Macular location and International classification of retinoblastoma group C and D predicted poor visual acuity, while previous radiotherapy predicted foveal thinning, which was associated with poor visual acuity.

25: Batra P, Mathur P, Misra MC. *Aeromonas* spp.: An Emerging Nosocomial Pathogen. *J Lab Physicians.* 2016 Jan-Jun;8(1):1-4. doi: 10.4103/0974-2727.176234. Review. PubMed PMID: 27013806; PubMed Central PMCID: PMC4785759.

*Aeromonads* are hallophillic, nonacid fast, nonspore forming, Gram-negative rods which are widely distributed in the soil, foodstuffs, and aquatic environment. Since times immemorial, they are important zoonotic pathogens of poikilotherms but are now emerging as important human pathogens. These emerging enteric pathogens flourish in the water distribution system by forming biofilms. They possess large number of virulence factors including inherent resistance to various antibiotics and ability to form biofilms using quorum sensing. These properties make them easy pathogens for human infections. *Aeromonads* are important enteric pathogens, but, with the growing level of immunosuppression in the population, they have been associated with various extraintestinal infections, such as skin and soft-tissue infections, traumatic wound infections, and lower respiratory tract/urinary tract infections. The average annual incidence of bacteremia in Southern Taiwan due to *Aeromonas* spp. was 76 cases/million inhabitants between 2008 and 2010. However, the incidence reported from Western countries is much lower. The case fatality rate among patients with *Aeromonas* bacteremia ranges from 27.5 to 46%. *Aeromonads* are universally resistant to the narrow-spectrum penicillin group of antibiotics such as penicillin, ampicillin, carbenicillin, and ticarcillin. They are however susceptible to piperacillin, azlocillin, second and third generation cephalosporins, and carbapenems. Most of the *Aeromonas* species are susceptible to aminoglycosides, tetracycline, chloramphenicol, trimethoprim-sulfamethoxazole,



quinolones, and monobactams. This manuscript is a comprehensive systematic review of the literature available on *Aeromonas* spp.

26: Behera HS, Satpathy G. Characterisation and expression analysis of trophozoite and cyst proteins of *Acanthamoeba* spp. isolated from *Acanthamoeba* keratitis (AK) patient. *Mol Biochem Parasitol.* 2016 Jan-Feb;205(1-2):29-34. doi: 10.1016/j.molbiopara.2016.03.009. Epub 2016 Mar 24. PubMed PMID: 27030419.

The study was carried out to characterise and analyze the expression pattern of proteins of infective trophozoite and cyst forms of *Acanthamoeba* spp. isolated from an amoebic keratitis patient. Protein was isolated from the trophozoites and cysts of *Acanthamoeba* spp. isolates and subjected to SDS PAGE, 2D PAGE analysis where a large number of protein bands and protein spots were observed. Four prominent protein spots i.e. 2 from trophozoites and 2 from cysts that appeared more intense compared to the corresponding spots in other corresponding gel were excised from the 2D PAGE gels and analysed by MALDI-TOF/TOF MS assay and Mascot search software. Protein spots from trophozoites were identified as "hypothetical protein ACA1" and "eukaryotic porin protein" and those from cysts were identified as "chaperone protein DnaK" and "chaperonin protein" respectively. Proteomic results of 4 proteins were further validated by reverse genomics using quantitative real time PCR assay which showed a 1388 fold and 4.35 fold increase in expression of "hypothetical protein ACA1" gene and "eukaryotic porin protein" gene respectively in trophozoites compared to cysts and a 15 fold and 12.36 fold increase in expression of "chaperone protein DnaK" gene and "chaperonin protein" gene respectively in cysts compared to trophozoites. "Hypothetical protein ACA1" of trophozoites, whose function is unknown might have some important role in the parasite division and pathogenicity of *Acanthamoeba* spp. which needs further study. As trophozoites are the active and feeding form of *Acanthamoeba* spp., "eukaryotic porin" proteins may have some important role in efflux of toxic metabolites and exudates from interior of cell to outside along with some role in pathogenicity. Similarly proteins such as "chaperone protein DnaK" and "chaperonin protein" which belongs to group of heat shock proteins may have a role in folding of cyst specific proteins in cyst which needs further study.

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27: Bhalla S, Unnikrishnan R, Srivastava R, Tandon N, Mohan V, Prabhakaran D. Innovation in capacity building of primary-care physicians in diabetes management in India: a new slant in medical education. *Lancet Diabetes Endocrinol.* 2016 Mar;4(3):200-2. doi: 10.1016/S2213-8587(15)00514-8. Epub 2016 Jan 20. PubMed PMID: 26868978.

28: Bhari N, Khaitan BK, Gupta P, Kumar T, Srivastava A. Neglect leads to extremes: maggots and malignancy in a case of discoid lupus erythematosus. *Lupus.* 2016 Jan;25(1):97-101. doi: 10.1177/0961203315603145. Epub 2015 Sep 7. PubMed PMID: 26345675.

Discoid lupus erythematosus (DLE) is a chronic form of cutaneous lupus erythematosus that runs an indolent course. The rare complications of DLE include scarring, mutilation, non-healing ulceration, cicatricial alopecia and malignancy. DLE progresses to systemic lupus erythematosus (SLE) in around 5% of localized cases and 22% of generalized cases. We report a case of DLE, presenting with a six-month history of ulcerated fungating plaques and small crusted nodules superimposed on DLE plaques over both the forearms. Two weeks prior to the presentation, maggots were also noticed on these plaques. Skin biopsies from these lesions were suggestive of squamous cell carcinoma (SCC) and keratoacanthoma. A wide surgical excision of the tumor followed by partial split-thickness skin grafting was performed with complete healing of the lesions. No recurrence has been noted 18 months from follow-up.

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29: Bhatnagar S, Noble S, Chaturvedi SK, Gielen J. Development and Psychometric

Assessment of a Spirituality Questionnaire for Indian Palliative Care Patients. *Indian J Palliat Care*. 2016 Jan-Mar;22(1):9-18. doi: 10.4103/0973-1075.173939. PubMed PMID: 26962275; PubMed Central PMCID: PMC4768456.

**INTRODUCTION:** There are only a few studies on spirituality among palliative care patients in India. This gap in research may be caused by the absence of relevant questionnaires and scales specifically designed for Indian palliative care populations. In this study, we describe the development of such a questionnaire and explain its psychometric characteristics.

**METHODS:** We designed a questionnaire on the basis of a systematic review of the literature. After a review of the questionnaire by specialists and a subsequent pilot study, the questionnaire was amended. The final questionnaire consisted of a list of 36 spirituality items. It was administered to a sample of 300 cancer patients attending the pain clinic of a tertiary hospital in New Delhi.

**RESULTS:** A factor analysis led to four factors explaining 54.6% of variance: Shifting moral and religious values (Factor 1), support from religious relationship (Factor 2), existential blame (Factor 3), and spiritual trust (Factor 4). The skewness and kurtosis for Factors 1, 3, and 4 were within a tolerable range for assuming a normal distribution, but Factor 2 was skewed. The alphas showed that the four factors have an acceptable internal consistency. Statistically significant associations were observed for age and Factor 3 ( $P = 0.004$ ), gender and Factor 4 ( $P = 0.014$ ), marital status and Factors 3 ( $P = 0.002$ ) and 4 ( $P = 0.001$ ), educational level and Factors 3 ( $P < 0.001$ ) and 4 ( $P < 0.001$ ), and pain scores and Factors 1 ( $P < 0.001$ ), 2 ( $P < 0.001$ ), and 3 ( $P = 0.001$ ).

**CONCLUSION:** The questionnaire offers promising prospects for the study of spirituality among palliative care patients in India.

30: Bhatnagar S. "If Not Us, Then Who? If Not Now, Then When?" - The Need for Resource Stratified Guidelines. *Indian J Palliat Care*. 2016 Jan-Mar;22(1):1-2. doi: 10.4103/0973-1075.173944. PubMed PMID: 26962273; PubMed Central PMCID: PMC4768439.

31: Bhoi S, Thakur N, Verma P, Sawhney C, Vankar S, Agrawal D, Sinha T. Does community emergency care initiative improve the knowledge and skill of healthcare workers and laypersons in basic emergency care in India? *J Emerg Trauma Shock*. 2016 Jan-Mar;9(1):10-6. doi: 10.4103/0974-2700.173870. PubMed PMID: 26957820; PubMed Central PMCID: PMC4766757.

**BACKGROUND:** Due to lack of training in emergency care, basic emergency care in India is still in its infancy. We designed All India Institute of Medical Sciences basic emergency care course (AIIMS BECC) to address the issue.

**AIM:** To improve the knowledge and skill of healthcare workers and laypersons in basic emergency care and to identify impact of the course.

**MATERIALS AND METHODS:** Prospective study conducted over a period of 4 years. The target groups were medical and nonmedical personnel. Provider AIIMS BECC is of 1 day duration including lectures on cardio-pulmonary resuscitation, choking, and special scenarios. Course was disseminated via lectures, audio-visual aids, and mannequin training. For analysis, the participants were categorized on the basis of their education and profession. A pre- and a post-course evaluation were done and individual scores were given out of 20 and compared among all the groups and P value was calculated.

**RESULTS:** A total of 1283 subjects were trained. 99.81% became providers and 2.0% were trained as instructors. There was a significant improvement in knowledge among all the participants irrespective of their education level including medicos/nonmedicos. However, participants who had higher education (graduates and postgraduates) and/or belonged to medical field had better knowledge gain as compared to those who had low level of education ( $\leq 12$ (th) standard) and were nonmedicos.

**CONCLUSION:** BECC is an excellent community initiative to improve knowledge and skill of healthcare and laypersons in providing basic emergency care.

32: Chaurasia R, Rout D, Zaman S, Chatterjee K, Pandey HC, Maurya AK. Comparison of Procleix Ultrio Elite and Procleix Ultrio NAT Assays for Screening of

Transfusion Transmitted Infections among Blood Donors in India. *Int J Microbiol.* 2016;2016:2543156. doi: 10.1155/2016/2543156. Epub 2016 Jan 19. PubMed PMID: 26904124; PubMed Central PMCID: PMC4745391.

**Background.** Introduction of nucleic acid testing (NAT) has helped in decreasing window period donations, resulting in increased safety of blood supplies. NAT combines the advantages of direct and highly sequence-specific detection of viral genomes. We analysed the performance of newer Procleix Ultrio Elite (PUE) and Procleix Ultrio assay (PUA) for the screening of the viral markers in our donor population. **Material and Methods.** 10,015 donor samples were screened by routine immunoassays and both versions of NAT. NAT yields detected were subjected to viral load estimation and to other serological markers. **Results.** A total of 21 NAT yields were detected; three were positive by both NAT systems, whereas 18 samples were reactive by PUE only. NAT yields include 18 HBV and 3 HCV yields, of which 17 HBV yields were occult infections and 1 was window period (WP) infection. All 3 HCV yields were WP infections. No HIV-1/HIV-2 yield was found. **Conclusion.** Efficient target capture chemistry in the new TMA assay version significantly improved sensitivity. NAT is superior to serological immunoassays for screening of the viral markers; and the efficient target capture system in the newer TMA assay, namely, the PUE system, has significantly improved sensitivity over the earlier versions.

33: Dada T, Sharma R, Sinha G, Angmo D, Temkar S. Cyclodialysis-enhanced trabeculectomy with triple Ologen implantation. *Eur J Ophthalmol.* 2016 Jan-Feb;26(1):95-7. doi: 10.5301/ejo.5000633. Epub 2015 May 27. PubMed PMID: 26044372.

**PURPOSE:** To describe a novel technique of trabeculectomy combined with cyclodialysis and Ologen implantation at 3 sites in cases with high risk for failure of trabeculectomy.

**METHODS:** Six eyes of 6 patients who had high risk for failure of trabeculectomy underwent cyclodialysis-augmented trabeculectomy with Ologen implantation at 3 sites using the described technique.

**RESULTS:** All the eyes achieved target intraocular pressure, which was maintained until 1 year of follow-up. One eye required bleb needling at 6 weeks postoperative follow-up. None of the eyes had any other intraoperative or postoperative complications.

**CONCLUSIONS:** This novel technique of combining trabeculectomy with cyclodialysis augmented by Ologen placement at 3 locations appears to have encouraging short-term intraocular pressure control and may be adopted in eyes with risk factors for failure of conventional trabeculectomy.

34: Darivemula SB, Goswami K, Gupta SK, Salve H, Singh U, Goswami AK. Work-related Neck Pain Among Desk Job Workers of Tertiary Care Hospital in New Delhi, India: Burden and Determinants. *Indian J Community Med.* 2016 Jan-Mar;41(1):50-4. doi: 10.4103/0970-0218.170967. PubMed PMID: 26917874; PubMed Central PMCID: PMC4746955.

**BACKGROUND:** Work-related Neck Pain (WRNP) is a leading cause of disability and absenteeism. There is dearth of information about burden and determinants of WRNP in health facility setting in India.

**MATERIALS AND METHODS:** A cross-sectional study was carried out at tertiary care hospital in New Delhi. All Group C desk job workers involved in the administrative work were included in the study. Participants were screened for WRNP by using pretested semi-structured questionnaire. Detailed information on probable risk factors was collected among patients with WRNP. Neck examination by trained investigator was done. Work place assessment was done by using observation check-list using the recommendations of the ISO Standard (Ergonomic requirements for office work with visual display terminals). Crude and adjusted odds ratio was calculated with 95% confidence interval to understand the determinants of WRNP.

**RESULTS:** In total, 441 participants were included in the study. Of them, 58% were males. Majority of participants aged between 31-50 years. One-year prevalence of neck pain and WRNP was reported as 43.3%, (95% CI 38.7%-47.9%) and 28.3%, (95% CI

24.3%-32.7%) respectively. On multivariate analysis, female gender (OR-2.0 95% CI) and poor perception of breaks during working hours (OR-2.4 95% CI), along with work place related factors such as posture (OR-5.4 95% CI) and height of the screen (<10 cms) (OR-2.6) were identified as independent determinants of WRNP. CONCLUSION: High one-year prevalence of WRNP was reported among desk job workers. Burden of WRNP was reported more among females as compared to males. Most common factor identified was Computer use for more than 4-6 hours was most important predictor of WRNP followed by work related factors such as height of screen and posture are associated with WRNP.

35: Das CJ, Manchanda S, Panda A, Sharma A, Gupta AK. Recent Advances in Imaging of Small and Large Bowel. *PET Clin.* 2016 Jan;11(1):21-37. doi: 10.1016/j.cpet.2015.07.008. Epub 2015 Oct 1. Review. PubMed PMID: 26590441.

The diagnosis of bowel pathology is challenging in view of the nonspecific clinical presentation. Currently, there are various imaging modalities available to reach an accurate diagnosis. These modalities include conventional techniques (radiographs, small bowel follow-through, conventional enteroclysis), ultrasonography, and cross-sectional examinations (computed tomography [CT] and MR imaging) as well as functional imaging modalities, such as PET-CT or PET-MR imaging. Each modality has its own advantages and disadvantages and can be used in isolation or combination. This review discusses the role of CT, MR imaging, and PET-CT in the evaluation of small and large bowel diseases.

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36: Das R, Khalil S, Mirdha BR, Makharia GK, Dattagupta S, Chaudhry R. Molecular Characterization and Subtyping of Blastocystis Species in Irritable Bowel Syndrome Patients from North India. *PLoS One.* 2016 Jan 19;11(1):e0147055. doi: 10.1371/journal.pone.0147055. eCollection 2016. PubMed PMID: 26784888; PubMed Central PMCID: PMC4718688.

Blastocystis species has been extensively studied in recent few years to establish its pathogenicity. Present study was designed to identify and examine the association of Blastocystis sp. and its subtypes with Irritable Bowel Syndrome (IBS). Blastocystis sp. detected using wet-mount microscopy, trichrome staining, in-vitro culture and Polymerase Chain Reaction (PCR) assay in a cohort of IBS patients (n = 150) and healthy controls (n = 100). Isolates of Blastocystis sp. were subtyped using Sequence Tagged Site and representative samples were sequenced at SSUrRNA locus. A total of sixty five isolates of Blastocystis sp. were identified [IBS (n = 50); Controls (n = 15)] of which 91% belonged to ST3 and 9% belonged to ST1. No other subtypes could be identified. Statistically significant association was observed between Blastocystis sp. and IBS patients; however no particular subtype could be ascertained to any particular clinical type of IBS. The frequency of occurrence of Blastocystis sp. was more in IBS patients as compared to the controls and ST3 being the most prevalent subtype. The genetic polymorphism of SSU-rRNA gene amongst the different Blastocystis sp. isolates found in this study reinforces the fact that these organisms are genetically highly divergent.

37: Das RR, Sankar J, Sankar MJ. Sick Neonate Score: Better than Others in Resource Restricted Settings? *Indian J Pediatr.* 2016 Feb;83(2):97-8. doi: 10.1007/s12098-015-2005-y. Epub 2016 Jan 9. PubMed PMID: 26747080.

38: Das S, Nanda SK, Bisoi AK, Wadhawan AN. Effect of preoperative statin therapy on early postoperative memory impairment after off-pump coronary artery bypass surgery. *Ann Card Anaesth.* 2016 Jan-Mar;19(1):38-44. doi: 10.4103/0971-9784.173018. PubMed PMID: 26750672.

CONTEXT: Frequent incidence of early postoperative memory impairment (POMI) after cardiac surgery remains a concern because of associated morbidity, impaired quality of life, and increased health care cost.

AIM: To assess the effect of preoperative statin therapy on POMI in patients

undergoing off-pump coronary artery bypass (OPCAB) surgery.

SETTING AND DESIGN: Prospective observational study in a tertiary level hospital.

METHODS: Sixty patients aged 45-65 years undergoing OPCAB surgery were allocated into two groups of 30 each. Group A patients were receiving statin and Group B patients were not receiving statins. All patients underwent memory function assessment preoperatively after admission to hospital and on the 6<sup>th</sup> postoperative day using postgraduate institute memory scale.

STATISTICAL ANALYSIS: Appropriate tests were applied with SPSS 20 to compare both groups. The value  $P < 0.05$  was considered statistically significant. Multiple regression analysis was performed with confounding factors to determine the effect on memory impairment.

RESULTS: Patients in Group A showed significant postoperative deterioration in 6 of the 10 functions and in Group B showed deterioration in 9 of 10 functions tested compared to preoperative scores. Intergroup comparison detected less POMI in Group A compared to Group B and was statistically significant in 8 memory functions. Multiple regression analysis detected statin as an independent factor in preventing memory impairment.

CONCLUSIONS: Preoperative statin therapy attenuates the early POMI in patients undergoing OPCAB. Future long-term studies will define the efficacy of statin on POMI.

39: Dash C, Gurjar H, Garg K, Sharma BS, Singla R. Massive life-threatening bifrontal epidural hematoma following placement of an external ventricular drain. *Childs Nerv Syst.* 2016 Feb;32(2):237-9. doi: 10.1007/s00381-015-2985-y. Epub 2016 Jan 6. PubMed PMID: 26738872.

40: Dayal P, Balhara YP. Profile of female patients seeking in-patient treatment for prescription opioid abuse from a tertiary care drug dependence treatment centre from India. *Indian J Med Res.* 2016 Jan;143(1):95-100. doi: 10.4103/0971-5916.178616. PubMed PMID: 26997020.

BACKGROUND & OBJECTIVES: There has been a limited focus on prescription drug abuse among women in the country. Choice of psychoactive substance, reasons for initiation and co-occurring disorders have been found to be different among men and women. The current study was aimed at studying the profile of female patients seeking in-patient treatment for prescription drug use over a period of five years at a tertiary care drug dependence treatment centre in India.

METHODS: Case records of all female patients admitted with substance use disorder at a national level drug dependence treatment centre in north India across five years (between January 2008 and December 2012) were reviewed retrospectively to study their socio-demographic and clinical profile. The information was gathered using a semi-structured proforma and detailed case records. Abstinence, relapse and retention rates were calculated.

RESULTS: Over the five years, 31 female patients were admitted with prescription drug abuse. Of them, 12 (39%) used prescription opioids and 11 (36%) used prescription opioid along with benzodiazepines. Commonest prescription opioid was pentazocine used by 87 per cent of the women. Twenty two (71%) women were introduced to opioid by medical practitioners and commonest reason for introduction was pain (among 48%). Common co-occurring psychiatric diagnoses were depressive disorder (26%), cluster B traits/disorder (19%) and somatoform disorder (13%). Eight women did not complete treatment and left against medical advice. Thirteen women were advised maintenance treatment, and 70 per cent of them were retained for at least six months.

INTERPRETATION & CONCLUSIONS: Our findings revealed a link between mental illness, pain and non-medical use of prescription opioids among women. Majority of these women received opioids as a legitimate prescription form physician. Therefore, these legitimate prescribers should be trained for pain management to facilitate proper treatment of pain and to prevent the subsequent misuse of these medicines. Female patients with frequent pain complaints should be assessed for psychopathology while prescribing opioids.

41: Deepti S, Gupta SK, Ramakrishnan S, Talwar S, Kothari SS. Constrictive pericarditis following open-heart surgery in a child. *Ann Pediatr Cardiol.* 2016

Jan-Apr;9(1):68-71. doi: 10.4103/0974-2069.171402. PubMed PMID: 27011697; PubMed Central PMCID: PMC4782473.

A 6-year-old child developed constrictive pericarditis 2 years after undergoing an open-heart surgery for a congenital cardiac disorder. No other cause of pericarditis was identified. The clinical condition improved after pericardiectomy. The case is reported for its rarity.

42: Dhawan B, Sebastian S, Malhotra R, Kapil A, Gautam D. Prosthetic joint infection due to *Lysobacter thermophilus* diagnosed by 16S rRNA gene sequencing. *Indian J Med Microbiol.* 2016 Jan-Mar;34(1):100-2. doi: 10.4103/0255-0857.174124. PubMed PMID: 26776130.

We report the first case of prosthetic joint infection caused by *Lysobacter thermophilus* which was identified by 16S rRNA gene sequencing. Removal of prosthesis followed by antibiotic treatment resulted in good clinical outcome. This case illustrates the use of molecular diagnostics to detect uncommon organisms in suspected prosthetic infections.

43: Dhull VS, Rana N, Nazar AH. Contrast Media in PET/Computed Tomography Imaging. *PET Clin.* 2016 Jan;11(1):85-94. doi: 10.1016/j.cpet.2015.07.007. Epub 2015 Sep 16. Review. PubMed PMID: 26590446.

Is there a need for the contrast-enhanced PET/computed tomography (CT) scan or is the low-dose, non-contrast-enhanced PET/CT scan sufficient? The topic has been debated time and again. Although low-dose noncontrast CT serves the purpose of simple anatomic correlation and attenuation correction of PET images, many times patients have to undergo additional contrast-enhanced diagnostic imaging modalities, which may lead to a delay in decision-making. In this review, the authors have addressed various such issues related to the use of contrast agents and special techniques of clinical interest based on their utility in dual-modality PET/CT.

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44: Dhull VS, Passah A, Rana N, Kaur K, Tripathi M, Kumar R. 18F-FDG PET/CT of Widespread Rosai-Dorfman Disease. *Clin Nucl Med.* 2016 Jan;41(1):57-9. doi: 10.1097/RLU.0000000000001002. PubMed PMID: 26402132.

We present a rare case of Rosai-Dorfman disease who was sent for whole-body 18F-FDG PET/CT to know the exact extent of involvement. PET/CT revealed extensive nodal and extranodal involvement from head to toe including osteolytic lesions in metacarpals, metatarsals, and phalanges. It is important to know the exact extent of the disease as this may alter the patient management.

45: Dwivedi DK, Kumar R, Bora GS, Thulkar S, Sharma S, Gupta SD, Jagannathan NR. Stratification of the aggressiveness of prostate cancer using pre-biopsy multiparametric MRI (mpMRI). *NMR Biomed.* 2016 Mar;29(3):232-8. doi: 10.1002/nbm.3452. Epub 2016 Jan 5. PubMed PMID: 26730884.

Risk stratification, based on the Gleason score (GS) of a prostate biopsy, is an important decision-making tool in prostate cancer management. As low-grade disease may not need active intervention, the ability to identify aggressive cancers on imaging could limit the need for prostate biopsies. We assessed the ability of multiparametric MRI (mpMRI) in pre-biopsy risk stratification of men with prostate cancer. One hundred and twenty men suspected to have prostate cancer underwent mpMRI (diffusion MRI and MR spectroscopic imaging) prior to biopsy. Twenty-six had cancer and were stratified into three groups based on GS:

low grade ( $GS \leq 6$ ), intermediate grade ( $GS = 7$ ) and high grade ( $GS \geq 8$ ). A total of 910 regions of interest (ROIs) from the peripheral zone (PZ, range 25-45) were

analyzed from these 26 patients. The metabolite ratio

[citrate/(choline+creatine)] and apparent diffusion coefficient (ADC) of voxels

were calculated for the PZ regions corresponding to the biopsy cores and compared with histology. The median metabolite ratios for low-grade, intermediate-grade and high-grade cancer were 0.29 (range: 0.16, 0.61), 0.17 (range: 0.13, 0.32) and

0.13 (range: 0.05, 0.23), respectively ( $p=0.004$ ). The corresponding mean ADCs

( $\times 10^{-3}$  mm<sup>2</sup> /s) for low-grade, intermediate-grade and high-grade cancer were

$0.99 \pm 0.08$ ,  $0.86 \pm 0.11$  and  $0.69 \pm 0.12$ , respectively ( $p < 0.0001$ ). The combined

ADC and metabolite ratio model showed strong discriminatory ability to

differentiate subjects with  $GS \leq 6$  from subjects with  $GS \geq 7$  with an area under

the curve of 94%. These data indicate that pre-biopsy mpMRI may stratify PCa aggressiveness noninvasively. As the recent literature data suggest that men with

$GS \leq 6$  cancer may not need radical therapy, our data may help limit the need for

biopsy and allow informed decision making for clinical intervention. Copyright © 2015 John Wiley & Sons, Ltd.

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46: Gajendra S, Sahoo MK. (18)F FDG-PET/CT of malignant thymoma with pleural and diaphragmatic metastases. Lung India. 2016 Jan-Feb;33(1):116-7. doi: 10.4103/0970-2113.173057. PubMed PMID: 26933330; PubMed Central PMCID: PMC4748653.

47: Gamanagatti S, Singh T, Sharma R, Srivastava DN, Dash NR, Garg PK. Unilobar Versus Bilobar Biliary Drainage: Effect on Quality of Life and Bilirubin Level Reduction. Indian J Palliat Care. 2016 Jan-Mar;22(1):50-62. doi: 10.4103/0973-1075.173958. PubMed PMID: 26962281; PubMed Central PMCID: PMC4768450.

**BACKGROUND:** Percutaneous biliary drainage is an accepted palliative treatment for malignant biliary obstruction.

**PURPOSE:** To assess the effect on quality of life (QOL) and bilirubin level reduction in patients with inoperable malignant biliary obstruction treated by unilobar or bilobar percutaneous transhepatic biliary drainage (PTBD).

**MATERIALS AND METHODS:** Over a period of 2 years, 49 patients (age range, 22-75 years) of inoperable malignant biliary obstruction were treated by PTBD.

Technical and clinical success rates, QOL, patency rates, survival rates, and complications were recorded. Clinical success rates, QOL, and bilirubin reduction were compared in patients treated with complete ( $n = 21$ ) versus partial ( $n = 28$ ) liver parenchyma drainage. QOL before and 1 month after biliary drainage were analyzed retrospectively between these two groups.

**RESULTS:** Biliary drainage was successful in all 49 patients, with an overall significant reduction of the postintervention bilirubin levels ( $P < 0.001$ )

resulting in overall clinical success rate of 89.97%. Clinical success rates were similar in patients treated with whole-liver drainage versus partial-liver drainage. Mean serum bilirubin level before PTBD was 19.85 mg/dl and after the procedure at 1 month was 6.02 mg/dl. The mean baseline functional score was 39.35, symptom scale score was 59.55, and global health score was 27.45. At 1 month, mean functional score was 61.25, symptom scale score was 36.04, and global health score was 56.33, with overall significant improvement in QOL ( $P < 0.001$ ). There was a statistically significant difference in the improvement of the QOL scores ( $P = 0.002$ ), among patients who achieved clinical success, compared with those patients who did not achieve clinical success at 1 month. We did not find any significant difference in the QOL scores in patients according to the amount of liver drained (unilateral or bilateral drainage), the type of internalization used (ring biliary or stent). Overall, minor and major complications rates were 14.3% and 8.1%, respectively.

**CONCLUSION:** Percutaneous biliary drainage provides good palliation of malignant obstructive jaundice. Partial-liver drainage achieved results as good as those after complete liver drainage with significant improvements in QOL and reduction of the bilirubin level.

48: Ganie MA, Marwaha RK, Nisar S, Farooqi KJ, Jan RA, Wani SA, Gojwari T, Shah ZA. Impact of hypovitaminosis D on clinical, hormonal and insulin sensitivity parameters in normal body mass index polycystic ovary syndrome women. *J Obstet Gynaecol.* 2016 Jan 15:1-5. [Epub ahead of print] PubMed PMID: 26772667.

Earlier data on the relationship of 25 hydroxyvitamins (25OHD) levels with various components of polycystic ovary syndrome (PCOS) has been conflicting. We studied 122 normal body mass index (BMI) women with PCOS (cases) and 46 age and BMI-matched healthy women (controls) and assessed the impact of serum 25OHD levels on clinical, biochemical and insulin sensitivity parameters in these lean Indian women with PCOS. The mean age and BMI of the cases and controls were

comparable. Mean serum 25OHD levels respectively were  $10.1 \pm 9.9$  and

$7.9 \pm 6.8$  ng/ml with 87.7% and 91.1% vitamin D (VD) deficient. No significant

correlation was noted between 25OHD levels and clinical, biochemical and insulin sensitivity parameters except with the total testosterone levels ( $p = 0.007$ ).

Also, no significant difference in these parameters was observed once the PCOS women were stratified into various subgroups based on the serum 25OHD levels. We conclude that VD deficiency being common in normal BMI Indian women with or without PCOS does not seem to alter the metabolic phenotype in these women.

49: Ganie MA, Dhingra A, Nisar S, Sreenivas V, Shah ZA, Rashid A, Masoodi S, Gupta N. Oral glucose tolerance test significantly impacts the prevalence of abnormal glucose tolerance among Indian women with polycystic ovary syndrome: lessons from a large database of two tertiary care centers on the Indian subcontinent. *Fertil Steril.* 2016 Jan;105(1):194-201.e3. doi: 10.1016/j.fertnstert.2015.09.005. Epub 2015 Sep 25. PubMed PMID: 26407537.

**OBJECTIVE:** To estimate the prevalence of abnormal glucose tolerance (AGT) among Indian women with polycystic ovary syndrome (PCOS) and analyze the role of oral glucose tolerance (OGTT) test on its estimation.

**DESIGN:** Cross-sectional clinical study.

**SETTING:** Tertiary care center.



**PATIENT(S):** A total of 2,014 women with PCOS diagnosed on the basis of the Rotterdam 2003 criteria were enrolled, and the data of 1,746 subjects were analyzed.

**INTERVENTION(S):** In addition to recording clinical, biochemical, and hormone parameters, a 75 g OGTT was administered.

**MAIN OUTCOME MEASURE(S):** Prevalence of AGT and impact of age, body mass index (BMI), family history, and OGTT on its prevalence.

**RESULT(S):** The mean age of subjects was  $23.8 \pm 5.3$  years, with a mean BMI of  $24.9 \pm 4.4$  kg/m<sup>2</sup>. The overall prevalence of AGT was 36.3% (6.3% diabetes and 30% impaired fasting plasma glucose/impaired glucose tolerance) using American Diabetes Association criteria. The glucose intolerance showed a rising trend with advancing age (30.3%, 35.4%, 51%, and 58.8% in the second, third, fourth, and fifth decades, respectively) and increasing BMI. Family history of diabetes mellitus was present in 54.6% (953/1,746) subjects, and it did not correlate with any of the studied parameters except waist circumference and BMI. Sensitivity was better with 2-hour post-OGTT glucose values as compared with fasting plasma glucose, since using fasting plasma glucose alone would have missed the diagnosis in 107 (6.1%) subjects.

**CONCLUSION(S):** We conclude that AGT is high among young Indian women with PCOS and that it is not predicted by family history of type 2 DM. OGTT significantly improves the detection rate of AGT among Indian women with PCOS.

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50: Garg K, Sinha S, Satyarthee GD, Agarwal D, Gupta DK, Sharma B, Mahapatra AK. Microsurgical Outcome of Post-traumatic Peripheral Nerve Injuries: An Experience of 23 Cases and Review of Literature. *Turk Neurosurg.* 2016;26(2):297-301. doi: 10.5137/1019-5149.JTN.7017-12.1. PubMed PMID: 26956829.

**AIM:** The present study aimed to evaluate the microsurgical outcome in post-traumatic peripheral nerve injuries and its correlation with time since injury and the type of the operative procedure performed.

**MATERIAL AND METHODS:** All the patients admitted to our center with the diagnosis of post-traumatic peripheral nerve injury were included in the study. The data of all patients was retrospectively analysed from the computerized database of our hospital. The time period of the study was from January 2008 to March 2011.

**RESULTS:** A total of 23 patients were included in the study. The interval between injury and surgery was 28.8 weeks (range: 1 day - 70 weeks). The most common mode of injury was road traffic accidents (39%, n=9). The mean follow up was  $24.7 \pm 11.3$  months (range 9-45 months). Six (60%) patients had a good outcome. There was no statistically significant correlation between outcome and time since injury or type of operative procedure performed ( $p > 0.05$ ).

**CONCLUSION:** Post-traumatic peripheral nerve injury is a rare form of nerve injury. There is no correlation between the surgical outcome and time since injury. Some of the nerves have a better outcome as compared to others.

51: Gerdin M, Roy N, Felländer-Tsai L, Tomson G, von Schreeb J, Petzold M; Towards Improved Trauma Care Outcomes in India (TITCO) Consortium, Gupta A, Jhakar A, Basak D, Mohamed Ismail D, Yabo D, Jegadeesan K, Kamble J, Saha ML, Nitnaware M, Khajanchi M, Jothi R, Ghosh SN, Bhoi S, Mahindrakar S, Dharap S, Rao S, Kamal V, Kumar V, Tirlotkar S. Traumatic transfers: calibration is adversely affected when prediction models are transferred between trauma care contexts in India and the United States. *J Clin Epidemiol.* 2016 Jan 15. pii: S0895-4356(16)00012-3. doi: 10.1016/j.jclinepi.2016.01.004. [Epub ahead of print] PubMed PMID: 26775627.

**OBJECTIVE:** We evaluated the transferability of prediction models between trauma care contexts in India and the United States and explored updating methods to adjust such models for new contexts.

**STUDY DESIGN AND SETTINGS:** Using a combination of prospective cohort and registry data from 3,728 patients of Towards Improved Trauma Care Outcomes in India (TITCO) and from 18,756 patients of the US National Trauma Data Bank (NTDB), we derived models in one context and validated them in the other, assessing them for discrimination and calibration using systolic blood pressure, heart rate, and

Glasgow coma scale as candidate predictors.

RESULTS: Early mortality was 8% in the TITCO and 1-2% in the NTDB samples. Both models discriminated well, but the TITCO model overestimated the risk of mortality in NTDB patients, and the NTDB model underestimated the risk in TITCO patients.

CONCLUSION: Transferability was good in terms of discrimination but poor in terms of calibration. It was possible to improve this miscalibration by updating the models' intercept. This updating method could be used in samples with as few as 25 events.

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52: Gilbert C, Wormald R, Fielder A, Deorari A, Zepeda-Romero LC, Quinn G, Vinekar A, Zin A, Darlow B. Potential for a paradigm change in the detection of retinopathy of prematurity requiring treatment. *Arch Dis Child Fetal Neonatal Ed.* 2016 Jan;101(1):F6-9. doi: 10.1136/archdischild-2015-308704. Epub 2015 Jul 24. PubMed PMID: 26208954; PubMed Central PMCID: PMC4717385.

53: Giri AK, Midha S, Banerjee P, Agrawal A, Mehdi SJ, Dhingra R, Kaur I, G RK, Lakhota R, Ghosh S, Das K, Mohindra S, Rana S, Bhasin DK, Garg PK, Bharadwaj D; INDIPAN and INDICO Consortium. Common Variants in CLDN2 and MORC4 Genes Confer Disease Susceptibility in Patients with Chronic Pancreatitis. *PLoS One.* 2016 Jan 28;11(1):e0147345. doi: 10.1371/journal.pone.0147345. eCollection 2016. PubMed PMID: 26820620; PubMed Central PMCID: PMC4731142.

A recent genome-wide association study (GWAS) identified association with variants in X-linked CLDN2 and MORC4, and PRSS1-PRSS2 loci with chronic pancreatitis (CP) in North American patients of European ancestry. We selected 9 variants from the reported GWAS and replicated the association with CP in Indian patients by genotyping 1807 unrelated Indians of Indo-European ethnicity, including 519 patients with CP and 1288 controls. The etiology of CP was idiopathic in 83.62% and alcoholic in 16.38% of 519 patients. Our study confirmed a significant association of 2 variants in CLDN2 gene (rs4409525-OR 1.71,  $P = 1.38 \times 10^{-09}$ ; rs12008279-OR 1.56,  $P = 1.53 \times 10^{-04}$ ) and 2 variants in MORC4 gene (rs12688220-OR 1.72,  $P = 9.20 \times 10^{-09}$ ; rs6622126-OR 1.75,  $P = 4.04 \times 10^{-05}$ ) in Indian patients with CP. We also found significant association at PRSS1-PRSS2 locus (OR 0.60;  $P = 9.92 \times 10^{-06}$ ) and SAMD12-TNFRSF11B (OR 0.49, 95% CI [0.31-0.78],  $P = 0.0027$ ). A variant in the gene MORC4 (rs12688220) showed significant interaction with alcohol (OR for homozygous and heterozygous risk allele -14.62 and 1.51 respectively,  $P = 0.0068$ ) suggesting gene-environment interaction. A combined analysis of the genes CLDN2 and MORC4 based on an effective risk allele score revealed a higher percentage of individuals homozygous for the risk allele in CP cases with 5.09 fold enhanced risk in individuals with 7 or more effective risk alleles compared with individuals with 3 or less risk alleles ( $P = 1.88 \times 10^{-14}$ ). Genetic variants in CLDN2 and MORC4 genes were associated with CP in Indian patients.

54: Goel V, Kumar D, Kumar R, Mathur P, Singh S. Community Acquired Enterococcal Urinary Tract Infections and Antibiotic Resistance Profile in North India. *J Lab Physicians.* 2016 Jan-Jun;8(1):50-4. doi: 10.4103/0974-2727.176237. PubMed PMID: 27013814; PubMed Central PMCID: PMC4785767.

BACKGROUND: Urinary tract infections (UTIs) remain a major problem both in hospitalized and outdoor patients. Multidrug-resistant enterococci are emerging as a major nosocomial pathogen with increasing frequency. However, the incidence of community-acquired enterococcal infections and species prevalent in India is not thoroughly investigated.

OBJECTIVES: This study aims to estimate the burden of community-acquired UTIs seen at a tertiary care hospital and to identify the Enterococcus species isolated from these patients. The study also aims to determine the antibiotic susceptibility pattern with reference to high-level aminoglycosides and vancomycin.

MATERIALS AND METHODS: Semi-quantitative cultures from a total of 22,810 urine

samples obtained from patients seen at various Outpatient Departments were analyzed. From them 115 nonduplicate isolates of enterococci were obtained as significant pure growth ( $>10^5$  cfu/ml) and speciated. Antibiotic susceptibility was performed by Kirby-Bauer disc diffusion method. Vancomycin resistance screening was performed by the vancomycin screen agar method recommended by Clinical and Laboratory Standards Institute and confirmed by determination of minimum inhibitory concentration by agar dilution method.

RESULTS: Of 115 enterococcal isolates, 61 were identified as *Enterococcus faecalis*, 42 as *Enterococcus faecium*, 3 each as *Enterococcus dispar*, and *Enterococcus pseudoavium*. High-level gentamicin resistance (HLGR) was higher in *E. faecium* (47.6%) than *E. faecalis* (32.7%) and HLSR also showed the same pattern with 47.6% and 27.9% resistance, respectively. Vancomycin resistant enterococci accounted for 11.3% of the isolates, and out of them 53.8% were *E. faecium* by agar dilution method.

CONCLUSION: High rate of resistance to antibiotics of penicillin group and aminoglycosides was observed in our tertiary care hospital even in community acquired UTIs. Hence, there is an urgent need for more rational and restricted use of antimicrobials.

55: Gola S, Gupta A, Keshri GK, Nath M, Velpandian T. Evaluation of hepatic metabolism and pharmacokinetics of ibuprofen in rats under chronic hypobaric hypoxia for targeted therapy at high altitude. *J Pharm Biomed Anal.* 2016 Mar 20;121:114-22. doi: 10.1016/j.jpba.2016.01.018. Epub 2016 Jan 12. PubMed PMID: 26799979.

With studies indicative of altered drug metabolism and pharmacokinetics (DMPK) under high altitude (HA)-induced hypobaric hypoxia, consideration of better therapeutic approaches has continuously been aimed in research for HA related illness management. DMPK of drugs like ibuprofen may get affected under hypoxia which establishes the requirement of different therapeutic dose regimen to ensure safe and effective therapy at HA. This study examined the effects of the chronic hypobaric hypoxia (CHH) on hepatic DMPK of ibuprofen in rats. Experimental

animals were exposed to simulated altitude of 7620m (~25,000ft) for CHH exposure

(7 or 14 days) in decompression chamber and administered with ibuprofen (80mg/kg, body weight, p.o.). Results demonstrated that CHH significantly altered PK variables of ibuprofen and activities of both phase-I and II hepatic metabolic enzymes as compared to the animals under normoxic conditions. Hepatic histopathological observations also revealed marked alterations. Increase in pro-inflammatory cytokines/chemokines viz. IL-1 $\beta$ , IL-2, IFN- $\gamma$ , TNF- $\alpha$  exhibited close relevance with diminished CYP2C9 expression under CHH. Moreover, the down-regulated CYP2C9 level further supported the underlying mechanism for reduced metabolism of ibuprofen and as a result, increased retention of parent drug in the system. Increased mean retention time, Vd, T $_{1/2}$  of ibuprofen, and decreased AUC, Cmax and clearance during CHH further strengthened the present findings. In conclusion, CHH exposure significantly affects hepatic DMPK of ibuprofen, which may further influence the usual therapeutic dose-regimen. Further, there is requirement of human studies to evaluate their susceptibility toward hypobaric hypoxia.

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56: Goswami D, Kashyap L, Batra RK, Bhagat C. Central bronchial carcinoid: Management of a case and anesthetic perspectives. *Saudi J Anaesth.* 2016 Jan-Mar;10(1):104-6. doi: 10.4103/1658-354X.169487. PubMed PMID: 26955320; PubMed Central PMCID: PMC4760028.

Obstructing lesions of the central airways present with a variety of symptoms and are often associated with pneumonia or asthma-like states. Anesthesia to these patients often presents challenges right from the preoperative stabilization of underlying lung condition, mask ventilation in the supine position to maintaining

oxygenation and ventilation in the intraoperative and postoperative period. We present here a case of a young woman with a central bronchial tumor with significant airway obstruction with potential for major bleeding and subsequent anesthetic management without lung sacrificing measures and cardiopulmonary bypass assistance.

57: Goswami R, Saha S, Sreenivas V, Singh N, Lakshmy R. Vitamin D-binding protein, vitamin D status and serum bioavailable 25(OH)D of young Asian Indian males working in outdoor and indoor environments. *J Bone Miner Metab.* 2016 Jan 30. [Epub ahead of print] PubMed PMID: 26832389.

Urban Asian Indians generally have low serum 25(OH)D. Information on serum bioavailable 25(OH)D and the effect of prolonged sun-exposure in them is not known. We assessed serum 25(OH)D and bioavailable 25(OH)D in males with varying durations of sun-exposure in Delhi during August-September. Serum 25(OH)D, vitamin D-binding protein (DBP), bioavailable 25(OH)D, free 25(OH)D index, iPTH, ionized calcium and sun-index were assessed in outdoor, mixed outdoor-indoor and indoor workers (n = 88, 32 and 74, respectively). The mean sun-index ( $12.0 \pm 6.25$ ,  $4.3 \pm 2.20$  and  $0.7 \pm 0.62$ , respectively;  $P < 0.001$ ) was highest outdoors and lowest indoors. Serum 25(OH)D ( $29.0 \pm 8.61$ ,  $19.1 \pm 5.73$  and  $10.9 \pm 4.19$  ng/ml, respectively;  $P < 0.001$ ), bioavailable 25(OH)D and free 25(OH)D index were maximum in outdoor workers followed by mixed-exposure and indoor workers. Their mean serum DBP levels ( $241.2 \pm 88.77$ ,  $239.3 \pm 83.40$  and  $216.6 \pm 63.93$  µg/ml, respectively;  $P = 0.12$ ) were comparable. Mean serum iPTH was significantly lower in outdoor than indoor workers and showed inverse correlations with serum 25(OH)D, bioavailable 25(OH)D and free 25(OH)D index ( $r = -0.401$ ,  $-0.269$  and  $-0.236$ , respectively;  $P < 0.001$  in all). Daily dietary-calorie intake was higher and calcium lower in outdoor than indoor workers. On regression analysis, sun-exposure was the only significant variable, increasing serum 25(OH)D by 2.03 ng/ml per hour of sun-exposure (95 % confidence interval 1.77-2.28;  $P < 0.001$ ). Outdoor workers with prolonged sun-exposure were vitamin D-sufficient, with higher serum bioavailable 25(OH)D than the indoor workers during summer. Use of serum DBP levels did not affect the interpretation of their vitamin D status.

58: Goyal A, Madhusudhan KS, Gamanagatti S, Baruah B, Shalimar, Sharma R. Radiological management of multiple hepatic artery pseudoaneurysms associated with cholangitic abscesses. *Indian J Radiol Imaging.* 2016 Jan-Mar;26(1):99-102. doi: 10.4103/0971-3026.178353. PubMed PMID: 27081232; PubMed Central PMCID: PMC4813083.

Hepatic artery pseudoaneurysms (HAP) are uncommon, occurring mostly as a complication of trauma (accidental or iatrogenic). Liver abscess rarely causes HAP and multiple HAP associated with cholangitic abscesses have not been reported in the literature. We present a patient of acute necrotizing pancreatitis with stent block cholangitis and multiple cholangitic abscesses who developed hemorrhagic output through drainage catheter in the liver abscess. A multiphasic CT angiography demonstrated three HAP, which were treated with a combination of endovascular coil embolization and percutaneous thrombin injection. The fact that cholangitic abscesses may be associated with pseudoaneurysms should not be neglected, considering the potentially catastrophic complication and relatively easy radiological management. CT angiography permits accurate diagnosis and lays down the roadmap for endovascular procedures.

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60: Goyal N, Agrawal D, Singla R, Kale SS, Singh M, Sharma BS. Stereotactic radiosurgery in hemangioblastoma: Experience over 14 years. *J Neurosci Rural*

Pract. 2016 Jan-Mar;7(1):23-7. doi: 10.4103/0976-3147.172165. PubMed PMID: 26933339; PubMed Central PMCID: PMC4750333.

**BACKGROUND:** Although gamma knife has been advocated for hemangioblastomas, it is not used widely by neurosurgeons.

**OBJECTIVE:** We review our experience over 14 years in an attempt to define the role of stereotactic radiosurgery (SRS) in the management of hemangioblastomas.

**PATIENTS AND METHODS:** A retrospective study was conducted on all patients of hemangioblastoma who underwent SRS at our institute over a period of 14 years (1998-2011). Gamma knife plans, clinical history, and radiology were reviewed for all patients.

**RESULTS:** A total of 2767 patients underwent gamma knife during the study period. Of these, 10 (0.36%) patients were treated for 24 hemangioblastomas. Eight patients (80%) had von Hippel-Lindau disease while two had sporadic hemangioblastomas. The median peripheral dose (50% isodose) delivered to the tumors was 29.9 Gy. Clinical and radiological follow-up data were available for eight patients. Of these, two were re-operated for persisting cerebellar symptoms. The remaining six patients were recurrence-free at a mean follow-up of 48 months (range 19-108 months). One patient had an increase in cyst volume along with a decrease in the size of the mural nodule.

**CONCLUSIONS:** SRS should be the first option for asymptomatic hemangioblastomas. Despite the obvious advantages, gamma knife is not widely used as an option for hemangioblastomas.

61: Gupta A, Gupta S, Harris S, Naina H. Hypothenar hammer syndrome. *BMJ Case Rep.* 2016 Jan 8;2016. pii: bcr2015213678. doi: 10.1136/bcr-2015-213678. PubMed PMID: 26746837.

62: Gupta A, Goyal V, Srivastava AK, Shukla G, Behari M. Remission and relapse of myasthenia gravis on long-term azathioprine: An ambispective study. *Muscle Nerve.* 2016 Jan 23. doi: 10.1002/mus.25052. [Epub ahead of print] PubMed PMID: 26802912.

**INTRODUCTION:** Azathioprine (AZA) is commonly used in Myasthenia Gravis (MG). Treatment may be prolonged, entailing significant risks and avoidable costs.

**OBJECTIVE:** We reviewed remission and relapse and side effect profiles in MG patients on AZA treatment and after tapering off.

**METHODS:** We conducted an ambispective study and analyzed remission, relapse rates, and side effect profiles in 117 MG patients on AZA.

**RESULTS:** Thirty-nine patients (33.3%) achieved remission, and 36 (30.8%) achieved complete stable remission (CSR) with a 33% relapse rate. No AZA side effects were seen in 95 (81%) patients. Only duration of disease more than 10 years (OR 9.5, 95% CI 2.4 - 36.9, P= 0.001) was significantly associated with remission.

**CONCLUSIONS:** AZA is well tolerated by MG patients, and about 30% go into CSR on long-term AZA. This article is protected by copyright. All rights reserved.

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63: Gupta D, Sharma D, Kannan N, Prapruettham S, Mock C, Wang J, Qiu Q, Pandey RM, Mahapatra A, Dash HH, Hecker JG, Rivara FP, Rowhani-Rahbar A, Vavilala MS. Guideline Adherence and Outcomes in Severe Adult Traumatic Brain Injury for the CHIRAG (Collaborative Head InjuRy and Guidelines) Study. *World Neurosurg.* 2016 Jan 12. pii: S1878-8750(16)00015-2. doi: 10.1016/j.wneu.2015.12.097. [Epub ahead of print] PubMed PMID: 26806065.

64: Gupta L, Bhatnagar V. A study of associated congenital anomalies with biliary atresia. *J Indian Assoc Pediatr Surg.* 2016 Jan-Mar;21(1):10-3. doi: 10.4103/0971-9261.158095. PubMed PMID: 26862288; PubMed Central PMCID: PMC4721121.

**BACKGROUND/PURPOSE:** This study aims to analyze the incidence and type of various associated anomalies among infants with extrahepatic biliary atresia (EHBA), compare their frequency with those quoted in the existing literature and assess

their role in the overall management.

**MATERIALS AND METHODS:** A retrospective study was performed on 137 infants who underwent the Kasai procedure for EHBA during the past 12 years. The medical records were reviewed for the incidence and type of associated anomalies in addition to the details of the management of the EHBA.

**RESULTS:** Of the 137 infants, 40 (29.2%) were diagnosed as having 58 anomalies. The majority of patients had presented in the 3(rd) month of life; mean age was  $81 \pm 33$  days (range = 20-150 days). There were 32 males and 8 females; boys with EHBA had a higher incidence of associated anomalies. Of these 40 patients, 22 (37.9%) had vascular anomalies, 13 patients (22.4%) had hernias (umbilical-10, inguinal-3), 7 patients (12.1%) had intestinal malrotation, 4 patients (6.8%) had choledochal cyst, 1 patient (1.7%) had Meckel's diverticulum, 3 patients (5%) had undergone prior treatment for jejunoileal atresias (jejunal-2, ileal-1), 2 patients (3.4%) had undergone prior treatment for esophageal atresia and tracheoesophageal fistula, 2 patients (3.4%) had spleniculi, and 2 patients (3.4%) were diagnosed as having situs inversus.

**CONCLUSIONS:** The most common associated anomalies in our study were related to the vascular variation at the porta hepatis and the digestive system. The existence of anomalies in distantly developing anatomic regions in patients with EHBA supports the possibility of a "generalized" insult during embryogenesis rather than a "localized" defect. In addition, male infants were observed to have significantly more associated anomalies as compared with the female infants in contrast to earlier reports.

65: Gupta N, Gothwal S, Satpathy AK, Missaglia S, Tavian D, Das P, Timila D, Kabra M. Chanarin Dorfman syndrome: a case report with novel nonsense mutation. *Gene*. 2016 Jan 10;575(2 Pt 1):359-62. doi: 10.1016/j.gene.2015.09.004. Epub 2015 Sep 6. PubMed PMID: 26353074.

Chanarin Dorfman syndrome (CDS) is a very rare neutral lipid metabolism disorder with multisystem involvement. It is inherited as an autosomal recessive manner. It is characterized with congenital ichthyosiform erythroderma and involvement of liver, muscle, and central nervous system. Demonstration of lipid vacuoles in neutrophils from peripheral blood smears in patients with ichthyosiform erythroderma leads to the diagnosis. We report a novel ABHD5 truncating variant in a twenty nine month old female child, who presented with ichthyosiform erythroderma.

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66: Gupta RK, Tripathi M, Sahoo MK, Nazar AH, Agarwal K, Kumar K, Damle N, Bal C. Asymmetrical F-18 Flurorodeoxyglucose uptake in the breasts: A dilemma solved by patient history. *Indian J Nucl Med*. 2016 Jan-Mar;31(1):83-4. doi: 10.4103/0972-3919.172377. PubMed PMID: 26917909; PubMed Central PMCID: PMC4746856.

The present case highlights the importance of history taking in solving the dilemmas of variant F-18 FDG uptake on PET/CT. Asymmetrically increased, abnormal looking, FDG uptake in the right breast of our patient was related to her breast feeding practice. Because of personal preference the patient suckled her child from the right breast only. This resulted in asymmetry of size, increase in glandular breast parenchyma and FDG uptake in the breast that was suckled.

67: Gupta S, Gogia V, Jose C, Chanana B, Bypareddy R, Kapoor KS, Gupta V. PERIPHERAL RETINAL DEGENERATIONS AND RHEGMATOGENOUS DETACHMENT IN PRIMARY CONGENITAL GLAUCOMA. *Retina*. 2016 Jan;36(1):188-91. doi: 10.1097/IAE.0000000000000688. PubMed PMID: 26200515.

**BACKGROUND:** To determine the prevalence of peripheral retinal degenerations (PRD) and rhegmatogenous retinal detachment in patients with primary congenital glaucoma (PCG).

**METHODS:** Records of all patients with PCG operated from year 2000 onwards were evaluated to look for the prevalence of rhegmatogenous retinal detachment. Of these, those children who were old enough to cooperate and had sufficient medial

clarity were screened with an indirect ophthalmoscopy in a cross-sectional evaluation from 2010 to 2014. Peripheral retina was examined, and prevalence of PRD was estimated in this subset. For statistical purposes, only one eye of each patient was considered in this cross-sectional analysis.

**RESULTS:** Of the 310 eyes (180 patients with PCG) operated from the year 2000 onwards, a rhegmatogenous retinal detachment was noted in 13 eyes (4%). Mean axial length of these eyes was  $26.3 \pm 3.2$  mm (range, 19.8-34.7 mm). Among the eyes screened for PRD ( $n = 60$ ), prevalence of pathologic PRD (lattices with/without atrophic holes and isolated holes/tears) was 15%. The average follow-up between glaucoma filtering surgery and the date of last examination was  $8.55 \pm 3.98$  years (range, 5-20 years) in this subset. Mean axial length was significantly greater in eyes with pathologic PRD than in those without ( $28.1 \pm 3.3$  mm vs.  $25.8 \pm 2.6$  mm;  $P = 0.01$ ). For axial length  $\geq 26$  mm, the odds of having a pathologic PRD were 14.4 times more than those with axial length  $< 26$  mm ( $P < 0.001$ ; 95% confidence interval, 1.7-120.5).

**CONCLUSION:** Prevalence of PRD among eyes with PCG is high. Peripheral retinal screening should be performed in eyes with PCG, especially those with axial lengths  $\geq 26$  mm.

68: Gupta SK, Gulati GS, Anderson RH. Clarifying the anatomy of the fifth arch artery. *Ann Pediatr Cardiol*. 2016 Jan-Apr;9(1):62-7. doi: 10.4103/0974-2069.171392. PubMed PMID: 27011696; PubMed Central PMCID: PMC4782472.

The artery allegedly forming in the fifth pharyngeal arch has increasingly been implicated as responsible for various vascular malformations in patients with congenitally malformed hearts. Observations from studies on developing embryos, however, have failed to provide support to substantiate several of these inferences such that the very existence of the fifth arch artery remains debatable. To the best of our knowledge, in only a solitary human embryo has a vascular channel been found that truly resembled the artery of the fifth arch. Despite the meager evidence to support its existence, the fifth arch artery has been invoked to explain the morphogenesis of double-barreled aorta, some unusual forms of aortopulmonary communications, and abnormalities of the brachiocephalic arteries. In most of these instances, the interpretations have proved fallible when examined in the light of existing knowledge of cardiac development. In our opinion, there are more plausible alternative explanations for the majority of these descriptions. Double-barreled aorta is more likely to result from retention of the recently identified dorsal collateral channels while abnormalities of brachiocephalic arteries are better explained on the basis of extensive remodeling of aortic arches during fetal development. Some examples of aortopulmonary communications, nonetheless, may well represent persistence of the developing artery of the fifth pharyngeal arch. We here present one such case - a patient with tetralogy of Fallot and pulmonary atresia, in whom the fifth arch artery provided a necessary communication between the ascending aorta and the pulmonary arteries. In this light, we discuss the features we consider to be essential before attaching the tag of "fifth arch artery" to a candidate vascular channel.

69: Gupta V, Arava S, Bakhshi S, Vashisht KR, Reddy R, Gupta S. Subcutaneous Panniculitis-Like T-Cell Lymphoma with Hemophagocytic Syndrome in a Child. *Pediatr Dermatol*. 2016 Mar;33(2):e72-e76. doi: 10.1111/pde.12776. Epub 2016 Jan 14. PubMed PMID: 26764131.

Subcutaneous panniculitis-like T-cell lymphoma (SPTCL) characterized by subcutaneous infiltration of pleomorphic T-cells of the  $\alpha/\beta$  phenotype rarely affects children. Development of hemophagocytic syndrome (HPS) leads to a poor prognosis with this otherwise indolent lymphoma. We report a case of SPTCL in a 5-year-old child complicated by HPS treated successfully with combination chemotherapy. We discuss the potential pitfalls in reaching an early diagnosis and challenges in its management. Previously reported cases of SPTCL with HPS in children are briefly reviewed.

70: Gupta V, Mridha AR, Sharma VK. Pediatric Dermatology Photoquiz: Multiple Erythematous Papules on the Back. *Pediatr Dermatol*. 2016 Jan;33(1):97-8. doi: 10.1111/pde.12700. PubMed PMID: 26758098.

71: Gupta V, Khute P, Patel A, Gupta S. Non-healing genital herpes mimicking donovanosis in an immunocompetent man. *Int J STD AIDS*. 2016 Jan;27(1):72-4. doi: 10.1177/0956462415568983. Epub 2015 Jan 22. PubMed PMID: 25614521.

Although atypical presentations of herpetic infection in immunocompetent individuals are common, they very rarely have the extensive, chronic and verrucous appearances seen in the immunocompromised host. We report a case of genital herpes manifesting as painless chronic non-healing genital ulcers with exuberant granulation tissue in an immunocompetent man. Owing to this morphology, the ulcers were initially mistaken for donovanosis. To the best of our knowledge, such a presentation of genital herpes in an immunocompetent individual has not been described previously.

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72: Gupta V, Rao A, Gupta S. Scrotal cutaneous toxicity: an uncommon but important side-effect of sunitinib. *J Eur Acad Dermatol Venereol*. 2016 Jan;30(1):132-3. doi: 10.1111/jdv.12615. Epub 2014 Jul 25. PubMed PMID: 25060046.

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74: Handa N, Rathinam D, Singh A, Jana M. Seminal vesicle involvement: a rare extranodal manifestation of non-Hodgkin's lymphoma. *BMJ Case Rep*. 2016 Jan 8;2016. pii: bcr2015213554. doi: 10.1136/bcr-2015-213554. PubMed PMID: 26746835.

75: Irpachi K, Kiran U. Life-threatening ruptured femoral artery pseudoaneurysm: A delayed complication of endovascular aortic repair of abdominal aortic aneurysm. *Ann Card Anaesth*. 2016 Jan-Mar;19(1):154-5. doi: 10.4103/0971-9784.173037. PubMed PMID: 26750691.

76: Israni A, Chakrabarty B, Kumar A, Gulati S. Isolated Frontal Variant of Adrenoleukodystrophy. *Pediatr Neurol*. 2016 Jan;54:100-1. doi: 10.1016/j.pediatrneurol.2015.08.003. Epub 2015 Aug 12. PubMed PMID: 26459737.

77: Jadhav GR, Mittal P. Decoding of disinfection regime used in revascularization. *J Nat Sci Biol Med*. 2016 Jan-Jun;7(1):113-4. doi: 10.4103/0976-9668.175109. PubMed PMID: 27003985; PubMed Central PMCID: PMC4780159.

78: Jain D, Mallick SR, Singh V, Singh G, Mathur SR, Sharma MC. Napsin A Expression in Anaplastic Lymphoma Kinase-positive Diffuse Large B-Cell Lymphoma: A Diagnostic Pitfall. *Appl Immunohistochem Mol Morphol*. 2016 Jan 22. [Epub ahead of print] PubMed PMID: 26808134.

BACKGROUND: Napsin A is frequently used to classify a tumor of unknown origin as lung primary. Recent studies have shown that Napsin A positivity occurs in adenocarcinomas of nonpulmonary origin such as renal cell carcinomas, endometrial carcinomas, and clear cell carcinomas of ovary. Nonspecific reactivity has been reported with polyclonal Napsin A antibody. On the basis of an index case of



anaplastic lymphoma kinase-positive diffuse large B-cell lymphoma (ALK-DLBCL) expressing Napsin A, which was misdiagnosed as poorly differentiated carcinoma of pulmonary origin, we studied Napsin A expression in our archived cases of ALK-DLBCL.

**MATERIALS AND METHODS:** A total of 3 cases of ALK-DLBCL were studied for Napsin A immunohistochemistry along with typical immunophenotypic profile of these cases. Archived paraffin-embedded tissue blocks and cytology aspiration smears were used for morphologic interpretation and immunohistochemistry. Rabbit monoclonal Napsin A antibody has been used.

**RESULTS AND CONCLUSIONS:** All 3 cases were positive for Napsin A exhibiting strong cytoplasmic positivity. To the best of our knowledge, expression of monoclonal Napsin A in lymphomas has never been reported. ALK-DLBCL should be considered in the differential diagnosis when evaluating a Napsin A-positive tumor of poorly differentiated morphology and of unknown primary. As Napsin A has not been described in the lymphoid tissue development, the significance of Napsin A positivity in hematolymphoid neoplasms is unknown and warrants further investigation.

PMID: 26808134 [PubMed - as supplied by publisher]

79: Jain P, Rajeshwari SM, Singh J, Kumar T, Agarwal SP, Das P. Myofibrillar Myopathy Presenting as Neonatal Intestinal Pseudo-Obstruction: An Extremely Rare Entity. *Fetal Pediatr Pathol.* 2016;35(2):124-8. doi: 10.3109/15513815.2015.1131783. Epub 2016 Jan 30. PubMed PMID: 26828629.

**BACKGROUND:** Although the most common cause of neonatal intestinal pseudoobstruction (IP) is Hirschsprungs disease, rarely myofibrillar myopathy can cause the same.

**CASE REPORT:** This 31+4/7 male infant at autopsy had marked narrowing of the jejunum (0.9 cm long), and colon (7.0 cm long) markedly narrowed segments of the jejunum and large intestine, were noted respectively. Sections from these segments showed eosinophilic periodic acid Schiff stain and desmin positive cytoplasmic inclusion bodies in the myocytes. Transmission electron microscopy performed revealed the presence of abnormal granulofilamentous material around the atrophic sarcomeres, subsarcolemmal rod-shaped and globoid fibrillar inclusions in the intestinal, skeletal, and cardiac myocytes, suggesting a myofibrillar myopathy.

**CONCLUSION:** Pure phenotypic neonatal IP presentation in a myofibrillar myopathy is extremely rare and not reported in the literature. Along with other common causes of neonatal IP, neuromuscular causes should also be investigated.

80: Jain R, Verma A. Laboratory approach for diagnosis of toluene-based inhalant abuse in a clinical setting. *J Pharm Bioallied Sci.* 2016 Jan-Mar;8(1):18-22. doi: 10.4103/0975-7406.164293. Review. PubMed PMID: 26957863; PubMed Central PMCID: PMC4766772.

The steady increase of inhalant abuse is a great challenge for analytical toxicologists. This review describes an overview of inhalant abuse including the extent of the problem, types of products abused, modes of administration, pharmacology and effects of inhalants, the role of laboratory, interpretation of laboratory results and clinical considerations. Regular laboratory screening for inhalant abuse as well as other substance abuse and health risk behaviors must be a part of standard clinical care.

81: Jain R, Sharma N, Basu S, Iyer G, Ueta M, Sotozono C, Kannabiran C, Rathi VM, Gupta N, Kinoshita S, Gomes JA, Chodosh J, Sangwan VS. Stevens-Johnson syndrome: The role of an ophthalmologist. *Surv Ophthalmol.* 2016 Jan 30. pii: S0039-6257(16)00003-5. doi: 10.1016/j.survophthal.2016.01.004. [Epub ahead of print] Review. PubMed PMID: 26829569.

Stevens-Johnson syndrome (SJS) is an acute blistering disease of the skin and mucous membranes. Acute SJS leads to the acute inflammation of the ocular surface and chronic conjunctivitis. If not properly treated, it causes chronic cicatricial conjunctivitis and cicatricial lid margin abnormalities. Persistent

inflammation and ulceration of the ocular surface with cicatricial complications of the lids leads to chronic ocular sequelae, ocular surface damage, and corneal scarring. The destruction of the glands that secrete the tear film leads to a severe form of dry eye that makes the management of chronic SJS difficult. The option that is routinely used for corneal visual rehabilitation, keratoplasty, is best avoided in such cases. We describe the management strategies that are most effective during the acute and chronic stages of SJS. Although treatments for acute SJS involve immunosuppressive and immunomodulatory therapies, amniotic membrane transplantation is also useful. The options for visual rehabilitation in patients with chronic SJS are undergoing radical change. We describe the existing literature regarding the management of SJS and highlight recent advances in the management of this disorder.

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82: Jain S, Sharma N, Maharana PK, Agarwal T, Sinha R, Vajpayee RB. Comparative Evaluation of Use of 400- $\mu\text{m}$  and 350- $\mu\text{m}$  Microkeratome Head to Prepare Donor Tissue in Cases of Descemet Stripping Automated Endothelial Keratoplasty. Eye Contact Lens. 2016 Jan 22. [Epub ahead of print] PubMed PMID: 26808701.

**PURPOSE:** To compare the outcomes of 400- $\mu\text{m}$  microkeratome head with 350- $\mu\text{m}$  microkeratome head Descemet stripping automated endothelial keratoplasty (DSAEK) in a prospective comparative study.

**METHODS:** Twenty cases of pseudophakic bullous keratopathy were randomly allocated into two groups. Group 1 underwent slow, single-pass 400- $\mu\text{m}$  microkeratome head, whereas group 2 underwent the standard technique of DSAEK using a 350- $\mu\text{m}$  microkeratome head. The primary outcome measures were best-corrected visual acuity (BCVA) at 6 months.

**RESULTS:** Groups were comparable in baseline characteristics. The mean central graft thickness (GT) at 6 months in group 1 was significantly thinner than group 2 (90.44 $\pm$ 28.67 vs. 165.60 $\pm$ 62.74  $\mu\text{m}$ ; P=0.003). The BCVA and contrast sensitivity were significantly better in group 1 than in group 2 (BCVA: 0.34 $\pm$ 0.15 vs. 0.53 $\pm$ 0.19 logMAR units, P=0.02; contrast sensitivity: 1.48 $\pm$ 0.13 vs. 1.06 $\pm$ 0.22, P=0.001). A significant correlation was found between both postoperative BCVA and contrast sensitivity, with the postoperative GT using Spearman rho correlation analysis (R=0.534, P=0.01 for BCVA and R=-0.522, P=0.02 for contrast sensitivity). The percentage endothelial cell loss was comparable between the 2 groups at the last follow-up (P=0.3). No major complications were observed during the study period.

**CONCLUSIONS:** The use of a 400- $\mu\text{m}$  microkeratome head instead of 350- $\mu\text{m}$  head can improve the visual outcomes in DSAEK without increasing the risk of complications. The thickness of the DSAEK graft can affect the visual acuity and contrast sensitivity.

83: Jana M, Gupta AK. Intraluminal Duodenal Diverticulum Causing Upper GI Obstruction. Indian J Pediatr. 2016 Jan 28. [Epub ahead of print] PubMed PMID: 26820763.

84: Jayaraj P, Sen S, Bhattacharya T, Arora J, Yadav S, Chhoker V, Kumar A, Dhanaraj PS, Yvr KS, Verma M. Clinical relevance of cyclo-oxygenase 2 and peroxisome proliferator activated receptor  $\hat{1}^3$  in eyelid sebaceous gland carcinoma. Histopathology. 2016 Jan 21. doi: 10.1111/his.12932. [Epub ahead of print] PubMed PMID: 26791964.

**BACKGROUND:** Sebaceous Gland Carcinoma (SGC) is a malignancy associated with pilosebaceous unit and occurs at ocular or non ocular sites. Cyclooxygenases (COX) are enzymes crucial for lipid metabolism. COX-2 is over expressed in various cancers and its inhibition by nonsteroidal anti-inflammatory drugs is known to reduce the risk of many cancers. PPAR- $\gamma$  (Peroxisome Proliferator Activated Receptor  $\gamma$ ) is a transcription factor involved in adipogenesis. PPAR- $\gamma$  is a potential therapeutic target for treatment of malignant tumors including

colon carcinoma. The status of COX-2 and PPAR- $\gamma$  as prognostic markers in human eyelid SGC was explored.

**METHODS AND RESULTS:** The immunohistochemical expression of COX-2 and PPAR- $\gamma$  was evaluated in 31 SGC cases. Cytoplasmic expression of COX-2 was detected in 80% of the SGC cases and nuclear staining of PPAR- $\gamma$  in 87%. There was a significant correlation of PPAR- $\gamma$  expression with well differentiated SGC 19/21(90%) and COX-2 over-expression with reduced disease-free survival ( $P=0.0441$ , log rank analysis). COX-2 expression (OR 3.82, 95% CI 1.02-14.33,  $P=0.046$ ) and Lymph node metastasis (OR 0.17, 95% CI 0.04-0.65,  $P=0.009$ ) emerged as significant risk factors in the univariate analysis. However, COX-2 expression did not emerge as a significant independent prognostic factor on multivariate analysis.

**CONCLUSION:** COX-2 is a potential marker to identify high risk SGC patients. Expression of PPAR- $\gamma$  in eyelid SGC cases reflects terminal sebaceous differentiation. Inhibitors of COX-2 signalling and PPAR- $\gamma$  agonist are both prospective novel therapeutic targets in the management of eyelid SGC patients. This article is protected by copyright. All rights reserved.

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85: Jenum S, Dhanasekaran S, Lodha R, Mukherjee A, Kumar Saini D, Singh S, Singh V, Medigeshi G, Haks MC, Ottenhoff TH, Doherty TM, Kabra SK, Ritz C, Grewal HM. Approaching a diagnostic point-of-care test for pediatric tuberculosis through evaluation of immune biomarkers across the clinical disease spectrum. *Sci Rep.* 2016 Jan 4;6:18520. doi: 10.1038/srep18520. PubMed PMID: 26725873; PubMed Central PMCID: PMC4698754.

The World Health Organization (WHO) calls for an accurate, rapid, and simple point-of-care (POC) test for the diagnosis of pediatric tuberculosis (TB) in order to make progress "Towards Zero Deaths". Whereas the sensitivity of a POC test based on detection of *Mycobacterium tuberculosis* (MTB) is likely to have poor sensitivity (70-80% of children have culture-negative disease), host biomarkers reflecting the on-going pathological processes across the spectrum of MTB infection and disease may hold greater promise for this purpose. We analyzed transcriptional immune biomarkers direct ex-vivo and translational biomarkers in MTB-antigen stimulated whole blood in 88 Indian children with intra-thoracic TB aged 6 months to 15 years, and 39 asymptomatic siblings. We identified 12 biomarkers consistently associated with either clinical groups "upstream" towards culture-positive TB on the TB disease spectrum (CD14, FCGR1A, FPR1, MMP9, RAB24, SEC14L1, and TIMP2) or "downstream" towards a decreased likelihood of TB disease (BLR1, CD3E, CD8A, IL7R, and TGFBR2), suggesting a correlation with MTB-related pathology and high relevance to a future POC test for pediatric TB. A biomarker signature consisting of BPI, CD3E, CD14, FPR1, IL4, TGFBR2, TIMP2 and TNFRSF1B separated children with TB from asymptomatic siblings (AUC of 88%).

86: Jhanjee S. Putting tobacco harm reduction in perspective: is it a viable alternative? *Indian J Med Res.* 2016 Jan;143(1):25-9. doi: 10.4103/0971-5916.178583. PubMed PMID: 26997010.

87: Joshi P, Agarwal S, Singh G, Xess I, Bhowmik D. "A fine needle aspiration cytology in time saves nine" - cutaneous phaeohyphomycosis caused by *Exophiala jeanselmei* in a renal transplant patient: Diagnosis by fine needle aspiration cytology. *J Cytol.* 2016 Jan-Mar;33(1):55-7. doi: 10.4103/0970-9371.175529. PubMed PMID: 27011447; PubMed Central PMCID: PMC4782408.

Infections by dematiaceous fungi are an emerging group of infectious diseases worldwide with a variety of clinical presentations. Though generally localized, they can disseminate in immunocompromised settings, therefore, early diagnosis and prompt therapy can prevent significant morbidity and mortality in these patients. Fungi of genus *Exophiala* are common causative organisms; however, *Exophiala jeanselmei* (*E. jeanselmei*) has not yet been reported from environmental sources in India. We present here the case of a renal transplant recipient who presented with an innocuous lesion on the foot, diagnosed on fine needle aspiration cytology (FNAC) as phaeohyphomycosis, and promptly treated with

excision and antifungal therapy. To the best of our knowledge, this is the first case report from India of *E. jeanselmei* causing phaeohyphomycosis in a transplant recipient and highlights the role a cytopathologist can play in the timely management of such cases.

88: Kabra M, Gupta N. Galactosemia , A Not to be Missed Inborn Error of Metabolism. *Indian Pediatr.* 2016 Jan 8;53(1):19-20. PubMed PMID: 26840664.

89: Kabra SK. *Imaging of Pediatric Chest - An Atlas*: Ashu Seith Bhalla, Arun Kumar Gupta (eds), Manisha Jana (co-ed) : Published by Jaypee Brothers Medical Publishers (P) Ltd; First Edition: 2015; ISBN: 978-93-5152-781-7; Pages: 182. *Indian J Pediatr.* 2016 Jan;83(1):96. doi: 10.1007/s12098-015-1850-z. Epub 2015 Jul 25. PubMed PMID: 26747279.

90: Kandasamy D, Gamanagatti S, Gupta AK. Pediatric Interventional Radiology: Non-Vascular Interventions. *Indian J Pediatr.* 2016 Jan 14. [Epub ahead of print] PubMed PMID: 26762330.

Pediatric interventional radiology (PIR), which includes variety of procedures done under image guidance has emerged as an essential adjunct to various surgical and medical conditions, plays a significant role in the delivery of safe and effective care by reducing surgical risks, decreasing the length of hospital stay and reducing costs. The application of interventional techniques in children has been delayed over years as compared to adults due to lack of special hardwares/equipments, lack of adequately trained physicians and also the lack of awareness among the pediatric practitioners. This situation is gradually changing now owing to the advancements in technology. In this review, authors will discuss various non-vascular interventional procedures undertaken in pediatric patients.

91: Kapoor V, Aggarwal S, Das SN. 6-Gingerol Mediates its Anti Tumor Activities in Human Oral and Cervical Cancer Cell Lines through Apoptosis and Cell Cycle Arrest. *Phytother Res.* 2016 Apr;30(4):588-95. doi: 10.1002/ptr.5561. Epub 2016 Jan 7. PubMed PMID: 26749462.

6-Gingerol, a potent nutraceutical, has been shown to have antitumor activity in different tumors, although its mechanism of action is not well understood. In this study, we evaluated antitumor activities of 6-gingerol on human oral (SCC4, KB) and cervical cancer (HeLa) cell lines with or without wortmannin, rapamycin, and cisplatin. Tumor cell proliferation was observed using 3-(4,5-dimethylthiazol-2-yl)-5-(3-carboxymethoxyphenyl)-2-(4-sulfophenyl)-2H tetrazolium, inner salt assay, cell cycle analysis by propidium iodide labeling and flow cytometry, apoptosis by Annexin-V binding assay, and caspase activity by chemiluminescence assay. 6-Gingerol showed dose-dependent cytotoxicity in all three cell lines. Combinations of 6-gingerol with wortmannin and cisplatin showed additive effects, while with rapamycin, it showed 50% cytotoxicity that was equivalent to IC50 of 6-gingerol alone. Treatment with 6-gingerol resulted in G2-phase arrest in KB and HeLa cells and S-phase arrest in SCC4 cells. 6-Gingerol, wortmannin, and rapamycin treatment showed almost two-fold higher expression of caspase 3 in all cell lines. The results imply that 6-gingerol

either alone or in combination with PI-3K inhibitor and cisplatin may provide

better therapeutic effects in oral and cervical carcinoma. Thus, 6-gingerol appears to be a safe and potent chemotherapeutic/chemopreventive compound acting through cell cycle arrest and induction of apoptosis in human oral and cervical tumor cells. Copyright © 2016 John Wiley & Sons, Ltd.

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92: Kaur M, Chandran DS, Jaryal AK, Bhowmik D, Agarwal SK, Deepak KK. Baroreflex

dysfunction in chronic kidney disease. *World J Nephrol.* 2016 Jan 6;5(1):53-65. doi: 10.5527/wjn.v5.i1.53. Review. PubMed PMID: 26788464; PubMed Central PMCID: PMC4707168.

Chronic kidney disease (CKD) patients have high cardiovascular mortality and morbidity. The presence of traditional and CKD related risk factors results in exaggerated vascular calcification in these patients. Vascular calcification is associated with reduced large arterial compliance and thus impaired baroreflex sensitivity (BRS) resulting in augmented blood pressure (BP) variability and hampered BP regulation. Baroreflex plays a vital role in short term regulation of BP. This review discusses the normal baroreflex physiology, methods to assess baroreflex function, its determinants along with the prognostic significance of assessing BRS in CKD patients, available literature on BRS in CKD patients and the probable patho-physiology of baroreflex dysfunction in CKD.

93: Kedia S, Kurrey L, Pratap Mouli V, Dhingra R, Srivastava S, Pradhan R, Sharma R, Das P, Tiwari V, Makharia G, Ahuja V. Frequency, natural course and clinical significance of symptomatic terminal ileitis. *J Dig Dis.* 2016 Jan;17(1):36-43. doi: 10.1111/1751-2980.12307. PubMed PMID: 26670338.

**OBJECTIVE:** Treatment guidelines for managing symptomatic terminal ileitis (TI) are lacking. We followed up a cohort of symptomatic TI patients to conduct an algorithm for their management.

**METHODS:** Consecutive patients with symptomatic TI from July 2007 to October 2013 were included. Symptomatic TI was defined as isolated terminal ileum ulceration (superficial or deep) and/or nodularity with abdominal symptoms. Patients were diagnosed either with intestinal tuberculosis (ITB) or Crohn's disease (CD) using standard criteria or received only symptomatic treatment according to their clinical manifestations, endoscopic, imaging and histological (specific to ITB/CD vs non-specific) features. Based upon above findings, an algorithm was conducted to differentiate non-specific TI from those with specific etiology (ITB/CD).

**RESULTS:** In all, 63/898 (7.0%) patients with ulcero-constrictive intestinal disease had TI, of which 45 (26 males and 19 females) were included. Fever, diarrhea, weight loss, deep ulcers, and ileal thickening were more frequently observed in patients with ITB or CD having specific treatments compared with those receiving symptomatic treatments. All patients with deep ulcers and those with superficial ulcer and specific histology had ITB/CD. In patients with

superficial ulcers and/or nodularity and non-specific inflammation (n=31), the

absence of fever, diarrhea, GI bleeding or weight loss had a negative predictive value of 92% in excluding ITB/CD.

**CONCLUSIONS:** In symptomatic TI patients with superficial ulcers and a non-specific histology, the absence of fever, diarrhea, GI bleeding or weight loss rules out the possibility of significant diagnoses like ITB/CD.

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94: Khan IA, Pilli S, A S, Rampal R, Chauhan SK, Tiwari V, Mouli VP, Kedia S, Nayak B, Das P, Makharia GK, Ahuja V. Prevalence and Association of *Mycobacterium avium* subspecies paratuberculosis with Disease Course in Patients with Ulcero-Constrictive Ileocolonic Disease. *PLoS One.* 2016 Mar 28;11(3):e0152063. doi: 10.1371/journal.pone.0152063. eCollection 2016. PubMed PMID: 27019109; PubMed Central PMCID: PMC4809507.

**BACKGROUND:** Association of *Mycobacterium avium* subspecies paratuberculosis (MAP) and Crohn's disease (CD) has been controversial due to contradictory reports. Therefore, we determined the prevalence of MAP in patients with CD and intestinal tuberculosis (ITB) and its association with clinical course.

**METHODOLOGY:** Blood and intestinal biopsies were taken from 69 CD, 32 ITB patients

and 41 patients with haemorrhoidal bleed who served as controls. qPCR targeting of MAP-specific IS900 gene was used to detect the presence of MAP DNA. qPCR results were further validated by sequencing. Immunohistochemistry (IHC) was used to detect the presence of MAP antigen in biopsy specimens. CD and ITB patients were followed-up for disease course and response to therapy.

**PRINCIPAL FINDINGS:** The frequency of MAP-specific DNA in biopsies by qPCR was significantly higher in CD patients (23.2%,  $p = 0.03$ ) as compared to controls (7.3%). No significant difference in intestinal MAP presence was observed between ITB patients (12.5%,  $p = 0.6$ ) and controls (7.3%). MAP presence in blood of CD patients was 10.1% as compared to 4.9% in controls while no patients with ITB were found to be positive ( $p = 0.1$ ). Using IHC for detection of MAP antigen, the prevalence of MAP in CD was 2.9%, 12.5% in ITB patients and 2.4% in controls. However, long-term follow-up of the patients revealed no significant associations between clinical characteristics and treatment outcomes with MAP positivity.

**CONCLUSION:** We report significantly high prevalence of MAP in intestinal biopsies of CD patients. However, the presence of MAP does not affect the disease course and treatment outcomes in either CD or ITB patients.

95: Khare A, Joshi D, Majumdar K, Gupta V, Goel G, Kapoor N. Cytological findings of odontogenic myxofibroma: A diagnostic dilemma. *Diagn Cytopathol.* 2016 Apr;44(4):329-33. doi: 10.1002/dc.23420. Epub 2016 Jan 23. PubMed PMID: 26801006.

Odontogenic myxofibroma represents a rare slow-growing benign neoplasm, which usually occurs in the second and third decades of life and rarely in children or adults over 50 years of age. Myxomas in general represent from 2.3% to 17.7% of all odontogenic tumors, and myxofibromas represent a small number of all myxomas. Limited evidence is present in literature regarding the cytological diagnosis of odontogenic myxoma/myxofibroma. We hereby report the cytomorphological features of a histologically confirmed case of odontogenic myxofibroma and the pitfalls of the cytological diagnosis. A painless jaw swelling in a young boy was aspirated. Scanty mucoid material was obtained. Cytology Smears were moderately cellular and showed a population comprising predominantly of singly scattered plump to fusiform cells with bipolar cytoplasmic processes showing mild to moderate atypia embedded within dense myxoid matrix and another population of cells arranged in clusters. Case was interpreted as low grade mesenchymal tumor. Subsequent biopsy confirmed it as odontogenic myxofibroma arising in a odontogenic keratocyst. Precise interpretation of intraosseous jaw lesions FNAC may not always be possible, but an attempt should be made to broadly classify the lesion as an inflammatory lesion, cystic lesion, giant cell lesion, fibro-osseous lesion or as an odontogenic tumor. If dual population of odontogenic epithelium and mesenchymal cells embedded in myxoid matrix are identified in such aspirates, a possibility of myxoid odontogenic tumor may be suggested. Triple correlation of cytological, clinical and radiological findings can guide the surgeon for taking appropriate therapeutic decisions. *Diagn. Cytopathol.* 2016;44:329-333. © 2016 Wiley Periodicals, Inc.

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96: Khokhar S, Gupta S, Gogia V, Nayak B. Salmon pink patch sign: Diagnosing persistent fetal vasculature. *Oman J Ophthalmol.* 2016 Jan-Apr;9(1):68-9. doi: 10.4103/0974-620X.176128. PubMed PMID: 27013836; PubMed Central PMCID: PMC4785716.

97: Kohanim S, Palioura S, Saeed HN, Akpek EK, Amescua G, Basu S, Blomquist PH, Bouchard CS, Dart JK, Gai X, Gomes JA, Gregory DG, Iyer G, Jacobs DS, Johnson AJ, Kinoshita S, Mantagos IS, Mehta JS, Perez VL, Pflugfelder SC, Sangwan VS, Sippel KC, Sotozono C, Srinivasan B, Tan DT, Tandon R, Tseng SC, Ueta M, Chodosh J. Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis - A Comprehensive Review and Guide to Therapy. I. Systemic Disease. *Ocul Surf.* 2016 Jan;14(1):2-19. doi: 10.1016/j.jtos.2015.10.002. Epub 2015 Nov 5. Review. PubMed PMID: 26549248.

The intent of this review is to comprehensively appraise the state of the art with regard to Stevens Johnson syndrome (SJS) and toxic epidermal necrolysis

(TEN), with particular attention to the ocular surface complications and their management. SJS and TEN represent two ends of a spectrum of immune-mediated, dermatobullous disease, characterized in the acute phase by a febrile illness followed by skin and mucous membrane necrosis and detachment. The widespread keratinocyte death seen in SJS/TEN is rapid and irreversible, and even with early and aggressive intervention, morbidity is severe and mortality not uncommon. We have divided this review into two parts. Part I summarizes the epidemiology and immunopathogenesis of SJS/TEN and discusses systemic therapy and its possible benefits. We hope this review will help the ophthalmologist better understand the mechanisms of disease in SJS/TEN and enhance their care of patients with this complex and often debilitating disease. Part II (April 2016 issue) will focus on ophthalmic manifestations.

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98: Krishnan A. Community Medicine in India - Which Way Forward? *Indian J Community Med.* 2016 Jan-Mar;41(1):5-10. doi: 10.4103/0970-0218.170956. PubMed PMID: 26917866; PubMed Central PMCID: PMC4746954.

Today, the Community Medicine professionals in India feel both "confused" and "threatened" by the mushrooming of schools of public health and departments of family medicine. The phenomenon of identity crisis and low-self esteem is not a recent one, nor is it restricted to India. The disciplines of community medicine and public health have evolved differently and despite some overlaps have differences especially in the need for clinical training. The core of the issue is that while the community medicine fraternity is keen to retain its clinical tag, what differentiates it from clinicians is the use of public health approach. I believe the strength of community medicine is that it bridges the gap between traditional fields of public health and clinical medicine and brings community perspective into health. The perceived threat from non-medical persons led public health is largely a result of us undervaluing our strength and our inability to foster partnership on equal footing with non-clinicians. While departments of community medicine have a fully functional rural or urban field practice area used for training at primary level care, these can serve as an excellent platform for training in secondary level care required for family medicine. National needs dictate that all three disciplines are required for improvement of population health, whether these are housed together or separately can be left to individual institutions to decide as long as they enable collaborations between them. We need to strengthen community medicine and market it appropriately to ministries of health.

99: Kumar D, Chandra R, Mathur M, Samdariya S, Kapoor N. Vaccine hesitancy: understanding better to address better. *Isr J Health Policy Res.* 2016 Feb 1;5:2. doi: 10.1186/s13584-016-0062-y. eCollection 2016. PubMed PMID: 26839681; PubMed Central PMCID: PMC4736490.

Vaccine hesitancy is an emerging term in the socio-medical literature which describes an approach to vaccine decision making. It recognizes that there is a continuum between full acceptance and outright refusal of some or all vaccines and challenges the previous understanding of individuals or groups, as being either anti-vaccine or pro-vaccine. The behaviours responsible for vaccine hesitancy can be related to confidence, convenience and complacency. The causes of vaccine hesitancy can be described by the epidemiological triad i.e. the complex interaction of environmental- (i.e. external), agent- (i.e. vaccine) and host (or parent)- specific factors. Vaccine hesitancy is a complex and dynamic issue; future vaccination programs need to reflect and address these context-specific factors in both their design and evaluation. Many experts are of the view that it is best to counter vaccine hesitancy at the population level. They believe that it can be done by introducing more transparency into policy decision-making before immunization programs, providing up-to-date information to the public and health providers about the rigorous procedures undertaken before introduction of new vaccines, and through diversified post-marketing surveillance of vaccine-related events.

100: Kumar K, Khanna V, Dhua AK, Bhatnagar V. Congenital diaphragmatic hernia with recurrent gastric volvulus and pulmonary sequestration: A "chance" combination. *J Indian Assoc Pediatr Surg.* 2016 Jan-Mar;21(1):38-40. doi: 10.4103/0971-9261.164640. PubMed PMID: 26862295; PubMed Central PMCID: PMC4721128.

Congenital diaphragmatic hernia (CDH) is a known cause of secondary gastric volvulus. It is also known that bronchopulmonary sequestration (BPS) may be associated with CDH. An extremely rare case of BPS associated with gastric volvulus in a girl with left sided CDH is being reported.

101: Kumar P, Jithesh V, Vij A, Gupta SK. Need for a hands-on approach to hand-offs: A study of nursing handovers in an Indian Neurosciences Center. *Asian J Neurosurg.* 2016 Jan-Mar;11(1):54-9. doi: 10.4103/1793-5482.165776. PubMed PMID: 26889281; PubMed Central PMCID: PMC4732244.

CONTEXT: Standardized nursing handovers have been known to improve outcome, reduce error, and enhance communication. Few, if any, studies on nursing handovers have been conducted in the India.

AIM: The aim was to study nursing handover practices in a Neurosciences Center in India.

SUBJECTS AND METHODS: This study was conducted in a 200 bedded public sector Neurosciences Center in New Delhi, to assess nursing handover practices across five wards, all shifts, weekdays, and weekends using a pretested checklist. Ten elements were observed under the categories of time, duration, process, nurse interaction, and patient communication.

STATISTICAL ANALYSIS: Analysis of variance, Z-test, and Spearman's correlation coefficient.

RESULTS: Totally, 525 nursing handovers revealed varying compliance levels among (63%) time, place (76%), process (82%), staff interaction (53%), and patient communication (44%) related elements. Poorer compliance was seen in morning shifts and weekends; the difference being statistically significant. Bedside handovers were more frequent during weekends and night shifts and were positively correlated with increased staff interaction and patient communication and negatively related to handover duration. Though nurses showed better adherence to process related elements, background patient information, and assessment was explained less frequently. Differences between wards were insignificant except in categories of nurse interaction and patient communication which was better in the neurosurgery than neurology wards.

CONCLUSION: Study revealed a need for a system change and standardization of handovers. Greater administrative commitment, use of technology, training, and leadership development will aid in continuity of care, promote patient safety, and ensure better outcomes.

102: Kumar P, Kumar A, Misra S, Faruq M, Vivekanandhan S, Srivastava AK, Prasad K. Association between lymphotoxin alpha (-252 A/G and -804 C/A) gene polymorphisms and risk of stroke in North Indian population: a hospital-based case-control study. *Int J Neurosci.* 2016 Jan 20:1-9. [Epub ahead of print] PubMed PMID: 26707826.

PURPOSE: Lymphotoxin alpha (LTA), a proinflammatory cytokine, plays an important role in promoting atherosclerosis which is an independent risk factor for stroke. Recent genetic studies have suggested that polymorphisms in the LTA gene, which affect its expression and biological function, may contribute to the development of stroke. The aim of this case-control study was to determine the association between LTA (-252 A/G and -804 C/A) gene polymorphisms and risk of stroke.

METHODS: Genotyping was determined by using SNaPshot method for 250 ischemic stroke (IS) patients, 250 age and sex matched IS free controls, 100 intracerebral hemorrhage (ICH) patients and 100 age and sex matched ICH free controls. Conditional logistic regression analysis with adjusting multiple demographic and risk factor variables was used to calculate the strength of association between LTA (-252 A/G and -804 C/A) gene polymorphisms and risk of stroke. The linkage disequilibrium (LD) was analyzed by using HaploView 4.2 software.



**RESULTS:** The distribution of LTA (-252 A/G and -804 C/A) genotypes was consistent with Hardy-Weinberg equilibrium. Adjusted conditional logistic regression analysis showed no significant association between LTA (-252 A/G and -804 C/A) gene polymorphisms and risk of both IS and ICH. Based on Trial of Org 10172 in Acute Stroke Treatment (TOAST) classification, a significant association between LTA -252 A/G gene polymorphism and small vessel disease subtype of IS under dominant model (OR, 2.06; 95% CI, 1.03-4.12; p value 0.04) with the risk of IS was observed. No LD was observed for both single nucleotide polymorphisms (SNPs) in north Indian population.

**CONCLUSION:** Neither -252 G/A nor -804 C/A polymorphism of the LTA gene was found to be associated with overall stroke as well as any subtype of IS excluding SVD in North Indian population.

103: Kumar P, Kathuria P, Nair P, Prasad K. Prediction of Upper Limb Motor Recovery after Subacute Ischemic Stroke Using Diffusion Tensor Imaging: A Systematic Review and Meta-Analysis. *J Stroke*. 2016 Jan;18(1):50-9. doi: 10.5853/jos.2015.01186. Epub 2016 Jan 29. Review. PubMed PMID: 26846758; PubMed Central PMCID: PMC4747076.

Early evaluation of the pyramidal tract using Diffusion Tensor Imaging (DTI) is a prerequisite to decide the optimal treatment or to assess appropriate rehabilitation. The early predictive value of DTI for assessing motor and functional recovery in ischemic stroke (IS) has yielded contradictory results. The purpose is to systematically review and summarize the current available literature on the value of Fractional Anisotropy (FA) parameter of the DTI in predicting upper limb motor recovery after sub-acute IS. MEDLINE, PubMed, EMBASE, Google Scholar and Cochrane CENTRAL searches were conducted from January 1, 1950, to July 31, 2015, which was supplemented with relevant articles identified in the references. Correlation between FA and upper limb motor recovery measure was done. Heterogeneity was examined using Higgins I-squared, Tau-squared. Summary of correlation coefficient was determined using Random Effects model. Out of 166 citations, only eleven studies met the criteria for inclusion in the systematic review and six studies were included in the meta-analysis. A random effects model revealed that DTI parameter FA is a significant predictor for upper limb motor recovery after sub-acute IS [Correlation Coefficient=0.82; 95% Confidence Interval-0.66 to 0.90, P value<0.001]. Moderate heterogeneity was observed (Tau-squared=0.12, I-squared=62.14). The studies reported so far on correlation between DTI and upper limb motor recovery are few with small sample sizes. This meta-analysis suggests strong correlation between DTI parameter FA and upper limb motor recovery. Well-designed prospective trials embedded with larger sample size are required to establish these findings.

104: Kumar R, Nadarajah J, Kumar A, Gamanagatti S. Misery of neurosurgeon: Gauzoma causing foreign body granuloma-role of radiologist. *Asian J Neurosurg*. 2016 Jan-Mar;11(1):74-5. doi: 10.4103/1793-5482.165797. PubMed PMID: 26889295; PubMed Central PMCID: PMC4732258.

Materials used in neurosurgery to achieve hemostasis may be of resorbable or nonresorbable substance and may cause foreign body granuloma if left at the operative site. Foreign body granuloma depending on clinical history may be indistinguishable from an abscess, resolving infarction, and hematoma. Here we present two cases, who had decompressive craniectomy following road traffic accident. Follow-up computerized tomography (CT) scan revealed hyperdense lobulated lesion with peripheral rim enhancement. On magnetic resonance imaging (MRI), lesions were predominantly hypointense on T1-weighted images, and hyperintense on T2-weighted images and showed a lack of restricted diffusion. In view of recent craniectomy and imaging findings diagnosis of foreign body granuloma was made. Both patients underwent surgery, intraoperatively gauze pieces were retrieved from lesions which confirmed preoperative diagnosis. The combination of CT and MRI can diagnose foreign body granuloma, especially in trauma settings. Thus, we can help the surgeon by providing the probable diagnosis for proper management.

105: Kumar R. Special Techniques and Technical Advances in PET/Computed

Tomographic Imaging. PET Clin. 2016 Jan;11(1):xi-xiii. doi: 10.1016/j.cpet.2015.10.006. PubMed PMID: 26590447.

106: Kumar R, Mukherjee A, Mittal BR. Special Techniques in PET/Computed Tomography Imaging for Evaluation of Head and Neck Cancer. PET Clin. 2016 Jan;11(1):13-20. doi: 10.1016/j.cpet.2015.07.006. Epub 2015 Aug 28. Review. PubMed PMID: 26590440.

PET with fluorodeoxyglucose F 18 (FDG)/computed tomography (CT) imaging has significantly improved the management of head and neck cancer. FDG, however, is not tumor-specific and various image interpretation pitfalls may occur because of false-positive and -negative causes of FDG uptake. Routine imaging examination of head and neck malignancies does not yield all of the necessary data, even with the most advanced imaging technique. Specific interventions, such as use of different dynamic maneuvers and pharmacologic interventions, may provide useful information about the lesion. This article reviews the use of special techniques in FDG PET/CT imaging and whole-body FDG PET/CT imaging for evaluation of head and neck cancer.

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107: Kumar R, Gupta YK, Singh S, Arunraja S. Picrorhiza kurroa Inhibits Experimental Arthritis Through Inhibition of Pro-inflammatory Cytokines, Angiogenesis and MMPs. Phytother Res. 2016 Jan;30(1):112-9. doi: 10.1002/ptr.5509. Epub 2015 Nov 11. PubMed PMID: 26556014.

The present study investigates the anti-arthritic activity of Picrorhiza kurroa (PK), on formaldehyde and adjuvant-induced arthritis (AIA) in rat. Administration of Picrorhiza kurroa rhizome extract (PKRE) significantly inhibited joint inflammation in both animal models. In AIA-induced arthritic rat, treatment with PKRE considerably decreased synovial expression of interleukin-1 $\beta$  (IL-1 $\beta$ ), interleukin-6 (IL-6), tumor necrosis factor receptor-1 (TNF-R1) and vascular endothelial growth factor as compared with control. The anti-arthritic activity was found to be well substantiated with significant suppression of oxidative and inflammatory markers as there was decreased malonaldehyde, Nitric oxide, tumor necrosis factor alpha levels accompanied with increased glutathione and superoxide dismutase, catalase activities. Additionally, PKRE significantly inhibited the expression of degrading enzymes, matrix metalloproteinases-3 and matrix metalloproteinases-9 in AIA-induced arthritic rat. Histopathology of paw tissue displayed decreased inflammatory cell infiltration as compared with control. Taken together, these results demonstrated the anti-arthritic activity of PKRE against experimental arthritis, and the underlying mechanism behind this efficacy might be mediated by inhibition of inflammatory mediators and angiogenesis, improvement of the synovium redox status and decreased expression of matrix metalloproteinases. Copyright © 2015 John Wiley & Sons, Ltd.

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108: Kumar S, Singh S, Kumar N, Dube SK. Video laryngoscope: A boon for airway management in severe facial trauma. Indian J Dent Res. 2016 Jan-Feb;27(1):106-7. doi: 10.4103/0970-9290.179841. PubMed PMID: 27054871.

We report the use of video laryngoscope for the exchange of orotracheal tube to nasotracheal tube needed for mandibular repair in a case of oromaxillofacial injury.

109: Kumar V, Takkar B, Chandra P, Kumar A. Macular infarction in a patient with Toxoplasma retinochoroditis. BMJ Case Rep. 2016 Jan 11;2016. pii: bcr2015212596. doi: 10.1136/bcr-2015-212596. PubMed PMID: 26759399.

Toxoplasma retinochoroditis is one of the commonest causes of infectious posterior uveitis and may lead to occlusive retinitis. We present a case of a patient with Toxoplasma retinochoroditis who developed macular infarction after

initial improvement on pharmacotherapy. The potential aetiology and outcome are described.

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110: Lodha R. Nutritional Rehabilitation of Children with Severe Acute Malnutrition. *Indian J Pediatr.* 2016 Jan;83(1):1-2. doi: 10.1007/s12098-015-1875-3. Epub 2015 Sep 8. PubMed PMID: 26346945.

111: Madan K, Dhooria S, Sehgal IS, Mohan A, Mehta R, Pattabhiraman V, Goyal R, Agarwal R. A Multicenter Experience With the Placement of Self-Expanding Metallic Tracheobronchial Y Stents. *J Bronchology Interv Pulmonol.* 2016 Jan;23(1):29-38. doi: 10.1097/LBR.0000000000000250. PubMed PMID: 26705009.

**BACKGROUND:** Deployment of a bifurcation (Y) stent is often required in patients with airway obstruction or fistulization near the tracheal carina. Herein, we describe our experience with placement of self-expanding metallic Y stents. **METHODS:** This was a retrospective analysis of data of consecutive subjects who underwent placement of self-expanding metallic Y stent over 2 years at 6 different centers. We describe the technique, complications, and outcomes of metallic Y stent placement at the tracheal carina. **RESULTS:** Thirty-eight subjects (25 men) with a mean age of 54.8 years underwent Y stent placement. The most common underlying disease was carcinoma of the esophagus (65.8%). The most common indication for stent insertion was central airway obstruction in 30 (78.9%) subjects followed by airway-esophageal fistula. Respiratory failure was present in 17 (44.7%) subjects at admission. The Y stent was deployed using either the rigid (n=32) or the flexible (n=6) bronchoscope, and was successfully placed in 37 of the 38 (97.4%) subjects. There was rapid improvement in symptoms and subsequent resolution of respiratory failure after stent placement. There was no periprocedural mortality and few stent-related complications. On follow-up at 12 weeks, 18 patients had died due to progression of the underlying disease. **CONCLUSION:** The insertion of a metallic Y stent results in immediate palliation of malignant airway obstruction or airway fistulization near the tracheal carina with rapid improvement of symptoms.

112: Madan NK, Madan K, Jain D, Walia R, Mohan A, Hadda V, Mathur S, Iyer VK, Khilnani GC, Guleria R. Utility of conventional transbronchial needle aspiration with rapid on-site evaluation (c-TBNA-ROSE) at a tertiary care center with endobronchial ultrasound (EBUS) facility. *J Cytol.* 2016 Jan-Mar;33(1):22-6. doi: 10.4103/0970-9371.175493. PubMed PMID: 27011437; PubMed Central PMCID: PMC4782398.

**BACKGROUND:** Conventional transbronchial needle aspiration (c-TBNA) is an underutilized bronchoscopic modality. Endobronchial ultrasound (EBUS) guided-TBNA though efficacious is an expensive modality, facilities of which are available at only limited centers. c-TBNA is cost-effective and has potential for wide utilization especially in resource-limited settings. Rapid on-site evaluation (ROSE) improves the yield of c-TBNA. **MATERIALS AND METHODS:** A retrospective review of the bronchoscopy records (May 2012 to July 2014) was performed. The patients who underwent c-TBNA with ROSE were included in the study and their clinical details were extracted. Convex probe EBUS-TBNA was being regularly performed during the study period by the operators performing c-TBNA. **RESULTS:** c-TBNA with ROSE was performed in 41 patients with mean age of 42.4 (16.2) years. The most frequently sampled node stations (>90% patients) were the subcarinal and lower right paratracheal. Representative samples could be obtained in 33 out of the 41 patients (80.4%). c-TBNA was diagnostic in 32 [tuberculosis (TB)-8, sarcoidosis-9, and malignancy-15] patients out of the 41 patients. The overall diagnostic yield (sensitivity) of c-TBNA with ROSE was 78%. Mean procedure duration was 18.4 (3.1) min and there were no procedural complications. **CONCLUSION:** c-TBNA with ROSE is a safe, efficacious, and cost-effective bronchoscopic modality. When it was performed by operators routinely performing

EBUS-TBNA, diagnostic yields similar to that of EBUS-TBNA can be obtained. Even at the centers where EBUS facilities are available, c-TBNA should be routinely performed.

113: Madhusudhan KS, Srivastava DN, Dash NR, Venuthruimilli A, Sharma R, Gamanagatti S, Gupta AK. Alveolar Echinococcosis of the Liver: A Diagnostic Problem in a Nonendemic Area. *Curr Probl Diagn Radiol*. 2016 Jan-Feb;45(1):80-3. doi: 10.1067/j.cpradiol.2014.09.001. Epub 2014 Nov 6. PubMed PMID: 25482390.

Alveolar echinococcosis is a parasitic disease primarily invading the liver. Owing to its aggressive nature, it invades the adjacent structures and can even metastasize to distant organs. The appearance of hepatic involvement on computed tomographic scan is characteristic, but not specific, with areas of calcification seen within a hypoenhancing mass. Although magnetic resonance imaging may better define the extent of the disease, it often misleads the radiologist, especially if the lesion is devoid of cystic component(s) and if it occurs in nonendemic areas. Knowledge of the imaging appearance may prompt serological evaluation and aid in making an early diagnosis and planning appropriate treatment of this uncommon fatal disease, especially in nonendemic areas.

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114: Maharana PK, Sharma N, Das S, Agarwal T, Sen S, Prakash G, Vajpayee RB. Salzmann's Nodular Degeneration. *Ocul Surf*. 2016 Jan;14(1):20-30. doi: 10.1016/j.jtos.2015.08.006. Epub 2015 Oct 17. Review. PubMed PMID: 26462409.

Salzmann's nodular degeneration (SND) is a rare, noninflammatory, slowly progressive degenerative disease of the cornea that is characterized by the appearance of nodular bluish gray opacities that vary in number and size. It is usually bilateral; most commonly occurring in people aged 50-60 years old, with a female preponderance; and often associated with a history of prior corneal inflammation. The clinical features usually depend on the location of the nodules. Generally, the nodules of SND are bluish white to gray in color, 1-2 mm in size, and round, conical or prismatic in shape. The overlying Bowman's layer is usually absent from the nodular areas and is partially replaced by granular Periodic Acid Schiff-positive eosinophilic material resembling the basement membrane. Diagnostic investigations include ultrasonic pachymetry, anterior segment optical coherence tomography, ultrasound biomicroscopy, and confocal microscopy. The majority of patients respond well to conservative management with topical lubricants; severe cases may require surgical intervention. The various surgical modalities described include superficial keratectomy, which may be combined with phototherapeutic keratectomy and keratoplasty. Various modifications of these procedures include the use of alcohol-assisted epithelial delamination, intraoperative mitomycin-C or amniotic membrane transplantation to make the procedure easy, reduce the risk of recurrence and improve postoperative comfort. Recurrences are rarely reported; overall, the visual prognosis following treatment is optimal.

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115: Maharana PK, Dubey A, Jhanji V, Sharma N, Das S, Vajpayee RB. Management of advanced corneal ectasias. *Br J Ophthalmol*. 2016 Jan;100(1):34-40. doi: 10.1136/bjophthalmol-2015-307059. Epub 2015 Aug 20. Review. PubMed PMID: 26294106.

Corneal ectasias include a group of disorders characterised by progressive thinning, bulging and distortion of the cornea. Keratoconus is the most common disease in this group. Other manifestations include pellucid marginal degeneration, Terrien's marginal degeneration, keratoglobus and ectasias following surgery. Advanced ectasias usually present with loss of vision due to high irregular astigmatism. Management of these disorders is difficult due to the peripheral location of ectasia and associated severe corneal thinning. Newer contact lenses such as scleral lenses are helpful in a selected group of patients. A majority of these cases requires surgical intervention. This review

provides an update on the current treatment modalities available for management of advanced corneal ectasias.

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116: Maitra S, Bhattacharjee S, Khanna P, Baidya DK. In Reply. *Anesthesiology*. 2016 Jan;124(1):247-8. doi: 10.1097/ALN.0000000000000931. PubMed PMID: 26669996.

117: Maitra S, Som A, Baidya DK, Bhattacharjee S. Comparison of Ondansetron and Dexamethasone for Prophylaxis of Postoperative Nausea and Vomiting in Patients Undergoing Laparoscopic Surgeries: A Meta-Analysis of Randomized Controlled Trials. *Anesthesiol Res Pract*. 2016;2016:7089454. doi: 10.1155/2016/7089454. Epub 2016 Mar 27. Review. PubMed PMID: 27110238.

**Background.** Postoperative nausea and vomiting (PONV) is a significant complication after laparoscopic surgeries. Ondansetron and dexamethasone are most commonly used drugs for PONV prophylaxis. Comparisons of these two drugs have not been systematically reviewed till date. **Methods.** PubMed, PubMed Central, and CENTRAL databases were searched with the following words: "dexamethasone," "ondansetron," "laparoscopy," and "PONV" to identify randomized trials that compared ondansetron and dexamethasone for PONV prophylaxis after laparoscopic surgeries. **Results.** Data of 592 patients from 7 RCTs have been included in this

meta-analysis. Incidence of postoperative nausea at 4-6h is significantly lower

when dexamethasone was used instead of ondansetron ( $p = 0.04$ ; OR 0.49, 95% CI 0.24-0.98, M-H fixed). Incidence of nausea is similar at 24 hours ( $p = 0.08$ , OR

0.71, 95% CI 0.48, 1.05; M-H fixed); vomiting is also similar at 4-6h ( $p = 0.43$ ,

OR 1.27, 95% CI 0.70-2.27; M-H fixed) and also at 24h ( $p = 0.46$ , OR 0.92, 95% CI

0.73, 1.16; M-H fixed). **Conclusion.** Dexamethasone is superior to ondansetron in

preventing postoperative nausea after 4-6h of laparoscopic surgeries. However,

both the drugs are of equal efficacy in preventing postoperative vomiting up to

24h after surgery. However, results should be interpreted with caution due to

clinical heterogeneity in the included studies.

118: Majumdar A, Misra P, Sharma S, Kant S, Krishnan A, Pandav CS. Prevalence of nonalcoholic fatty liver disease in an adult population in a rural community of Haryana, India. *Indian J Public Health*. 2016 Jan-Mar;60(1):26-33. doi: 10.4103/0019-557X.177295. PubMed PMID: 26911214.

**BACKGROUND:** Though nonalcoholic fatty liver disease (NAFLD) is increasingly becoming prevalent in the Indian population, knowledge regarding the burden and risk factors of NAFLD is limited, more so from rural areas. This study was thus

conducted to estimate the prevalence of NAFLD among adults in a rural community of Haryana, India and to measure the association of diet, physical activity, and other selected risk factors with NAFLD.

**MATERIALS AND METHODS:** The present study was conducted in a rural community of Haryana, India among resident adults  $\geq 35$  years of age. Eight out of 28 villages were selected by probability proportion to size sampling. The number of eligible and consenting participants randomly selected from each village was 27. Out of 216 participants thus recruited, 184 participants reported for undergoing ultrasonography (USG) of the liver, anthropometry, blood pressure recording, and blood sample collection. Finally, 176 participants were analyzed.

**RESULTS:** Prevalence of NAFLD was 30.7%. There was no significant difference in the calorie intake and average total physical activity between participants with and without NAFLD. On multivariate analysis, hypertension [adjusted odds ratio (OR): 2.3, 95% confidence interval (CI): 1.1-5.0,  $P = 0.03$ ] and an increased waist circumference (adjusted OR: 4.9, 95% CI: 1.5-7.0,  $P < 0.001$ ) were independently associated with NAFLD. A normal high-density lipoprotein (HDL) level was protective against NAFLD (adjusted OR: 0.4, 95% CI: 0.2-0.8,  $P = 0.001$ ).

**CONCLUSIONS:** The high prevalence of NAFLD is already a public health problem, even in the rural parts of India. Urgent public health interventions are required to prevent its development by controlling the cardiometabolic risk factors associated with it.

119: Majumder P, Sarkar S, Gupta R, Patra BN, Balhara YP. Predictors of retention in treatment in a tertiary care de-addiction center. *Indian J Psychiatry*. 2016 Jan-Mar;58(1):27-30. doi: 10.4103/0019-5545.174359. PubMed PMID: 26985101; PubMed Central PMCID: PMC4776577.

**CONTEXT:** Retention in treatment can improve the outcomes of patients with substance use disorders.

**AIMS:** This study aimed to assess the predictors of treatment retention in a set of patients admitted with substance use disorders.

**SETTING AND DESIGN:** This record-based study was conducted among consecutive patients discharged from the inpatient unit of a tertiary care de-addiction facility in Northern India.

**MATERIALS AND METHODS:** Patients were classified as being retained in treatment or drop-outs based on follow-up records.

**STATISTICAL ANALYSIS:** Those who were retained and those who dropped out were compared using appropriate parametric and nonparametric tests. Logistic regression was used to find out the predictors of retention in treatment.

**RESULTS:** A total of 88 case records were evaluated. All subjects were males and majority of the sample was married, educated up to 10(th) grade, employed, belonged to the nuclear family and urban background. Opioid dependence syndrome (96.6%) was the most common substance use disorder identified. Guilt feelings, general weakness of body, and loss of social respect were the most common substance-related complications experienced. Of the total sample, 40 (45.4%) were classified as retained into treatment. Higher socioeconomic status and having a family member with substance use was associated with higher chances of treatment retention.

**CONCLUSION:** Identification of patient characteristics predicting drop-outs can help in targeting those individuals at higher risk. This can help in more favorable patient outcomes.

120: Makhija N, Narula J, Keshri VK, Gupta SK, Talwar S. Unidirectional ventricular septal valved patch for repair of late presenting ventricular septal defect with aortopulmonary window. *Ann Pediatr Cardiol*. 2016 Jan-Apr;9(1):90-3. doi: 10.4103/0974-2069.171404. PubMed PMID: 27011704; PubMed Central PMCID: PMC4782481.

Management of long standing left to right shunt lesion resulting in elevated pulmonary vascular resistance (PVR) is challenging. Limited surgical options are further complicated by an unpredictable postoperative period. Unidirectional valve patch (UVP) closure has shown to be useful in cases of the large ventricular septal defect (VSD) who present late. We report a case of large aortopulmonary window coexisting with a large VSD with severe pulmonary artery

hypertension and significantly elevated PVR that was managed surgically by closure of the window by sandwich technique and closure of the septal defect with a UVP. This report emphasizes the importance of UVP in the management of such patients.

121: Mal G, Vyas S, Srinivasan A, Patil NV, Pathak KM. Studies on Liquefaction Time and Proteins Involved in the Improvement of Seminal Characteristics in Dromedary Camels (*Camelus dromedarius*). *Scientifica* (Cairo). 2016;2016:4659358. doi: 10.1155/2016/4659358. Epub 2016 Feb 18. PubMed PMID: 27022505; PubMed Central PMCID: PMC4775800.

Semen was collected from six dromedary camels using artificial vagina during rutting season. Liquefaction of the viscous semen occurred in  $23.89 \pm 1.49$ h.

During liquefaction, proteins with molecular masses of 24.55 kDa and 22.07 kDa

appeared in conjunction with the disappearance of intact 26.00 kDa protein after

18-24h. These proteins were identified as  $\beta$ -nerve growth factors ( $\beta$ -NGFs) in

liquefied camel semen. Guanidine-HCL improves the rheological characteristics of dromedary camel semen along with significant ( $P < 0.01$ ) increase in sperm motility. No significant differences were found in viability of spermatozoa indicating no visible detrimental effects on spermatozoa. The cause of semen viscosity, as well as proteins that are present in liquefied dromedary camel seminal plasma, is described for the first time.

122: Malhotra V, Chandra SP, Dash D, Garg A, Tripathi M, Bal CS, Tripathi M. A screening tool to identify surgical candidates with drug refractory epilepsy in a resource limited settings. *Epilepsy Res.* 2016 Mar;121:14-20. doi: 10.1016/j.epilepsyres.2015.12.001. Epub 2016 Jan 23. PubMed PMID: 26855366.

**OBJECTIVES:** Access to epilepsy surgery remains a considerable challenge in contemporary healthcare systems. Given the limitations in resources and demand for Epilepsy Monitoring Unit (EMU) assessments, information that can be used to expedite the process is of great value. The purpose of this study was to identify variables prior to EMU admission that may be associated with candidacy for prospective epilepsy surgery.

**METHODS:** This was a prospective study conducted at the Department of Neurology, All India Institute of Medical Sciences, New Delhi, India. We identified two subgroups of patients from 501 drug refractory epilepsy (DRE) patients admitted in EMU of Neurology Department, AIIMS from 2006 onwards following validation of proposed tool in 40 patients. They on subsequent investigations were either cleared or not cleared for epilepsy surgery. A tool consisting of variables likely to predict surgical candidacy in persons with DRE in Indian settings was developed for identification of patients who might benefit from an early epilepsy surgery evaluation.

**RESULTS:** Statistical analysis revealed significant differences between the two groups for several variables. Non-surgical candidates had non-disabling seizures, seizures improved with a combination of drugs, had little/no AEDs side effects and had near normal or normal scalp EEG and MRI brain.

**SIGNIFICANCE:** Using the best available evidence, we developed a decision making

tool which can provide a comprehensive quick guide for determining candidacy for epilepsy surgery evaluations in resource limited settings. Given the demand for EMU assessments, information that can be used to expedite the process is of value.

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123: Mallick S, Arava S, Muthukumaran S, Sharma B, Choudhary SK, Ray R. Mesothelial/monocytic incidental cardiac excrescence mimicking cardiac tumor. *Asian Cardiovasc Thorac Ann.* 2016 Jan;24(1):42-4. doi: 10.1177/0218492314535224. Epub 2014 May 16. PubMed PMID: 24838237.

Mesothelial incidental cardiac excrescence is a non-neoplastic tumor-like lesion commonly occurring in the intracardiac region. The exact etiology is unclear. A 32-year-old woman presented with respiratory distress on exertion. Echocardiography showed severe aortic, mitral, and tricuspid regurgitation, for which triple-valve replacement was performed. A small cardiac excrescence was found over the aortic valve, measuring 0.6 × 0.3 × 0.3-cm, which on microscopy showed features of mesothelial/monocytic incidental cardiac excrescence. This condition is very rare but it must be recognized because it mimics a metastatic malignancy.

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124: Mancuso F, Hamilton TW, Kumar V, Murray DW, Pandit H. Clinical outcome after UKA and HTO in ACL deficiency: a systematic review. *Knee Surg Sports Traumatol Arthrosc.* 2016 Jan;24(1):112-22. doi: 10.1007/s00167-014-3346-1. Epub 2014 Sep 30. PubMed PMID: 25266231.

**PURPOSE:** In the treatment of medial osteoarthritis secondary to anterior cruciate ligament (ACL) injury there is no consensus about optimum treatment, with both high tibial osteotomy (HTO) and unicompartmental knee arthroplasty (UKA) being viable options. The aim of this review was to compare the outcomes of these treatments, both with or without ACL reconstruction.

**METHODS:** EMBASE, MEDLINE and the Clinical Trials Registers were searched to identify relevant studies. Studies meeting pre-defined inclusion criteria were assessed independently by two researchers for methodological quality and data extracted.

**RESULTS:** Twenty-six studies involving 771 patients were identified for inclusion. No randomized controlled trials were identified. Seventeen studies reported outcomes following HTO and nine studies reported outcomes following UKA. HTO patients were significantly younger than those receiving UKA, and ACL reconstruction patients were younger than non-reconstructed patients. Treatment with HTO ACL reconstruction had the lowest revision rate (0.62/100 observed component years) but the highest rate of complications (4.61/100 observed component years). Too little data were available to test for differences in outcome between different surgical techniques or prosthesis designs.

**CONCLUSIONS:** Limited conclusions about the optimum treatment can be made due to the absence of controlled trials. In patients treated with HTO ACL reconstruction, the high complication rate likely outweighs its minimally superior survival. Outcomes following UKA ACL reconstruction are similar to outcomes for UKA in the ACL intact knee without any increase in complications. As such in patients meeting indications for UKA, UKA ACL reconstruction should be performed with further work required to identify the optimum treatment in other patient groups.

**LEVEL OF EVIDENCE:** IV.

125: Marda M, Pandia MP, Rath GP, Kale SS, Dash H. A comparative study of early and late extubation following transoral odontoidectomy and posterior fixation. *J Anaesthesiol Clin Pharmacol.* 2016 Jan-Mar;32(1):33-7. doi: 10.4103/0970-9185.173344. PubMed PMID: 27006538; PubMed Central PMCID: PMC4784210.

**BACKGROUND AND AIMS:** Elective ventilation is the usual practice after transoral



odontoidectomy (TOO) and posterior fixation. This practice of elective ventilation is not based on any evidence. The primary objective of our study was to find out the difference in oxygenation and ventilation in patients extubated early compared to those extubated late after TOO and posterior fixation. The secondary objectives were to compare the length of Intensive Care Unit (ICU)/hospital stay and pulmonary complications between the two groups.

**MATERIAL AND METHODS:** After TOO and posterior fixation, patients were either extubated in the operating room (Group E) or extubated next day (Group D). The oxygenation (PaO<sub>2</sub>:FiO<sub>2</sub> ratio) and ventilation (PaCO<sub>2</sub>) of the two groups before surgery, at 30 min and at 6/12/24 and 48 h after extubation were compared. Complications, durations of ICU and hospital stay were noted.

**RESULTS:** The base-line PaO<sub>2</sub>:FiO<sub>2</sub> and PaCO<sub>2</sub> was comparable between the groups. No significant change in the PaO<sub>2</sub>:FiO<sub>2</sub> was noted in the postoperative period in either group as compared to the preoperative values. Except for at 12 h after surgery, there was no significant difference between the two groups at various time intervals. No significant change in the PaCO<sub>2</sub> level was seen during the study period in either group. PaCO<sub>2</sub> measured at 30 min after surgery was more in Group E (37.5 ± 3.2 mmHg in Group E vs. 34.6 ± 2.9 mmHg in Group D), otherwise there was no significant difference between the two groups at various time intervals. One patient in Group E (7.1%) and two patients in Group D (13%) developed postoperative respiratory complication, but the difference was not statistically significant. The mean ICU stay (Group D = 42 ± 25 h vs. Group E = 25.1 ± 16.9 h) and mean hospital stay (Group D = 9.9 ± 4 days vs. Group E = 7.6 ± 2.2 days) were longer in Group D patients.

**CONCLUSION:** Ventilation and oxygenation in the postoperative period in patients undergoing TOO and posterior fixation are not different between the two groups. However, the duration of ICU and hospital stay was prolonged in group D.

126: Masroor M, Javid J, Mir R, Y P, A I, Z M, Mohan A, Ray PC, Saxena A. Prognostic significance of serum ERBB3 and ERBB4 mRNA in lung adenocarcinoma patients. *Tumour Biol.* 2016 Jan;37(1):857-63. doi: 10.1007/s13277-015-3859-3. Epub 2015 Aug 9. PubMed PMID: 26254096.

Serum messenger RNA (mRNA) is an emerging prognostic tool for noninvasive malignant disease prognosis, and to study serum mRNA may have importance in the prognosis and detection of disease. This study aimed to evaluate the possible prognostic role of serum ERBB3 and ERBB4 mRNA expressions in lung adenocarcinoma patients. One hundred newly diagnosed lung adenocarcinoma patients and 100 age- and sex-matched healthy controls were included. Expression was analysed by quantitative real-time PCR and overall survival was analysed by Kaplan-Meier analysis. Serum ERBB3 and ERBB4 mRNA expressions was found to be significantly associated with distant metastases and TNM stages. It was observed that patients with distant metastases had 4.8- and 3.4-fold high ERBB3 and ERBB4 expression in contrast to patients without distant metastases, respectively. It was also found that ERBB3 and ERBB4 mRNA expression was 7.7-fold and 6.7-fold high in TNM stage IV compared to TNM stage I, respectively. Significantly, 2.6-fold increased serum ERBB4 mRNA expression was found in patients with pleural effusion compared to

patients without pleural effusion (p=0.005). Lung adenocarcinoma patients with

≤8- and >8-fold increased serum ERBB3 mRNA expression had 10.0 and 5.5 months of overall median survival while serum ERBB4 mRNA with ≤10- and >10-fold increased expression showed 11.4 and 5.0 months overall median survival, respectively. ERBB3 and ERBB4 together also found to be significantly associated with poor

overall median survival. Patients with ≤8+≤10- and >8+>10-fold expression

showed 11.3 vs 4.8 months of overall median survival, respectively. In conclusion, serum ERBB3 and ERBB4 mRNA expressions may be a prognostic marker and monitoring of serum ERBB3 and ERBB4 mRNA can be one of the predictive factors for

metastases and poor overall survival of lung adenocarcinoma patients.

127: Mathur P. Antimicrobial consumption in hospitals of developing nations: When will the Gap Bridge between infection rates and prescription patterns? *Indian J Med Microbiol.* 2016 Jan-Mar;34(1):3-4. doi: 10.4103/0255-0857.174119. PubMed PMID: 26776110.

128: McArthur E, Bali S, Khan AA. Socio-cultural and Knowledge-Based Barriers to Tuberculosis Diagnosis for Women in Bhopal, India. *Indian J Community Med.* 2016 Jan-Mar;41(1):62-4. doi: 10.4103/0970-0218.170990. PubMed PMID: 26917876; PubMed Central PMCID: PMC4746957.

**BACKGROUND:** In India, only one woman is diagnosed with tuberculosis (TB) for every 2.4 men. Previous studies have indicated gender disparities in care-seeking behavior and TB diagnosis; however, little is known about the specific barriers women face.

**OBJECTIVES:** This study aimed to characterize socio-cultural and knowledge-based barriers that affected TB diagnosis for women in Bhopal, India.

**MATERIALS AND METHODS:** In-depth interviews were conducted with 13 affected women and 6 health-care workers. The Bhopal Diagnostic Microscopy Laboratory Register (n = 121) and the Bhopal district report (n = 261) were examined for diagnostic and care-seeking trends.

**RESULTS:** Women, especially younger women, faced socio-cultural barriers and stigma, causing many to hide their symptoms. Older women had little awareness about TB. Women often sought treatment from private practitioners, resulting in delayed diagnosis.

**CONCLUSIONS:** Understanding these diagnostic and help-seeking behaviors barriers for women is critical for development of a gender-sensitive TB control program.

129: Menon V, Sarkar S, Thomas S. Establishing a psychosomatic clinic in a low resource setting: Process, challenges, and opportunities. *J Neurosci Rural Pract.* 2016 Jan-Mar;7(1):171-5. doi: 10.4103/0976-3147.172157. PubMed PMID: 26933373; PubMed Central PMCID: PMC4750324.

**BACKGROUND:** Specialty psychosomatic clinics are a felt need in low- and middle-income countries, but its benefits and challenges have not been reported so far.

**AIMS:** To describe the process, challenges, and opportunities that we encountered in setting up a specialty psychosomatic clinic at a government medical college in South India.

**METHODS:** The biweekly psychosomatic clinic was located in the Department of Psychiatry and manned by a multimodal team. Structured questionnaires were used to evaluate all patients. All psychiatric diagnoses were made as per International Classification of Diseases-10, clinical descriptions and diagnostic guidelines. Management comprised both pharmacotherapy and psychotherapeutic interventions.

**RESULTS:** A total of 72 patients registered for services in the 1(st) year of the clinic. The mean age of the sample was 36.6 years (range 14-60 years). A median of 2 years and 19 visits to various care providers had elapsed before their visit to the clinic. The index contact was a general practitioner in the majority of cases though an overwhelming majority (95.6%) had also sought specialist care. The most common diagnostic cluster was the somatoform group of disorders (50.0%). Antidepressants were the most commonly prescribed medications (70.6%).

**CONCLUSION:** The specialty psychosomatic clinic provided better opportunities for a more comprehensive evaluation of people with medically unexplained symptoms and better resident training and focused inter-disciplinary research. It describes a scalable model that can be replicated in similar resource constrained settings.

130: Misra S, Kumar P, Kumar A, Sagar R, Chakravarty K, Prasad K. Genetic association between inflammatory genes (IL-1 $\beta$ , CD14, LGALS2, PSMA6) and risk of ischemic stroke: A meta-analysis. *Meta Gene.* 2016 Jan 19;8:21-9. doi: 10.1016/j.mgene.2016.01.003. eCollection 2016 Jun. Review. PubMed PMID: 27014587; PubMed Central PMCID: PMC4792905.

**BACKGROUND:** Sequence variations in genes involved in inflammatory system are known to contribute to the risk of cerebrovascular diseases (CVD) including stroke. Very few number of studies have been published in the context of the association between Interleukin-1 $\alpha$  (IL-1 $\alpha$ ), CD14 cell surface glycoprotein (CD14), Galectin-2-encoding gene (LGALS2) and proteasome subunit type 6 (PSMA6) gene polymorphisms with susceptibility to ischemic stroke (IS).

**OBJECTIVE:** The present meta-analysis aimed to provide a comprehensive account of the association between IL-1 $\alpha$  (-C889T and -C511T), CD14 (-C159T), LGALS2 (-C3279T) and PSMA6 (-C8G) gene polymorphisms and susceptibility to IS.

**METHODS:** A literature search for eligible genetic studies published before August 31, 2015 was conducted in the PubMed, Medline, EMBASE, OVID, and Google Scholar databases. Fixed or random effects models were used to estimate the Pooled Odds ratio (OR) and 95% confidence interval (CI) using RevMan 5.3 software.

**RESULTS:** Total 21 studies were included in our meta-analysis. No significant association was observed between IL-1 $\alpha$  (-C889T) [OR = 1.18, 95% CI: 0.67-2.08, P = 0.58], IL-1 $\alpha$  (-C511T) [OR = 0.95, 95% CI: 0.66-1.37, P = 0.77], LGALS2 (-C2379T) [OR = 0.29, 95% CI: 0.02-4.26, P = 0.37] and CD14 (-C260T) [OR = 0.93, 95% CI: 0.77-1.11, P = 0.42] gene polymorphisms and risk of IS. However, protective level of association was observed between PSMA6 (-C8G) gene polymorphism and susceptibility to IS under the recessive model [OR = 0.25, 95% CI: 0.08-0.72, P = 0.01].

**CONCLUSION:** Our meta-analysis shows that IL-1 $\alpha$  (-C889T and -C511T), CD14 (-C159T), LGALS2 (-C3279T) and gene polymorphisms are not significantly associated with the risk of IS while PSMA6 (-C8G) gene polymorphism may play a protective role with the susceptibility of IS. Further prospective large epidemiological studies are needed to confirm these findings in different populations.

131: Mittal K, Gupta S, Khokhar S, Vanathi M, Sharma N, Agarwal T, Vajpayee RB. Evaluation of Autograft Characteristics After Pterygium Excision Surgery: Autologous Blood Coagulum Versus Fibrin Glue. *Eye Contact Lens*. 2016 Jan 16. [Epub ahead of print] PubMed PMID: 26783976.

**PURPOSE:** To compare graft outcomes following pterygium excision and conjunctival autograft fixation using patient's in situ autologous blood or standard fibrin glue-assisted conjunctival autograft adhesion.

**METHODS:** Outcomes of 23 consecutive eyes which underwent pterygium excision and conjunctival autograft with autologous in situ blood coagulum (group I) were compared with historical case controls (20 eyes) that had undergone fibrin glue-assisted conjunctival autograft (group II). Primary outcome measure was graft stability. Secondary outcome measure was severity of graft inflammation at day 1, day 7, 3 months, and 6 months.

**RESULTS:** The two groups were similar regarding age, gender, uncorrected visual acuity (UCVA), best corrected visual acuity (BCVA), refractive error, tear function tests, and pterygium size. Mean surgical time was similar for the two groups (14.2 $\pm$ 2.74 min, group I; 12.25 $\pm$ 1.88 min, group II; P=0.1); with the mean difference in operative time being 1.95 min (95% CI, 0.48-3.42 min). Postoperatively, there was a statistically significant reduction in astigmatism and improvement in UCVA, BCVA, and spherical equivalent in all eyes. No difference was found in mean epithelial defect healing time, UCVA, BCVA, astigmatism, tear film break-up time, and Schirmer I and II at 6 months between the two groups. Initial graft stability was better for group II at 1 month (P=0.001) but was similar for both groups at 6 months. Median score of graft inflammation was significantly more for group II during the first week (P<0.05; Wilcoxon rank-sum test).

**CONCLUSION:** Autologous blood may be used as an effective alternative with lesser postoperative inflammation in comparison to glue-assisted autograft fixation.

132: Mohan A, Ansari A, Uniyal A, Upadhyay AD, Guleria R. Acute changes in physiological cardiopulmonary parameters during and after flexible fiberoptic bronchoscopy. *Lung India*. 2016 Jan-Feb;33(1):111-2. doi: 10.4103/0970-2113.173067. PubMed PMID: 26933326; PubMed Central PMCID: PMC4748649.

133: Mohan I, Gupta R, Misra A, Sharma KK, Agrawal A, Vikram NK, Sharma V, Shrivastava U, Pandey RM. Disparities in Prevalence of Cardiometabolic Risk Factors in Rural, Urban-Poor, and Urban-Middle Class Women in India. PLoS One. 2016 Feb 16;11(2):e0149437. doi: 10.1371/journal.pone.0149437. eCollection 2016. PubMed PMID: 26881429; PubMed Central PMCID: PMC4755555.

**OBJECTIVE:** Urbanization is an important determinant of cardiovascular disease (CVD) risk. To determine location-based differences in CVD risk factors in India we performed studies among women in rural, urban-poor and urban middle-class locations.

**METHODS:** Population-based cross-sectional studies in rural, urban-poor, and urban-middle class women (35-70y) were performed at multiple sites. We evaluated 6853 women (rural 2616, 5 sites; urban-poor 2008, 4 sites; urban middle-class 2229, 11 sites) for socioeconomic, lifestyle, anthropometric and biochemical risk factors. Descriptive statistics are reported.

**RESULTS:** Mean levels of body mass index (BMI), waist circumference, waist-hip ratio (WHR), systolic BP, fasting glucose and cholesterol in rural, urban-poor and urban-middle class women showed significantly increasing trends (ANOVAtrend,  $p < 0.001$ ). Age-adjusted prevalence of diabetes and risk factors among rural, urban-poor and urban-middle class women, respectively was, diabetes (2.2, 9.3, 17.7%), overweight BMI  $\geq 25$  kg/m<sup>2</sup> (22.5, 45.6, 57.4%), waist  $> 80$  cm (28.3, 63.4, 61.9%), waist  $> 90$  cm (8.4, 31.4, 38.2%), waist hip ratio (WHR)  $> 0.8$  (60.4, 90.7, 88.5), WHR  $> 0.9$  (13.0, 44.3, 56.1%), hypertension (31.6, 48.2, 59.0%) and hypercholesterolemia (13.5, 27.7, 37.4%) (Mantel Haenszel X<sup>2</sup> ptrend  $< 0.01$ ). Inverse trend was observed for tobacco use (41.6, 19.6, 9.4%). There was significant association of hypertension, hypercholesterolemia and diabetes with overweight and obesity (adjusted R<sup>2</sup> 0.89-0.99).

**CONCLUSIONS:** There are significant location based differences in cardiometabolic risk factors in India. The urban-middle class women have the highest risk compared to urban-poor and rural.

134: Morey VM, Nag HL, Chowdhury B, Pannu CD, Meena S, Kumar K, Palaniswamy A. Arthroscopic anatomic double bundle anterior cruciate ligament reconstruction: Our experience with follow-up of 4 years. J Clin Orthop Trauma. 2016 Jan-Mar;7(1):17-22. doi: 10.1016/j.jcot.2015.06.003. Epub 2015 Jul 20. PubMed PMID: 26908971; PubMed Central PMCID: PMC4735560.

**BACKGROUND:** Double bundle (DB) anterior cruciate ligament (ACL) reconstruction has been proposed to recreate the natural anatomy of ACL. Reconstruction of the anatomy of both the bundles of ACL has been thought to be able to restore the rotational stability of the knee joint. Nevertheless, it remains unclear whether DB reconstruction has better functional outcome than single bundle (SB) ACL reconstruction.

**PURPOSE:** To evaluate the clinical outcomes, patient satisfaction and manual laxity tests of knee in patients treated with DB ACL reconstruction in Indian population.

**METHODS:** We prospectively followed 25 patients with an isolated ACL injury operated for DB ACL reconstruction after applying the inclusion and exclusion criteria. Patients were evaluated pre-operatively and in the post-operative period at regular intervals with the minimum follow up of 4 years. Clinical stability was assessed by anterior drawer test, Lachman test and pivot shift test. Functional outcome was assessed by IKDC, Lysholm and Modified Cincinnati scores.

**RESULTS:** At the end of 4 years, functional outcome in terms of all subjective scores was satisfactory. Graded stability results of the Lachman, Anterior drawer and pivot shift tests were almost near to that in normal knee. No complication occurred post-operatively.

**CONCLUSION:** Anatomical DB ACL reconstruction seems to offer satisfactory results in terms of subjective scores and stability tests to patients with ACL tear. It has been found to be associated with no obvious complications and no failures. However a larger patient pool is desired for conclusive results.

135: Munawwar A, Singh S. Human Herpesviruses as Copathogens of HIV Infection, Their Role in HIV Transmission, and Disease Progression. *J Lab Physicians*. 2016 Jan-Jun;8(1):5-18. doi: 10.4103/0974-2727.176228. Review. PubMed PMID: 27013807; PubMed Central PMCID: PMC4785766.

Of eight human herpesviruses (HHVs), often, only herpes simplex virus types 1 (HSV-1) and 2 (HSV-2) find mention in medical literature as both of these viruses are commonly associated with genital lesions and oral ulcers, commonly known as cold sores. However, role of human herpesviruses as copathogens and in aggravation and in the transmission of other human diseases, especially the Acquired immunodeficiency syndrome (HIV/AIDS) has only very recently been recognized. Therefore, screening and treating subclinical HHV infections may offer slowing of HIV infection, disease progression, and its transmission. Beside HSV-1 and HSV-2, HHV-3 a causative agent of herpes zoster remained one of the first manifestations of HIV disease before the era of highly active antiretroviral therapy (HAART). HHV-5 also known as human Cytomegalovirus infection remains a significant risk factor for HIV-associated mortality and morbidity even in HAART era. It is proposed that Cytomegalovirus viremia could be a better predictor of HIV disease progression than CD4+ T-lymphocyte count. The role of HHV-4 or Epstein-Barr virus and HHV-6, HHV-7, and HHV-8 is still being investigated in HIV disease progression. This review provides insight into the current understanding about these 8 HHVs, their co-pathogenesis, and role in HIV/AIDS disease progression. The review also covers recent literature in favor and against administering anti-HHV treatment along with HAART for slower AIDS progression and interrupted sexual transmission.

136: Nair A, Dhingra A, Gopi A, Jyotsna VP. Nonsuppressible Oral Dexamethasone Suppression Tests but Not Cushing Syndrome. *Case Rep Endocrinol*. 2016;2016:3684287. doi: 10.1155/2016/3684287. Epub 2016 Mar 22. PubMed PMID: 27092281; PubMed Central PMCID: PMC4820604.

In spite of the presence of definitive diagnostic criteria to diagnose Cushing syndrome diagnosis may become challenging. We report a young female with mild clinical features of Cushing syndrome, who had nonsuppressible oral dexamethasone suppression tests; also she had a suspicious pituitary lesion. She underwent pituitary surgery and a pituitary microadenoma (non-ACTH staining) was removed. Now she had come to us with similar complaints to those before. Again she had nonsuppressible oral dexamethasone suppression tests. As the diurnal variation of serum and salivary cortisol was maintained and urinary free cortisol was normal, further evaluation with IV dexamethasone suppression test was performed which clearly ruled out Cushing syndrome. The patient was not on any medicines known to alter dexamethasone metabolism. Fat malabsorption was also ruled out using appropriate tests. The reason for this discrepancy is thought to be altered (increased) metabolism of dexamethasone in this patient as it is widely variable in the general population.

137: Nambirajan A, Mridha AR, Kumar P, Ray R. Congenital cellular plexiform schwannoma mimicking a vascular lesion: Potential pitfalls in clinical and histopathological assessment. *Indian J Dermatol Venereol Leprol*. 2016 Jan-Feb;82(1):79-81. doi: 10.4103/0378-6323.171012. PubMed PMID: 26728820.

138: Nataraj V, Rastogi S, Khan SA, Sharma MC, Agarwala S, Vishnubhatla S, Bakhshi S. Prognosticating metastatic osteosarcoma treated with uniform chemotherapy protocol without high dose methotrexate and delayed metastasectomy: a single center experience of 102 patients. *Clin Transl Oncol*. 2016 Jan 7. [Epub ahead of print] PubMed PMID: 26742936.

**PURPOSE:** Data on prognostic factors in patients with metastatic osteosarcoma treated with uniform chemotherapy protocol are lacking. The objective of this study was to analyze demographic data, treatment outcome and prognostic factors for patients with metastatic osteosarcoma at our center treated with a uniform chemotherapy protocol without high dose methotrexate.

**METHODS:** This is a single-institutional data review of patients treated between June 2003 and December 2012 with neoadjuvant chemotherapy, local site surgery

followed by adjuvant chemotherapy and metastasectomy at completion of adjuvant chemotherapy.

RESULTS: 102 patients of metastatic osteosarcoma were treated with a median age of 18 years (range 8-48 years), male to female ratio of 3.3:1 and median symptom duration of 4 months. EFS and OS at 5 years were  $12.7 \pm 0.1$  and  $28.1 \pm 0.1$  %, respectively. On multivariate analysis, elevated serum alkaline phosphatase ( $p < 0.001$ ) and number of metastasis  $>3$  ( $p = 0.04$ ) were predictive of lower EFS, whereas elevated serum alkaline phosphatase ( $p = 0.01$ ), number of metastasis  $>3$  ( $p = 0.05$ ), and margin positivity ( $p < 0.001$ ) were predictive of lower OS.

CONCLUSIONS: This is the largest data on metastatic osteosarcoma treated with a uniform chemotherapy protocol without high dose methotrexate. The data showed prognostic factors similar to what have been observed previously such as elevated serum alkaline phosphatase and  $>3$  metastatic lesions in lung predicting inferior outcome. Notably our survival was comparable to data from other studies despite our practice of delaying metastasectomy to completion of chemotherapy rather than performing the same along with local site surgery.

139: Nath D, Gupta A, Arava S, Jain D, Madan K. Synchronous existence of granular cell tumor and small cell carcinoma of lung: An unusual entity. *Indian J Pathol Microbiol.* 2016 Jan-Mar;59(1):90-2. doi: 10.4103/0377-4929.178239. PubMed PMID: 26960647.

Granular cell tumor (GCT) is a rare benign mesenchymal tumor that uncommonly occurs in the lung and tracheobronchial tree. Small cell carcinoma of lung is a centrally located malignant neoplasm that commonly occurs in elderly smokers. Concomitant existence of both the neoplasm in lung is extremely rare with only one reported case in the literature. Few rare combinations of GCT with other primary bronchogenic carcinomas have also been reported. Clinical symptoms depend upon the site and size of the tumor. Definitive diagnosis is by histopathological and proper immunohistochemical analysis. Identification of this entity is important as treatment requires individual therapy protocols that depend on the presence of metastasis, location of the tumors, and type of bronchogenic carcinoma.

140: Neelapu BC, Kharbanda OP, Sardana HK, Balachandran R, Sardana V, Kapoor P, Gupta A, Vasamsetti S. Craniofacial and upper airway morphology in adult obstructive sleep apnea patients: A systematic review and meta-analysis of cephalometric studies. *Sleep Med Rev.* 2016 Jan 30. pii: S1087-0792(16)00016-2. doi: 10.1016/j.smrv.2016.01.007. [Epub ahead of print] Review. PubMed PMID: 27039222.

Obstructive sleep apnea (OSA) is one of the common sleep breathing disorders in adults, characterised by frequent episodes of upper airway collapse during sleep. Craniofacial disharmony is an important risk factor for OSA. Overnight polysomnography (PSG) study is considered to be the most reliable confirmatory investigation for OSA diagnosis, whereas the precise localization of site of obstruction to the airflow cannot be detected. Identifying the cause of OSA in a particular ethnic population/individual subject helps to understand the etiological factors and effective management of OSA. The objective of the meta-analysis is to elucidate altered craniofacial anatomy on lateral cephalograms in adult subjects with established OSA. Significant weighted mean difference with insignificant heterogeneity was found for the following parameters: anterior lower facial height (ALFH: 2.48 mm), position of hyoid bone (Go-H: 5.45 mm, S-H: 6.89 mm, GoGn-H:  $11.84^\circ$ , GoGn-H: 7.22 mm, N-S-H:  $2.14^\circ$ ), and pharyngeal airway space (PNS-Phw: -1.55 mm, pharyngeal space: -495.74 mm<sup>2</sup>) and oro-pharyngeal area: -151.15 mm<sup>2</sup>). Significant weighted mean difference with significant heterogeneity was found for the following parameters: cranial base (SN: -2.25 mm, S-N-Ba:  $-1.45^\circ$ ), position and length of mandible (SNB:  $-1.49^\circ$  and Go-Me: -5.66 mm) respectively, maxillary length (ANS-PNS: -1.76 mm), tongue area (T: 366.51 mm<sup>2</sup>), soft palate area (UV: 125.02 mm<sup>2</sup>), and upper airway length (UAL: 5.39 mm). This meta-analysis supports the relationship between craniofacial disharmony and obstructive sleep apnea. There is a strong evidence for reduced pharyngeal airway space, inferiorly placed hyoid bone and increased anterior facial heights in adult OSA patients compared to control subjects. The

cephalometric analysis provides insight into anatomical basis of the etiology of OSA that can influence making a choice of appropriate therapy.

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141: Ooi CJ, Makharia GK, Hilmi I, Gibson PR, Fock KM, Ahuja V, Ling KL, Lim WC, Thia KT, Wei SC, Leung WK, Koh PK, Gearry RB, Goh KL, Ouyang Q, Sollano J, Manatsathit S, de Silva HJ, Rerknimitr R, Pisespongsa P, Abu Hassan MR, Sung J, Hibi T, Boey CC, Moran N, Leong RW; Asia Pacific Association of Gastroenterology (APAGE) Working Group on Inflammatory Bowel Disease. Asia-Pacific consensus statements on Crohn's disease. Part 2: Management. *J Gastroenterol Hepatol*. 2016 Jan;31(1):56-68. doi: 10.1111/jgh.12958. Review. PubMed PMID: 25819311.

The Asia Pacific Working Group on Inflammatory Bowel Disease was established in Cebu, Philippines, at the Asia Pacific Digestive Week conference in 2006 under the auspices of the Asian Pacific Association of Gastroenterology (APAGE) with the goal of developing best management practices, coordinating research and raising awareness of IBD in the region. The consensus group previously published recommendations for the diagnosis and management of ulcerative colitis (UC) with specific relevance to the Asia-Pacific region. The present consensus statements were developed following a similar process to address the epidemiology, diagnosis and management of Crohn's disease (CD). The goals of these statements are to pool the pertinent literature specifically highlighting relevant data and conditions in the Asia-Pacific region relating to the economy, health systems, background infectious diseases, differential diagnoses and treatment availability. It does not intend to be all-comprehensive and future revisions are likely to be required in this ever-changing field.

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142: Ooi CJ, Makharia GK, Hilmi I, Gibson PR, Fock KM, Ahuja V, Ling KL, Lim WC, Thia KT, Wei SC, Leung WK, Koh PK, Gearry RB, Goh KL, Ouyang Q, Sollano J, Manatsathit S, de Silva HJ, Rerknimitr R, Pisespongsa P, Abu Hassan MR, Sung J, Hibi T, Boey CC, Moran N, Leong RW; Asia Pacific Association of Gastroenterology (APAGE) Working Group on Inflammatory Bowel Disease. Asia Pacific Consensus Statements on Crohn's disease. Part 1: Definition, diagnosis, and epidemiology: (Asia Pacific Crohn's Disease Consensus-Part 1). *J Gastroenterol Hepatol*. 2016 Jan;31(1):45-55. doi: 10.1111/jgh.12956. Review. PubMed PMID: 25819140.

Inflammatory bowel disease (IBD) was previously thought to be rare in Asia, but emerging data indicate rising incidence and prevalence of IBD in the region. The Asia Pacific Working Group on Inflammatory Bowel Disease was established in Cebu, Philippines, at the Asia Pacific Digestive Week conference in 2006 under the auspices of the Asian Pacific Association of Gastroenterology with the goal of developing best management practices, coordinating research, and raising awareness of IBD in the region. The consensus group previously published recommendations for the diagnosis and management of ulcerative colitis with specific relevance to the Asia-Pacific region. The present consensus statements were developed following a similar process to address the epidemiology, diagnosis, and management of Crohn's disease. The goals of these statements are to pool the pertinent literature specifically highlighting relevant data and conditions in the Asia-Pacific region relating to the economy, health systems, background infectious diseases, differential diagnoses, and treatment availability. It does not intend to be all comprehensive and future revisions are likely to be required in this ever-changing field.

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143: Pal A, Balhara YP. A Review of Impact of Tobacco Use on Patients with Co-occurring Psychiatric Disorders. *Tob Use Insights*. 2016 Mar 10;9:7-12. doi: 10.4137/TUI.S32201. eCollection 2016. Review. PubMed PMID: 26997871; PubMed Central PMCID: PMC4788174.

Consumption of tobacco has been a worldwide problem over the past few decades due to the highly prevalent tobacco-attributable complications. Tobacco use has also been found to be more prevalent in patients with psychiatric disorders. Therefore, we conducted this review about the impact of tobacco use on co-occurring psychiatric disorders. Various facets of this interaction between tobacco use among those with co-occurring psychiatric disorders have been explored. It has been found that people with psychiatric disorders have a higher chance of currently smoking tobacco and lesser chance of cessation. Tobacco use and mental disorders continue to share a complex relationship that has been further evolving after the change in the pattern of tobacco use and also the advent of newer modalities of treatment. However, at the same time, it is believed that cessation of smoking may lead to improvement in the symptoms of mental illness.

144: Pandey AK, Sharma SK, Agarwal KK, Sharma P, Bal C, Kumar R. Digital contrast enhancement of (18)Fluorine-fluorodeoxyglucose positron emission tomography images in hepatocellular carcinoma. *Indian J Nucl Med.* 2016 Jan-Mar;31(1):20-6. doi: 10.4103/0972-3919.172346. PubMed PMID: 26917889; PubMed Central PMCID: PMC4746835.

**PURPOSE:** The role of (18)fluorodeoxyglucose positron emission tomography (PET) is limited for detection of primary hepatocellular carcinoma (HCC) due to low contrast to the tumor, and normal hepatocytes (background). The aim of the present study was to improve the contrast between the tumor and background by standardizing the input parameters of a digital contrast enhancement technique. **MATERIALS AND METHODS:** A transverse slice of PET image was adjusted for the best possible contrast, and saved in JPEG 2000 format. We processed this image with a contrast enhancement technique using 847 possible combinations of input parameters (threshold "m" and slope "e"). The input parameters which resulted in an image having a high value of 2(nd) order entropy, and edge content, and low value of absolute mean brightness error, and saturation evaluation metrics, were considered as standardized input parameters. The same process was repeated for total nine PET-computed tomography studies, thus analyzing 7623 images. **RESULTS:** The selected digital contrast enhancement technique increased the contrast between the HCC tumor and background. In seven out of nine images, the standardized input parameters "m" had values between 150 and 160, and for other two images values were 138 and 175, respectively. The value of slope "e" was 4 in 4 images, 3 in 3 images and 1 in 2 images. It was found that it is important to optimize the input parameters for the best possible contrast for each image; a particular value was not sufficient for all the HCC images. **CONCLUSION:** The use of above digital contrast enhancement technique improves the tumor to background ratio in PET images of HCC and appears to be useful. Further clinical validation of this finding is warranted.

145: Pandey V, Bhutia O, Nagori SA, Seith A, Roychoudhury A. Management of mandibular angle fractures using a 1.7 mm 3-dimensional strut plate. *J Oral Biol Craniofac Res.* 2016 Jan-Apr;6(1):35-40. doi: 10.1016/j.jobocr.2015.11.001. Epub 2015 Nov 27. PubMed PMID: 26937367; PubMed Central PMCID: PMC4756066.

**AIM:** We report our experience with the use of 1.7 mm 3-dimensional (3D) strut plate for the management of mandibular angle fractures. **METHODS:** This prospective study enrolled 15 patients in whom mandibular angle fractures were treated with 1.7 mm 3D plate using trans-buccal trochar. Patients were evaluated at 72 h, 2 weeks, 6 weeks and 12 weeks for fracture stability, occlusion, soft-tissue swelling, infection and post-operative inferior alveolar nerve damage. Other complications like wound dehiscence, non-union, mal-union and hardware failure were also assessed. **RESULTS:** In the immediate post-operative period, fracture instability was seen in 1 (6.7%) patient which resolved by 2 weeks. Mild occlusal discrepancy was also noted in 1 (6.7%) patient. Wound dehiscence was seen in 5 (33.3%) patients and all resolved by local measures. 1 (6.7%) patient developed post-operative nerve paraesthesia. Immediate post-operative radiographic evaluation demonstrated optimal reduction in all cases with no inferior border gaping. No case of



infection, hardware failure, non-union and mal-union was noted.

CONCLUSION: Within the limitations of the study, 1.7 mm 3D strut plate was found to be effective for management of non-communitied mandibular angle fractures.

146: Pattanayak RD, Charan D. Divalproex sodium leading to sustained significant improvement in tardive dyskinesia in a patient with bipolar disorder. *Indian J Psychiatry*. 2016 Jan-Mar;58(1):103-4. doi: 10.4103/0019-5545.174403. PubMed PMID: 26985118; PubMed Central PMCID: PMC4776571.

147: Prajapati S, Upadhyay K, Mukherjee A, Kabra SK, Lodha R, Singh V, Grewal HM, Singh S; Delhi Pediatric TB Study Group. Detection of enterotoxigenic *E. coli* in hospitalised children with and without diarrhoea in Blantyre, Malawi. *Paediatr Int Child Health*. 2016 Jan 12:1-5. [Epub ahead of print] PubMed PMID: 27077609.

BACKGROUND: Drug susceptibility testing (DST) of *Mycobacterium tuberculosis* (Mtb) isolates is crucial for the effective treatment of tuberculosis. Data on DST patterns in Mtb isolates in childhood tuberculosis are scanty.

AIMS: To determine drug resistance patterns in Mtb isolates from a paediatric TB cohort in North India.

METHODS: 403 children aged 6 months to 14 year with probable intrathoracic tuberculosis were enrolled prospectively. All were treatment-naïve. 802 ambulatory-induced sputa (IS) and 787 gastric aspirate (GA) samples were cultured in BACTEC-MGIT960 system, and DST of the Mtb isolates was undertaken using the automated BACTEC-MGIT960 SIRE kit.

RESULTS: Of the 403 children, 147 (36.4%) were culture-confirmed: 132 (89.8%) isolates were Mtb and 15 (10.2%) non-tuberculous mycobacteria (NTM). Five Mtb isolates were contaminated and the remaining 127 were subjected to in-vitro drug susceptibility testing against streptomycin, isoniazid, rifampicin and ethambutol. Twenty-six (20.47%) isolates were resistant to one or more drugs, seven (5.5%) were resistant to rifampicin singly or in combination, and 11 (8.7%) were resistant to isoniazid singly or in combination. Mono-resistance to isoniazid, rifampicin, streptomycin and ethambutol was detected in four (3.1%), one (0.8%), four (3.1%) and two (1.6%), respectively. Five children (3.9%) had MDR-TB; 101 (79.9%) children had Mtb isolates which were sensitive to all four drugs.

CONCLUSIONS: The rifampicin and isoniazid resistance rates were much higher than those in the adult TB population in India.

148: Prakash K, Chandran DS, Khadgawat R, Jaryal AK, Deepak KK. Correlations between endothelial function in the systemic and cerebral circulation and insulin resistance in type 2 diabetes mellitus. *Diab Vasc Dis Res*. 2016 Jan;13(1):49-55. doi: 10.1177/1479164115604120. Epub 2015 Sep 25. PubMed PMID: 26408643.

Insulin resistance is associated with endothelial dysfunction in type 2 diabetes mellitus, which can lead to impaired vascular reactivities of both systemic and cerebral circulations. Appropriate 'correction' of vascular reactivity results for non-endothelium-dependent systemic effects avoids misinterpretation of endothelial function. Therefore, we 'corrected' vascular reactivity results and explored the potential correlations between systemic vascular reactivity, cerebrovascular reactivity and insulin resistance. In 34 patients, 'systemic vascular reactivity' was assessed by quantifying reactive hyperaemia. Cerebrovascular reactivity was assessed by quantifying changes in cerebral blood flow velocity during hypercapnia. To minimize the influence of non-endothelium-dependent systemic effects on vascular reactivity results, 'corrected systemic vascular reactivity' was calculated by normalizing systemic vascular reactivity using the measurements from the contralateral side; and cerebrovascular reactivity results were corrected by calculating percentage and absolute changes in cerebrovascular conductance index ('percent cerebrovascular conductance index' and 'delta cerebrovascular conductance index', respectively). Insulin resistance was estimated by homeostatic model assessment. Correlation between conventional cerebrovascular reactivity and systemic vascular reactivity was not significant. But correlations between 'corrected systemic vascular

reactivity' and 'percent cerebrovascular conductance index' ( $r=0.51$ ;  $p=0.002$ )

and 'corrected systemic vascular reactivity' and 'delta cerebrovascular

conductance index' ( $r=0.50$ ;  $p=0.003$ ) were significant. Among all vascular

reactivity parameters, only 'delta cerebrovascular conductance index' was significantly correlated with homeostatic model assessment of insulin resistance

( $r=-0.38$ ;  $p=0.029$ ). In conclusion, endothelial function in the systemic and

cerebral circulations is moderately correlated, provided that vascular reactivity estimates are corrected for non-endothelium-dependent influences.

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149: Prasad GL, Sharma MS, Kale SS, Agrawal D, Singh M, Sharma BS. Gamma Knife radiosurgery in the treatment of abducens nerve schwannomas: a retrospective study. *J Neurosurg*. 2016 Jan 29:1-6. [Epub ahead of print] PubMed PMID: 26824380.

**OBJECTIVE** Of the intracranial schwannomas, those arising from the vestibular nerves are the most common. Abducens nerve (AN) schwannomas are very rare, and there is limited literature on their optimal management. Therapeutic options include surgery and/or stereotactic radiosurgery. The aim of this study was to evaluate the role of Gamma Knife radiosurgery (GKRS) in these sixth cranial nerve (CN) schwannomas. **METHODS** The authors performed a retrospective analysis of patients who had undergone GKRS for intracranial tumors at their institute in the period from 2003 to 2010. Inclusion criteria were as follows: isolated AN paresis on presentation, a lesion along the course of the sixth CN, and imaging features characteristic of a schwannoma. Patients with other CN deficits and neurofibromatosis Type 2 were excluded. Symptomatic improvement was defined as the resolution of or an improvement in diplopia noted on a subjective basis or as an improvement in lateral eyeball excursion noted objectively on follow-up. A reduction in tumor volume by at least 20%, as noted by comparing the pre- and post-GKRS images, was deemed significant. **RESULTS** Six patients with a mean age of 37.1 years (range 17-55 years) underwent primary GKRS. There were 2 prepontine cistern, 3 cavernous sinus, and 1 cisterno-cavernous tumor. The mean duration of symptoms was 6.1 months (range 3-12 months). The mean tumor volume was 3.3 cm<sup>3</sup> (range 1.5-4.8 cm<sup>3</sup>). The mean tumor margin radiation dose was 12.5 Gy (range 12-14 Gy), while the median margin dose was 12 Gy (50% isodose line). The median number of isocenters used was 5 (range 4-8). The brainstem received an average 8.35-Gy radiation dosage (range 5.5-11 Gy). The mean follow-up duration was 44.3 months (range 24-78 months). Symptoms remained stable in 1 patient, improved in 3, and resolved in 2 (total improvement 83%). Magnetic resonance imaging at the last follow-up showed a stable tumor size in 3 patients (50%) and a reduction in the other 3. Thus, the tumor control rate achieved was 100%. No new CN deficits were noted. **CONCLUSIONS** Abducens nerve schwannomas are rare intracranial tumors. They can be cavernous, cisternal, or cisterno-cavernous in location. Excellent tumor control rates and symptomatic improvement can be achieved with GKRS, which appears to be a safe and effective, minimally invasive modality for the treatment of such lesions. Therefore, it is reasonable to consider GKRS as the initial treatment of choice for this rare pathology. Long-term follow-up will be essential for further recommendations.

PMID: 26824380 [PubMed - as supplied by publisher]

150: Puri I, Vibha D, Prasad K, Bhatia R. Is congenital melanocytic naevus a link

between Hirayama disease and moyamoya pattern: a new syndrome or a co-incidence? *BMJ Case Rep.* 2016 Jan 8;2016. pii: bcr2015212894. doi: 10.1136/bcr-2015-212894. PubMed PMID: 26746830.

A 22-year-old man presented with a history of progressive weakness and wasting of

the right hand and forearm for 12 months followed by similar symptoms in the left

upper limb for the past 5 months. He also gave a history of episodes of loss of

consciousness for the past 5 years with a frequency of one per 3 months. On

examination, there were melanocytic naevi-one large lesion in the nape of the neck and multiple satellite lesions. On investigation, the cervical cord MRI was normal. The brain MRI and angiography showed a moyamoya pattern. Thus, this patient had congenital melanocytic naevi with Hirayama disease and moyamoya pattern. He was treated with extracranial-intracranial bypass for moyamoya disease. During 6-month follow-up, he has been stable. Although moyamoya syndrome has been associated with several systemic diseases and conditions, the coexistence of a moyamoya pattern with Hirayama disease and melanocytic naevi has not been described so far.

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151: Raheja A, Sinha S, Samson N, Bhoi S, Subramanian A, Sharma P, Sharma BS. Serum biomarkers as predictors of long-term outcome in severe traumatic brain injury: analysis from a randomized placebo-controlled Phase II clinical trial. *J Neurosurg.* 2016 Jan 1:1-11. [Epub ahead of print] PubMed PMID: 26722854.

**OBJECTIVE** There has been increased interest in the potential importance of biochemical parameters as predictors of outcome in severe traumatic brain injury (sTBI). **METHODS** Of 107 patients with sTBI (age 18-65 years with a Glasgow Coma Scale score of 4-8 presenting within 8 hours after injury) who were randomized for a placebo-controlled Phase II trial of progesterone with or without hypothermia, the authors serially analyzed serum biomarkers (S100-B, glial fibrillary acidic protein [GFAP], neuron-specific enolase [NSE], tumor necrosis factor- $\alpha$ , interleukin-6 [IL-6], estrogen [Eg], and progesterone [Pg]). This analysis was performed using the sandwich enzyme-linked immunosorbent assay technique at admission and 7 days later for 86 patients, irrespective of assigned group. The long-term predictive values of serum biomarkers for dichotomized Glasgow Outcome Scale (GOS) score, functional independence measure, and survival status at 6 and 12 months were analyzed using an adjusted binary logistic regression model and receiver operating characteristic curve. **RESULTS** A favorable GOS score (4-5) at 1 year was predicted by higher admission IL-6 (above 108.36 pg/ml; area under the curve [AUC] 0.69, sensitivity 52%, and specificity 78.6%) and Day 7 Pg levels (above 3.15 ng/ml; AUC 0.79, sensitivity 70%, and specificity 92.9%). An unfavorable GOS score (1-3) at 1 year was predicted by higher Day 7 GFAP levels (above 9.50 ng/ml; AUC 0.82, sensitivity 78.6%, and specificity 82.4%). Survivors at 1 year had significantly higher Day 7 Pg levels (above 3.15 ng/ml; AUC 0.78, sensitivity 66.7%, and specificity 90.9%). Nonsurvivors at 1 year had significantly higher Day 7 GFAP serum levels (above 11.14 ng/ml; AUC 0.81, sensitivity 81.8%, and specificity 88.9%) and Day 7 IL-6 serum levels (above 71.26 pg/ml; AUC 0.87, sensitivity 81.8%, and specificity 87%). In multivariate logistic regression analysis, independent predictors of outcome at 1 year were serum levels of Day 7 Pg (favorable GOS-OR 3.24, CI 1.5-7,  $p = 0.003$ ; and favorable survival-OR 2, CI 1.2-3.5,  $p = 0.01$ ); admission IL-6 (favorable

GOS-OR 1.04, CI 1.00-1.08,  $p = 0.04$ ); and Day 7 GFAP (unfavorable GOS-OR 0.79, CI 0.65-0.95,  $p = 0.01$ ; and unfavorable survival-OR 0.80, CI 0.66-0.96,  $p = 0.01$ ). CONCLUSIONS Serial Pg, GFAP, and IL-6 monitoring could aid in prognosticating outcomes in patients with acute sTBI. A cause and effect relationship or a mere association of these biomarkers to outcome needs to be further studied for better understanding of the pathophysiology of sTBI and for choosing potential therapeutic targets. Clinical trial registration no.: CTRI/2009/091/000893 (<http://www.ctri.nic.in>).

152: Raizada N, Jyotsna VP, Upadhyay AD, Gupta N. Bone mineral density in young adult women with congenital adrenal hyperplasia. *Indian J Endocrinol Metab.* 2016 Jan-Feb;20(1):62-6. doi: 10.4103/2230-8210.172283. PubMed PMID: 26904470; PubMed Central PMCID: PMC4743386.

**BACKGROUND:** There is equipoise regarding the status of bone mineral density (BMD) in patients with congenital adrenal hyperplasia (CAH), where patients need to be on long-term low-dose steroids.

**OBJECTIVE:** We aimed to evaluate BMD at the hip, spine and forearm in women with CAH and compare it to healthy young adult women of the same age range.

**SUBJECTS AND METHODS:** Fifteen adult women with CAH with age ranging from 18 to 40 years (mean  $\pm$  standard deviation =  $27.5 \pm 6.2$  years) underwent dual-energy X-ray absorptiometry along with laboratory evaluation. BMD at lumbar spine, hip, forearm along with T-scores were measured. Serum total calcium, phosphate, alkaline phosphatase, 25 hydroxy Vitamin D, intact parathyroid hormone, total testosterone, and dehydroepiandrosterone were assayed. History of any fractures in the past was taken. Fifteen healthy women in the same age range were taken as controls for comparison.

**RESULTS:** The BMD at hip ( $0.85 \pm 0.02$  g/cm<sup>2</sup>) in CAH was significantly lower as compared with controls ( $0.92 \pm 0.03$  g/cm<sup>2</sup>),  $P = 0.029$ ). BMD at lumbar spine was also reduced ( $0.96 \pm 0.02$  vs.  $1.03 \pm 0.03$ ,  $P = 0.057$ ). The BMD at forearm was not significantly different between CAH and controls. The mean Vitamin D was 9.8 ng/ml (deficient range). There was no history of fractures in CAH.

**CONCLUSION:** Young adult CAH women had lower BMD at spine and hip than healthy young adult women of the same age range. The forearm BMD was not different from controls. No change in fracture frequency was present. Patients with CAH being treated with steroids are at increased risk of osteopenia, and their bone health needs to be monitored.

153: Rajashekar P, Talwar S, Kothari SS, Anand A, Airan B. Institutional Experience of Assisting Cavopulmonary Circulation With Central Systemic Artery-to-Central Systemic Vein Shunt. *World J Pediatr Congenit Heart Surg.* 2016 Jan;7(1):36-42. doi: 10.1177/2150135115610284. PubMed PMID: 26714992.

**OBJECTIVE:** Patients who have undergone a previous bidirectional superior cavopulmonary anastomosis and have hypoxemia and anatomy considered unsuitable for the Fontan completion present a difficult subset. We performed common carotid artery-to-internal jugular vein (CCA-IJV) shunt in these patients.

**METHODS:** Between January 2010 and January 2015, eight patients underwent a CCA-IJV shunt. Their records were analyzed retrospectively.

**RESULTS:** There were no early deaths. The baseline arterial saturation prior to the shunt procedure was median 67% (range 60%-72%), which increased to median 83% (range 80%-90%) after the procedure. The preoperative arterial oxygen partial pressure (Pao<sub>2</sub>) ranged from 30 to 49 mm Hg (median 40 mm Hg). The hematocrit dropped from a preoperative median of 65% (range 55%-72%) to a median of 45% (range 42%-48%) after the procedure. Median intensive care unit stay was 2.5 days, and the median hospital stay was 7 days. Median follow-up was 24 months. At the last follow-up, these patients were classified in New York Heart Association class II.

**CONCLUSIONS:** In a selected group of patients who are considered to be unsuitable for completion of Fontan circulation following superior cavopulmonary anastomosis, creation of a CCA-IJV shunt may be helpful to improve saturations and improve ventricular function.

154: Rajeshwari M, Sharma MC, Kakkar A, Nambirajan A, Suri V, Sarkar C, Singh M, Saran RK, Gupta RK. Evaluation of chromosome 1q gain in intracranial ependymomas. *J Neurooncol*. 2016 Apr;127(2):271-8. doi: 10.1007/s11060-015-2047-z. Epub 2016 Jan 2. PubMed PMID: 26725097.

Ependymomas are relatively uncommon gliomas with poor prognosis despite recent advances in neurooncology. Molecular pathogenesis of ependymomas is not extensively studied. Lack of correlation of histological grade with patient outcome has directed attention towards identification of molecular alterations as novel prognostic markers. Recently, 1q gain has emerged as a potential prognostic marker, associated with decreased survival, especially in posterior fossa, high grade tumors. Cases of intracranial ependymomas were retrieved. Tumors were graded using objective criteria to supplement WHO grading. Fluorescence in situ hybridization for 1q gain was performed on formalin-fixed paraffin embedded sections. Eighty-one intracranial ependymomas were analyzed. Pediatric (76 %) and infratentorial (70 %) ependymomas constituted the majority. 1q gain was seen in 27 cases (33 %), was equally frequent in children (34 %) and adults (32 %), supratentorial (37 %) and infratentorial (32 %) location, grade II (33 %) and III (25 %) tumors. Recurrence was noted in 24 cases and death in 7 cases with 5-year progression-free and overall-survival rates of 37 % and 80 %, respectively. Grade II tumors had a better survival than grade III tumors; histopathological grade was the only prognostically significant marker. 1q gain had no prognostic significance. 1q gain is frequent in ependymomas in Indian patients, seen across all ages, sites and grades, and thus is likely an early event in pathogenesis. The prognostic value of 1q gain, remains uncertain, and multicentric pooling of data is required. A histopathological grading system using objective criteria correlates well with patient outcome and can serve as an economical option for prognostication of ependymomas.

155: Ramakrishna BS, Makharia GK, Chetri K, Dutta S, Mathur P, Ahuja V, Amarchand R, Balamurugan R, Chowdhury SD, Daniel D, Das A, George G, Gupta SD, Krishnan A, Prasad JH, Kaur G, Pugazhendhi S, Pulimood A, Ramakrishna K, Verma AK. Prevalence of Adult Celiac Disease in India: Regional Variations and Associations. *Am J Gastroenterol*. 2016 Jan;111(1):115-23. doi: 10.1038/ajg.2015.398. Epub 2016 Jan 5. PubMed PMID: 26729543.

**OBJECTIVES:** Although celiac disease (CeD) affects 1% of people in the northern part of India, it is believed to be uncommon in the southern and northeastern parts because of significant differences in dietary pattern and ethnicity. We estimated the prevalence of CeD in these three populations. In a subset, we also investigated differences in the prevalence of HLA-DQ 2/8 allelotype and dietary grain consumption.

**METHODS:** A total of 23,331 healthy adults were sampled from three regions of India-northern (n=6207), northeastern (n=8149), and southern (n=8973)-and screened for CeD using IgA anti-tissue transglutaminase antibody. Positive tests were reconfirmed using a second ELISA. CeD was diagnosed if the second test was positive and these participants were further investigated. A subsample of participants was tested for HLA-DQ2/-DQ8 and underwent detailed dietary evaluation.

**RESULTS:** Age-adjusted prevalence of celiac autoantibodies was 1.23% in northern, 0.87% in northeastern, and 0.10% in southern India (P<0.0001). Prevalence of CeD and latent CeD, respectively, was 8.53/1,000 and 3.70/1,000 in northern, 4.66/1,000 and 3.92/1,000 in northeastern, and 0.11/1,000 and 1.22/1,000 in the southern part. The population prevalence of genes determining HLA-DQ2 and/or -DQ8 expression was 38.1% in northern, 31.4% in northeastern, and 36.4% in southern

India. Mean daily wheat intake was highest in northern (455g) compared with

northeastern (37g) or southern part (25g), whereas daily rice intake showed an inverse pattern.

**CONCLUSIONS:** CeD and latent CeD were most prevalent in northern India and were the least in southern India. The prevalence correlated with wheat intake and did not reflect differences in the genetic background.

156: Raman VS, Bajpai M, Ali A. Bladder exstrophy-epispadias complex and the role of methylenetetrahydrofolate reductase C677T polymorphism: A case control study. *J Indian Assoc Pediatr Surg.* 2016 Jan-Mar;21(1):28-32. doi: 10.4103/0971-9261.165842. PubMed PMID: 26862292; PubMed Central PMCID: PMC4721125.

**PURPOSE:** The Bladder Exstrophy-Epispadias Complex (BEEC) is the most serious form of midline abdominal malformation. The etiology of BEEC is unknown and is thought to be multifactorial. Methylenetetrahydrofolate reductase (MTHFR) polymorphism C677T is strongly associated with other midline abnormalities such as neural tube defects. No proper case-control study existed comparing MTHFR polymorphism with BEEC. We sought to find an association with MTHFR polymorphism and patients with bladder exstrophy (BE).

**MATERIALS AND METHODS:** The design of the study was a case-control study, involving 50 children with BEEC and 50 normal healthy school children. Genetic analysis for MTHFR 677 polymorphism was carried out after DNA extraction and polymerase chain reaction amplification. Epidemiological analysis was done by using the birth defect questionnaire on parents of BEEC.

**RESULTS:** Forty-two classical BE, two cloacal exstrophies (CE), four epispadias, and two exstrophy variant patients were a part of this study. Severe variety of BE had a significant association with C667T MTHFR polymorphism as compared to the normal control population ( $P = 0.01$ ).

**CONCLUSION:** C677T MTHFR polymorphism has a strong association with severe variety (CE) of BEEC occurrence.

157: Ramanujam B, Dash D, Dabla S, Tripathi M, Srivastava MV. Epilepsia Partialis Continua as Presenting Manifestation of AIDS: A Rarity. *J Int Assoc Provid AIDS Care.* 2016 Jan-Feb;15(1):19-22. doi: 10.1177/2325957415570743. Epub 2015 Feb 9. PubMed PMID: 25667167.

Seizures, most commonly generalized tonic-clonic, are common in known human immune deficiency virus (HIV) sero-positive patients, and they usually have a focal lesion on brain imaging. However, it is very unusual to see a patient with no premorbid illness presenting with epilepsy partialis continua (EPC) and then being detected HIV seropositive with an Acquired Immune Deficiency Syndrome (AIDS)-defining illness. We report the case of a teenaged boy with no past significant history or known high-risk behavior who presented with recurrent focal seizures of 5 days' duration, EPC, and encephalopathy. His electroencephalogram showed periodic lateralized epileptiform discharges (PLEDS), and magnetic resonance imaging (MRI) of the brain showed abnormal signal changes in the right parieto-occipital cortex and thalamus, both as yet unreported in cytomegalovirus (CMV) encephalitis, which was diagnosed by the cerebrospinal fluid (CSF) analysis.

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158: Rastogi N, Mathur P, Bindra A, Goyal K, Sokhal N, Kumar S, Sagar S, Aggarwal R, Soni KD, Tandon V. Infections due to *Elizabethkingia meningoseptica* in critically injured trauma patients: a seven-year study. *J Hosp Infect.* 2016 Jan;92(1):30-2. doi: 10.1016/j.jhin.2015.07.008. Epub 2015 Aug 14. PubMed PMID: 26763750.

*Elizabethkingia meningoseptica* is an infrequent cause of hospital-acquired infections. The clinical and microbiological profiles of infections due to

*E. meningoseptica* over a seven-year period at a Level-I trauma centre are reported in this study. Medical records of patients from whose clinical samples *E. meningoseptica* was isolated on more than one occasion were reviewed. A total of 21 cases were observed during the study, 16 (76.2%) of which exhibited multidrug resistance. The observed in-hospital mortality rate was 47.6%. A high index of clinical suspicion and effective detection of *E. meningoseptica* in clinical samples are requisite for improved clinical outcome.

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159: Ratan SK, Sharma A, Kapoor S, Polipalli SK, Dubey D, Mishra TK, Sinha SK, Agarwal SK. Polymorphism of 3' UTR of MAMLD1 gene is also associated with increased risk of isolated hypospadias in Indian children: a preliminary report. *Pediatr Surg Int*. 2016 May;32(5):515-24. doi: 10.1007/s00383-016-3856-7. Epub 2016 Jan 27. PubMed PMID: 26815876.

**OBJECTIVE:** To study MAMLD1 gene polymorphisms, serum LH and testosterone levels amongst Indian children with isolated hypospadias (IH) and controls.

**MATERIALS AND METHODS:** Screening of the MAMLD1 gene was performed by PCR sequencing method in 100 Indian children aged 0-12 years presenting with IH and 100 controls. LH and testosterone hormone levels were also assessed (categorized in four age-wise groups).

**RESULTS:** IH subjects had significantly higher incidence of MAMLD1 polymorphism as compared to controls (33 vs 15 %,  $p = 0.01$ ). Of various genomic variants identified in this study, the noteworthy novel ones were missense mutation P299A and single nucleotide polymorphism c.2960C>T in 3' UTR of Exon 7. While p 299A was found to cause protein structural instability consequent to amino acid change, eighty percent subjects with c.2960C>T in 3' UTR of Exon 7 (corresponding to newly discovered currently non-validated exon 11) were found to have lower testosterone levels when compared with their age group mean. IH showed statistically higher incidence of c.2960C>T in comparison to controls (22 vs 10 %,  $p$  value 0.046) and about 2.5-folds higher risk of this anomaly.

**CONCLUSION:** Occurrence of MAMLD1 gene polymorphisms, specially of c.2960C>T in 3' UTR of its exon 7 is associated with a higher risk of IH in Indian children, probably by lowering androgenic levels.

160: Rath GP, Sharma VB, Dube SK. Persistent Premature Atrial Contraction as the Sole Presentation of Trigemino-cardiac Reflex during Radiofrequency Thermocoagulation. *J Neurosurg Anesthesiol*. 2016 Jan 22. [Epub ahead of print] PubMed PMID: 26807695.

161: Rubens M, Ramamoorthy V, Attonito J, Saxena A, Appunni S, Shehadeh N, D'Amico JG. A review of 5-HT transporter linked promoter region (5-HTTLPR) polymorphism and associations with alcohol use problems and sexual risk behaviors. *J Community Genet*. 2016 Jan;7(1):1-10. doi: 10.1007/s12687-015-0253-1. Epub 2015 Sep 4. PubMed PMID: 26338666; PubMed Central PMCID: PMC4715809.

Alcohol use and sexual risk behaviors are multidimensional phenomena involving many genetic and environmental factors. 5-HT transporter linked promoter region (5-HTTLPR) polymorphism constitutes an important factor affecting alcohol use problems and risky sexual behaviors. This paper narratively reviews studies on 5-HTTLPR polymorphism and its associations with alcohol use problems and sexual risk behaviors. We searched the electronic databases, PubMed, Ovid, and Google Scholar for articles using MeSH terms. Relevant articles were reviewed and eligible articles were selected for the study. Many studies have reported a significant but moderate association between 5-HTTLPR polymorphism and alcohol use problems. These studies have implicated the presence of at least one S allele to be associated with significant increases in alcohol use problems. Similarly, some studies associate the S allele with increased sexual risk behaviors. Effective alcohol cessation initiatives and STI/HIV prevention programs should be modified to account for 5-HTTLPR polymorphism before planning interventions; genetic effects could moderate the intervention effect.

162: Rustagi RS, Arora K, Das RR, Pooni PA, Singh D. Incidence, risk factors and outcome of acute kidney injury in critically ill children - a developing country perspective. *Paediatr Int Child Health*. 2016 Jan 9:1-7. [Epub ahead of print] PubMed PMID: 26752169.

**BACKGROUND:** Acute kidney injury (AKI) is common in critically ill children and is associated with poor outcome.

**OBJECTIVE:** To study the incidence, risk factors and outcome of AKI in children admitted to paediatric intensive care unit (PICU) of a developing country.

**MATERIALS AND METHODS:** This prospective observational study was conducted in a tertiary care PICU over one-year period. Critically ill children aged from 2 months to 18 years were included. RIFLE criteria based on GFR, and urine output was used for categorisation.

**RESULTS:** Of 380 children, 53 children (14%) had AKI (met any of the RIFLE criteria). The most common diagnoses underlying AKI were acute lower respiratory tract infection, CNS illness and severe dehydration. Subjects with AKI had a higher PRISM score (>10) at admission, longer duration of stay and high mortality. Significant risk factors for AKI following multivariate analysis were: age 1-5, PRISM score (>10) at admission, shock, infection, thrombocytopenia, hypo-albuminaemia and multi-organ dysfunction. Twenty-six of 53 subjects fulfilled the maximum RIFLE criteria within 72 h after admission and the mean (SD) time to first RIFLE attend was 1.6 (1.2) day. Subjects with AKI (RIFLE criteria) had 4.5 times higher mortality than those without AKI (36 vs 8%,  $P < \text{etc}$ ).

**CONCLUSION:** A high incidence of AKI was noted in the PICU that was associated with high mortality. The RIFLE criterion is an effective tool which can be used not only for predicting the outcomes, but may help in the early identification of patients at risk for AKI.

163: Sahai P, Shukla NK, Arora S, Mohanti BK. Recurrent sebaceous carcinoma of the eyelid: Outcome after postoperative reirradiation. *Head Neck*. 2016 Jan;38(1):E16-9. doi: 10.1002/hed.24089. Epub 2015 Jul 18. PubMed PMID: 25900883.

**BACKGROUND:** The purpose of this study was for us to describe a case of recurrent sebaceous carcinoma treated with postoperative reirradiation.

**METHODS:** A 38-year-old man was diagnosed with sebaceous carcinoma of the right lower eyelid. The patient developed local recurrence 4 times, with the first one at 30 months after the excision. The first local recurrence was treated with excision and postoperative radiotherapy with 60 Gy/30 fractions/6 weeks. He manifested preauricular nodal metastasis with the third local recurrence, which was confirmed with (18) F-fluorodeoxyglucose positron emission tomography-CT ((18) F-FDG PET-CT). He received 2 courses of adjuvant reirradiation to the right orbit with 45 Gy/25 fractions/5 weeks and 30 Gy/15 fractions/3 weeks, respectively.

**RESULTS:** The patient was successfully treated with no evidence of locoregional recurrence at 2 years after the cancer-directed therapy. The patient's follow-up from the date of diagnosis has been 9 years.

**CONCLUSION:** Adjuvant reirradiation with modest doses may be considered with a view to provide disease control and long-term survival. © 2015 Wiley Periodicals, Inc. *Head Neck* 38: E16-E19, 2016.

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164: Sahu MK, Das A, Malik V, Subramanian A, Singh SP, Hote M. Comparison of levosimendan and nitroglycerine in patients undergoing coronary artery bypass graft surgery. *Ann Card Anaesth*. 2016 Jan-Mar;19(1):52-8. doi: 10.4103/0971-9784.173020. PubMed PMID: 26750674.

**BACKGROUND:** Levosimendan a calcium ion sensitizer improves both systolic and diastolic functions. This novel lusitropic drug has predictable antiischemic properties which are mediated via the opening of mitochondrial adenosine triphosphate-sensitive potassium channels. This action of levosimendan is beneficial in cardiac surgical patients as it improves myocardial contractility,



decreases systemic vascular resistance (SVR), and increases cardiac index (CI) and is thought to be cardioprotective. We decided to study whether levosimendan has any impact on the outcomes such as the duration of ventilation, the length of Intensive Care Unit (ICU) stay, and the hospital stay when compared with the nitroglycerine (NTG), which is the current standard of care at our center.

**MATERIALS AND METHODS:** Forty-seven patients undergoing elective coronary artery bypass surgery were randomly assigned to two groups receiving either levosimendan or NTG. The medications were started before starting surgery and continued until 24 h in the postoperative period. Baseline hemodynamic parameters were evaluated before beginning of the operation and then postoperatively at 3 different time intervals. N-terminal fragment of pro-brain natriuretic peptide (NT-proBNP) levels were also measured in both groups.

**RESULTS:** In comparison to the NTG group, the duration of ventilation and length of ICU stay were significantly less in levosimendan group ( $P < 0.05$ ,  $P = 0.02$ ). NT-proBNP level analysis showed a slow rising pattern in both groups and a statistically significant rise in the levels was observed in NTG group ( $P = 0.03$ ,  $P = 0.02$ ) in postoperative period when compared to levosimendan group of patients.

**CONCLUSION:** Levosimendan treatment in patients undergoing surgical revascularization resulted in improved CI, decreased SVR and lower heart rate. And, thereby the duration of ventilation and length of ICU stay were significantly less in this group of patients when compared with NTG group.

165: Saini L, Kumar RM, Chakrabarty B, Gulati S. Recurrent headache in a five year old boy. *Ann Indian Acad Neurol*. 2016 Jan-Mar;19(1):143-5. doi: 10.4103/0972-2327.160085. PubMed PMID: 27011651; PubMed Central PMCID: PMC4782536.

Headache is infrequent in early childhood. Headache and neurological deficits associated with cerebrospinal fluid (CSF) lymphocytosis (HaNDL), a variant of migraine, is a rare disorder. A 5-year-old boy presented with recurrent episodes of headache for 6 months. Each episode lasted for a week and in the current episode, he was symptomatic for 3 days. All the episodes were associated with paresthesias and CSF lymphocytosis with normal protein and sugar. There was history of migraine in his family. His magnetic resonance imaging (MRI) brain with contrast with magnetic resonance (MR) angiography and venography were normal. Work-up for relevant causes of infection and vasculitis were negative. His symptoms subsided on oral antimigraine prophylaxis and he has been on remission for last 8 months. HaNDL should be considered in relevant clinical scenarios, as it prevents unnecessary investigations, therapy, and hospitalization.

166: Sankar J, Lotha W, Ismail J, Anubhuti C, Meena RS, Sankar MJ. Vitamin D deficiency and length of pediatric intensive care unit stay: a prospective observational study. *Ann Intensive Care*. 2016 Dec;6(1):3. doi: 10.1186/s13613-015-0102-8. Epub 2016 Jan 8. PubMed PMID: 26745966; PubMed Central PMCID: PMC4706541.

**BACKGROUND:** Due to the limited data available in the pediatric population and lack of interventional studies to show that administration of vitamin D indeed improves clinical outcomes, opinion is still divided as to whether it is just an innocent bystander or a marker of severe disease. Our objective was therefore to estimate the prevalence of vitamin D deficiency in children admitted to intensive care unit (ICU) and to examine its association with duration of ICU stay and other key clinical outcomes.

**METHODS:** We prospectively enrolled children aged 1 month-17 years admitted to the ICU over a period of 8 months ( $n = 101$ ). The primary objectives were to estimate the prevalence of vitamin D deficiency (serum 25 (OH)  $<20$  ng/mL) at 'admission' and to examine its association with length of ICU stay.

**RESULTS:** The prevalence of vitamin D deficiency was 74 % (95 % CI: 65-88). The median (IQR) duration of ICU stay was significantly longer in 'vitamin D deficient' children (7 days; 2-12) than in those with 'no vitamin D deficiency' (3 days; 2-5;  $p = 0.006$ ). On multivariable analysis, the association between length of ICU stay and vitamin D deficiency remained significant, even after

adjusting for key baseline variables, diagnosis, illness severity (PIM-2), PELOD, and need for fluid boluses, ventilation, inotropes and mortality [adjusted mean difference (95 % CI): 3.5 days (0.50-6.53);  $p = 0.024$ ].

CONCLUSIONS: We observed a high prevalence of vitamin D deficiency in critically ill children in our study population. Vitamin D deficient children had a longer duration of ICU stay as compared to others.

167: Sankar MJ, Sankar J, Mehta M, Bhat V, Srinivasan R. Anti-vascular endothelial growth factor (VEGF) drugs for treatment of retinopathy of prematurity. *Cochrane Database Syst Rev.* 2016;2:CD009734. doi: 10.1002/14651858.CD009734.pub2. Epub 2016 Feb 27. Review. PubMed PMID: 26932750.

BACKGROUND: Vascular endothelial growth factor (VEGF) plays a key role in angiogenesis in fetal life. Recently, researchers have attempted to use anti-VEGF agents for the treatment of retinopathy of prematurity (ROP), a vasoproliferative disorder. There is currently uncertainty regarding the safety and efficacy of these agents in preterm infants with ROP.

OBJECTIVES: To evaluate the efficacy and safety of anti-VEGF drugs when used either as monotherapy, i.e. without concomitant cryotherapy or laser therapy or in combination with planned cryo/laser therapy in preterm infants with type 1 ROP (defined as zone I any stage with plus disease, zone I stage 3 with or without plus disease or zone II stage 2 or 3 with plus disease).

SEARCH METHODS: We searched the Cochrane Central Register of Controlled Trials (CENTRAL 2016, Issue 1), MEDLINE (1966 to January 1, 2016), EMBASE (1980 to January 1, 2016), CINAHL (1982 to January 1, 2016), conference proceedings, and previous reviews.

SELECTION CRITERIA: Randomised or quasi-randomised controlled trials that evaluated the efficacy and safety of administration, or both, of anti-VEGF agents compared with conventional therapy in premature infants with ROP.

DATA COLLECTION AND ANALYSIS: We used standard Cochrane and Cochrane Neonatal methods for data collection and analysis.

MAIN RESULTS: Three trials, in which 239 infants participated, fulfilled the inclusion criteria. Two trials compared intravitreal bevacizumab with conventional laser therapy (monotherapy) while the third compared intravitreal pegaptanib plus laser treatment with laser and cryotherapy (combination therapy) in infants with type 1 ROP. Of the two studies that evaluated intravitreal bevacizumab, one randomized infants while the other randomized eyes of the infants to the intervention and control groups. The former did not report any difference in the incidence of complete or partial retinal detachment between the groups (143 infants; RR 1.04, 95% CI 0.21 to 5.13; RD 0.00, 95% CI -0.06 to 0.07; very low quality evidence) but reported a significant reduction in the risk of refractive errors - very high myopia - at 30 months of age (211 eyes; RR 0.06, 95% CI 0.02 to 0.20; RD -0.40, 95% CI -0.50 to -0.30; low quality evidence) and recurrence of ROP by 54 weeks' postmenstrual age (143 infants; RR 0.22, 95% CI 0.08 to 0.62; RD -0.20, 95% CI -0.31 to -0.09; moderate quality evidence) in the bevacizumab group. The study found no difference in the risk of mortality before discharge from the hospital (150 infants; RR 1.50; 95% CI 0.26 to 8.75; RD 0.01; 95% CI -0.04 to 0.07; low quality evidence), mortality at 30 months of age (150 infants; RR 0.86, 95% CI 0.30 to 2.45; RD -0.01; 95% CI -0.10 to 0.08; low quality evidence), corneal opacity requiring corneal transplant (286 eyes; RR 0.34, 95% CI 0.01 to 8.26; RD -0.01; 95% CI -0.03 to 0.02; very low quality evidence), or lens opacity requiring cataract removal (286 eyes; RR 0.15, 95% CI 0.01 to 2.79; RD -0.02; 95% CI -0.05 to 0.01; very low quality evidence). The second trial that randomized eyes of the infants did not find any difference in the risk of complete retinal detachment between the eyes randomized to bevacizumab and those that were randomized to laser therapy (13 eyes; RR 0.33, 95% CI 0.01 to 7.50; RD -0.08, 95% CI -0.27 to 0.11). When used in combination with laser therapy, intravitreal pegaptanib was found to reduce the risk of retinal detachment when compared to laser/cryotherapy alone (152 eyes; RR 0.26, 95% CI 0.12 to 0.55; RD -0.29, 95% CI -0.42 to -0.16; low quality evidence). The incidence of recurrence of ROP by 55 weeks' postmenstrual age was also lower in the pegaptanib + laser therapy group (76 infants; RR 0.29, 95% CI 0.12 to 0.7; RD -0.35, 95% CI -0.55 to -0.16; low quality evidence). There was no difference in the risk of perioperative retinal haemorrhages between the two groups (152 eyes;

RR 0.62, 95% CI 0.24 to 1.56; RD -0.05, 95% CI -0.16 to 0.05; very low quality evidence). The risk of delayed systemic adverse effects with either of the drugs is, however, not known.

#### AUTHORS' CONCLUSIONS:

**IMPLICATIONS FOR PRACTICE:** Intravitreal bevacizumab reduces the risk of refractive errors during childhood when used as monotherapy while intravitreal pegaptanib reduces the risk of retinal detachment when used in conjunction with laser therapy in infants with type 1 ROP. Quality of evidence was, however, low for both the outcomes because of the risk of detection and other biases. Effect on other critical outcomes and, more importantly, the long-term systemic adverse effects of the drugs are not known. The insufficient data precludes strong conclusions favouring routine use of intravitreal anti-VEGF agents in preterm infants with type 1 ROP.

**IMPLICATIONS FOR RESEARCH:** Further studies are needed to evaluate the effect of anti-VEGF agents on structural and functional outcomes in childhood and delayed systemic adverse effects such as myocardial dysfunction and adverse neurodevelopmental outcomes.

168: Sankaranarayanan R, Prabhu PR, Pawlita M, Gheit T, Bhatla N, Muwonge R, Nene BM, Esmey PO, Joshi S, Poli UR, Jivarajani P, Verma Y, Zomawia E, Siddiqi M, Shastri SS, Jayant K, Malvi SG, Lucas E, Michel A, Butt J, Vijayamma JM, Sankaran S, Kannan TP, Varghese R, Divate U, Thomas S, Joshi G, Willhauck-Fleckenstein M, Waterboer T, MÅller M, Sehr P, Hingmire S, Kriplani A, Mishra G, Pimple S, Jadhav

R, Sauvaget C, Tommasino M, Pillai MR; Indian HPV vaccine study group. Immunogenicity and HPV infection after one, two, and three doses of quadrivalent HPV vaccine in girls in India: a multicentre prospective cohort study. *Lancet Oncol.* 2016 Jan;17(1):67-77. doi: 10.1016/S1470-2045(15)00414-3. Epub 2015 Dec 2. PubMed PMID: 26652797.

**BACKGROUND:** An increase in worldwide HPV vaccination could be facilitated if fewer than three doses of vaccine are as effective as three doses. We originally aimed to compare the immunogenicity and frequency of persistent infection and cervical precancerous lesions caused by vaccine-targeted HPV after vaccination with two doses of quadrivalent vaccine on days 1 and 180 or later, with three doses on days 1, 60, and 180 or later, in a cluster-randomised trial. Suspension of the recruitment and vaccination due to events unrelated to our study meant that some enrolled girls could not be vaccinated and some vaccinated girls received fewer than the planned number of vaccinations by default. As a result, we re-analysed our data as an observational cohort study.

**METHODS:** Our study was designed to be done in nine locations (188 clusters) in India. Participants were unmarried girls aged 10-18 years vaccinated in four cohorts: girls who received three doses of vaccine on days 1, 60, and 180 or later, two doses on days 1 and 180 or later, two doses on days 1 and 60 by default, and one dose by default. The primary outcomes were immunogenicity in terms of L1 genotype-specific binding antibody titres, neutralising antibody titres, and antibody avidity after vaccination for the vaccine-targeted HPV types 16, 18, 6, and 11 and incident and persistent infections with these HPVs. Analysis was per actual number of vaccine doses received. This study is registered with ISRCTN, number ISRCTN98283094; and with ClinicalTrials.gov, number NCT00923702.

**FINDINGS:** Vaccination of eligible girls was initiated on Sept 1, 2009, and

continued until April 8, 2010. Of 21 258 eligible girls identified at 188

clusters, 17 729 girls were recruited from 178 clusters before suspension. 4348

(25%) girls received three doses, 4979 (28%) received two doses on days 1 and 180 or later, 3452 (19%) received two doses at days 1 and 60, and 4950 (28%) received

one dose. Immune response in the two-dose HPV vaccine group was non-inferior to the three-dose group (median fluorescence intensity ratio for HPV 16 1.12 [95% CI 1.02-1.23] and for HPV 18 1.04 [0.92-1.19]) at 7 months, but was inferior in the two-dose default (0.33 [0.29-0.38] for HPV 16 and 0.51 [0.43-0.59] for HPV 18) and one-dose default (0.09 [0.08-0.11] for HPV 16 and 0.12 [0.10-0.14] for HPV 18) groups at 18 months. The geometric mean avidity indices after fewer than three doses by design or default were non-inferior to those after three doses of vaccine. Fewer than three doses by design and default induced detectable concentrations of neutralising antibodies to all four vaccine-targeted HPV types, but at much lower concentration after one dose. Cervical samples from 2649 participants were tested and the frequency of incident HPV 16, 18, 6, and 11 infections was similar irrespective of the number of vaccine doses received. The testing of at least two samples from 838 participants showed that there was no persistent HPV 16 or 18 infections in any study group at a median follow-up of 4.7 years (IQR 4.2-5.1).

INTERPRETATION: Despite the limitations imposed by the suspension of the HPV vaccination, our findings lend support to the WHO recommendation of two doses, at least 6 months apart, for routine vaccination of young girls. The short-term protection afforded by one dose of HPV vaccine against persistent infection with HPV 16, 18, 6, and 11 is similar to that afforded by two or three doses of vaccine and merits further assessment.

FUNDING: Bill & Melinda Gates Foundation.

© 2015 International Agency for Research on Cancer. Published by Elsevier Ltd/Inc/BV. All rights reserved.

169: Satapathy S, Swain R, Pandey V, Behera C. An Adolescent with Bestiality Behaviour: Psychological Evaluation and Community Health Concerns. *Indian J Community Med.* 2016 Jan-Mar;41(1):23-6. doi: 10.4103/0970-0218.170961. PubMed PMID: 26917869; PubMed Central PMCID: PMC4746949.

Bestiality is a serious but less commonly reported form of animal cruelty occurring in a society. It is a punishable sexual offence in India. Bestiality has received little attention in recent psychiatric literature, and even though case reports have been published, an elaborate psychological assessment is often missing. This case report of 18 year old male presented here highlighted the importance of psychological assessment to emphasize on its implications for the further risk assessment of the person, family psycho-education and non-pharmacological intervention for bestialists. The overall assessment suggested of absence of any brain dysfunction and active psychopathology, average intelligence (IQ) and intact cognitive functioning. The findings portrayed physical and sexual inadequacies, emotional and sexual immaturity, difficulty in emotional attachment, internalized hostility, voyeuristic tendencies and infantile social behaviour, excitement seeker, inability to delay gratification of impulses, lacks empathy, poor self-discipline, less conscientiousness and less sensitive to criticism. The report also emphasized the role of child sexual abuse on sexual behavior later life. The importance of including the topic within the community health/sexual and reproductive health education programmes was highlighted.

170: Saurabh A, Thakral D, Mourya MK, Singh A, Mohan A, Bhatnagar AK, Mitra DK, Kanga U. Differential expression of HLA-G and ILT-2 receptor in human tuberculosis: Localized versus disseminated disease. *Hum Immunol.* 2016 Jan 9. pii: S0198-8859(16)00005-7. doi: 10.1016/j.humimm.2016.01.004. [Epub ahead of print] PubMed PMID: 26776460.

171: Saxena R, Sharma M, Singh D, Dhiman R, Sharma P. Medial transposition of split lateral rectus augmented with fixation sutures in cases of complete third nerve palsy. *Br J Ophthalmol.* 2016 May;100(5):585-7. doi: 10.1136/bjophthalmol-2015-307583. Epub 2016 Jan 12. PubMed PMID: 26758537.

Human leukocyte antigen-G (HLA-G) is an anti-inflammatory and immunosuppressive molecule that can modulate immune cell activation. The role of HLA-G in

tuberculosis, an immune-mediated and chronic bacterial disease remains to be elucidated. We investigated the expression profile of soluble and membrane bound HLA-G in pulmonary TB (PTB), TB pleural effusion (TB-PE, localized disease) and Miliary TB (disseminated form). The expression of HLA-G receptor, ILT-2 was also determined on the immune cells. We observed that the plasma sHLA-G levels were significantly increased in Miliary TB than in TB-PE patients. In contrast, immunophenotyping revealed that the percent frequency of CD3(+) T cells expressing HLA-G was significantly reduced in Miliary TB as compared to TB-PE, whereas frequency of CD14(+) monocytes expressing HLA-G was significantly higher in TB-PE patients. Strikingly in the TB-PE cases, comparison of disease site, i.e. pleural effusion with peripheral blood showed increased expression of both soluble and surface HLA-G, whereas ILT-2 expressing cells were reduced at the local disease site. Furthermore, we demonstrated that in TB-PE cases, HLA-G expression on CD3(+) T cells was influenced by broad spectrum MMP inhibitor. Thus, differential expression of HLA-G could potentially be a useful biomarker to distinguish different states of TB disease.

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172: Saxena R, Talwar S, Gharde P, Kumar MV, Choudhary SK. Repair of Concomitant Double Orifice Mitral and Tricuspid Valves. *World J Pediatr Congenit Heart Surg.* 2016 Jan;7(1):120-2. doi: 10.1177/2150135113517907. PubMed PMID: 26715007.

The coexistence of double orifice mitral and tricuspid valves is rare. We report a five-year-old boy with double orifice mitral and tricuspid valves requiring surgical correction of hemodynamically significant mitral and tricuspid stenosis.

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173: Sehrawat U, Pokhriyal R, Gupta AK, Hariprasad R, Khan MI, Gupta D, Naru J, Singh SB, Mohanty AK, Vanamail P, Kumar L, Kumar S, Hariprasad G. Comparative Proteomic Analysis of Advanced Ovarian Cancer Tissue to Identify Potential Biomarkers of Responders and Nonresponders to First-Line Chemotherapy of Carboplatin and Paclitaxel. *Biomark Cancer.* 2016 Mar 16;8:43-56. doi: 10.4137/BIC.S35775. eCollection 2016. PubMed PMID: 26997873; PubMed Central PMCID: PMC4795487.

Conventional treatment for advanced ovarian cancer is an initial debulking surgery followed by chemotherapy combination of carboplatin and paclitaxel. Despite initial high response, three-fourths of these women experience disease recurrence with a dismal prognosis. Patients with advanced-stage ovarian cancer who underwent cytoreductive surgery were enrolled and tissue samples were collected. Post surgery, these patients were started on chemotherapy and followed up till the end of the cycle. Fluorescence-based differential in-gel expression coupled with mass spectrometric analysis was used for discovery phase of experiments, and real-time polymerase chain reaction, Western blotting, and pathway analysis were performed for expression and functional validation of differentially expressed proteins. While aldehyde reductase, hnRNP, cyclophilin A, heat shock protein-27, and actin are upregulated in responders, prohibitin, enoyl-coA hydratase, peroxiredoxin, and fibrin- $\beta$  are upregulated in the nonresponders. The expressions of some of these proteins correlated with increased apoptotic activity in responders and decreased apoptotic activity in nonresponders. Therefore, the proteins qualify as potential biomarkers to predict chemotherapy response.

174: Sethuraman G, Marwaha RK, Challa A, Yenamandra VK, Ramakrishnan L, Thulkar S, Sharma VK. Vitamin D: A New Promising Therapy for Congenital Ichthyosis. *Pediatrics.* 2016 Jan;137(1):1-5. doi: 10.1542/peds.2015-1313. Epub 2015 Dec 31. PubMed PMID: 26721572.

Severe vitamin D deficiency and rickets are highly prevalent among children with congenital ichthyosis. We report an incidental observation of a dramatic and excellent clinical response with regard to skin scaling and stiffness in children

with congenital ichthyosis after short-term high-dose vitamin D supplementation that has not been previously described. Seven children with congenital ichthyosis (5 with autosomal recessive congenital ichthyosis; 2 with epidermolytic ichthyosis) and severe vitamin D deficiency (and/or rickets) were given 60,000 IU of oral cholecalciferol daily for 10 days under supervision. All children were subsequently put on recommended daily allowance of 400 to 600 IU of cholecalciferol. The main outcome measures observed and studied were reduction in skin scaling and stiffness of the extremities. All cases had severe vitamin D deficiency (serum 25-hydroxyvitamin D < 4 ng/mL) and secondary hyperparathyroidism. Six patients had clinical and radiologic evidence of rickets. Significant improvement in scaling was noticeable by day 5, showing further improvement by day 10, in 6 of the 7 cases. At 1 month, the skin had become near normal in all the cases of autosomal recessive congenital ichthyosis. Remarkable reduction in stiffness was also observed in all children. Supplementation with high-dose vitamin D followed by recommended daily allowance appears to be an effective form of therapy in the management of congenital ichthyosis with vitamin D deficiency.

Copyright © 2016 by the American Academy of Pediatrics.

175: Sharma C, Biswas NR, Ojha S, Velpandian T. Comprehensive evaluation of formulation factors for ocular penetration of fluoroquinolones in rabbits using cassette dosing technique. *Drug Des Devel Ther.* 2016 Feb 22;10:811-23. doi: 10.2147/DDDT.S95870. eCollection 2016. PubMed PMID: 26955263; PubMed Central PMCID: PMC4769009.

**OBJECTIVE:** Corneal permeability of drugs is an important factor used to assess the efficacy of topical preparations. Transcorneal penetration of drugs from aqueous formulation is governed by various physiological, physiochemical, and formulation factors. In the present study, we investigated the effect of formulation factors like concentration, pH, and volume of instillation across the cornea using cassette dosing technique for ophthalmic fluoroquinolones (FQs). **MATERIALS AND METHODS:** Sterile cocktail formulations were prepared using four congeneric ophthalmic FQs (ofloxacin, sparfloxacin, pefloxacin mesylate, and gatifloxacin) at concentrations of 0.025%, 0.5%, and 0.1%. Each formulation was adjusted to different pH ranges (4.5, 7.0, and 8.0) and assessed for transcorneal penetration in vivo in rabbit's cornea (n=4 eyes) at three different volumes (12.5, 25, and 50 µL). Aqueous humor was aspirated through paracentesis after applying local anesthesia at 0, 5, 15, 30, 60, 120, and 240 minutes postdosing. The biosamples collected from a total of 27 groups were analyzed using liquid chromatography-tandem mass spectroscopy to determine transcorneal permeability of all four FQs individually.

**RESULTS:** Increase in concentration showed an increase in penetration up to 0.05%; thereafter, the effect of concentration was found to be dependent on volume of instillation as we observed a decrease in transcorneal penetration. The highest transcorneal penetration of all FQs was observed at pH 7.0 at concentration 0.05% followed by 0.025% at pH 4.5. Lastly, increasing the volume of instillation from 12.5 to 50 µL showed a significant fall in transcorneal penetration.

**CONCLUSION:** The study concludes that formulation factors showed discernible effect on transcorneal permeation; therefore, due emphasis should be given on drug development and design of ophthalmic formulation.

176: Sharma DN, Gaffney DK. Concurrent chemobrachytherapy in locally advanced cervical carcinoma: A hypothesis worth exploring. *Brachytherapy.* 2016 Mar-Apr;15(2):200-4. doi: 10.1016/j.brachy.2015.12.010. Epub 2016 Jan 30. PubMed PMID: 26832672.

177: Sharma DN, Gandhi AK, Bhatla N, Kumar S, Rath GK. High-dose-rate interstitial brachytherapy for female peri-urethral cancer. *J Contemp Brachytherapy.* 2016 Feb;8(1):41-7. doi: 10.5114/jcb.2016.57461. Epub 2016 Jan 27. PubMed PMID: 26985196; PubMed Central PMCID: PMC4793063.

**PURPOSE:** Peri-urethral cancer (PUC) in females is a rare malignancy. Surgery is

not usually contemplated due to associated morbidity. Radiation therapy (RT) can be employed in the form of interstitial brachytherapy (IBT) alone for early lesions, and external beam radiation therapy (EBRT) with or without IBT for advanced lesions. We report our first experience in the literature to evaluate the role of high-dose-rate (HDR) IBT in female PUC.

**MATERIAL AND METHODS:** Between 2008 and 2013, 10 female patients with PUC (5 primary and 5 recurrent) were treated with HDR-IBT with or without EBRT at our center. Size of the lesion ranged from 1.5 cm to 5.0 cm. A 2-3 plane free-hand implant was performed using plastic catheters. The prescribed dose of HDR-IBT was 42 Gy in 14 fractions for brachytherapy alone (5 patients), and 18-21 Gy for the boost along with EBRT (5 patients). Patients were followed up regularly for assessment of disease control and toxicity.

**RESULTS:** At a median follow up of 25 months, six patients were disease free at their last follow up. Four patients developed recurrence: 2 at inguinal nodes, 1 at local site, and 1 at both local as well as inguinal nodes. Moist desquamation was the commonest acute toxicity observed in all 5 patients treated with IBT alone, which healed within 4 weeks' time. Overall, grade II delayed complication rate was 30%.

**CONCLUSIONS:** Though small sample size, the results of our study have shown that HDR-IBT provides good loco-regional control with acceptable toxicity for female PUC.

178: Sharma G, Lodha R, Shastri S, Saini S, Kapil A, Singla M, Mukherjee A, Jat KR, Kabra M, Kabra SK. Zinc Supplementation for One Year Among Children with Cystic Fibrosis Does Not Decrease Pulmonary Infection. *Respir Care*. 2016 Jan;61(1):78-84. doi: 10.4187/respcare.04038. Epub 2015 Oct 6. PubMed PMID: 26443019.

**BACKGROUND:** Children with cystic fibrosis may have a deficiency of micronutrients, including zinc, which may affect their susceptibility to infections. There is a paucity of data on zinc supplementation among children with cystic fibrosis. We hypothesized that a pharmacologic dose of zinc administered daily for 12 months would reduce the need for antibiotics by 50%.

**METHODS:** This double-blind randomized placebo-controlled trial was conducted among children with cystic fibrosis to assess the effect of zinc supplementation on the need for antibiotics and pulmonary function tests. The children, age 5-15 y, of either sex, received either 30-mg zinc tablets or similar looking placebo tablets daily in addition to standard care. They were followed up every month for a period of 12 months and whenever they had pulmonary exacerbations. Their serum zinc was estimated at baseline and at 12 months of enrollment. During each visit, the children underwent a pulmonary function test and sputum culture.

**RESULTS:** Of a total of 43 children screened, 40 were enrolled, and of them, 37 completed the study. The median (interquartile range) number of days of the administration of antibiotics over 12 months of follow-up among the children receiving zinc was 42 (14-97) d. In the placebo group, it was 38 (15-70) d ( $P = .79$ ). There were no significant differences in the percent-of-predicted FEV1 or change in FEV1 values at 12 months ( $P = .44$ ). The number of children in whose respiratory specimens *Pseudomonas* was isolated was similar for the 2 groups at different time intervals. The adverse events reported were similar in the 2 groups.

**CONCLUSION:** We did not find any significant difference in the need for antibiotics, pulmonary function tests, hospitalization, colonization with *Pseudomonas*, or the need for antibiotics for children with cystic fibrosis receiving zinc supplementation of 30 mg/d.

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179: Sharma JB, Sharma S, Usha BR, Yadav M, Kumar S, Mukhopadhyay AK. Cross-sectional study of serum parathyroid hormone level in high-risk pregnancies as compared to nonpregnant control. *Indian J Endocrinol Metab*. 2016 Jan-Feb;20(1):92-6. doi: 10.4103/2230-8210.172288. PubMed PMID: 26904475; PubMed Central PMCID: PMC4743392.

**OBJECTIVES:** To note the value of serum parathyroid hormone (PTH) levels in normal

and high-risk pregnancies (HRP) in patients attending antenatal visits at All India Institute of Medical Sciences (AIIMS).

**MATERIALS AND METHODS:** This is a cross-sectional study where a total of 282 patients attending Gynecology Outpatient Department at AIIMS, New Delhi were recruited. Among the 282 subjects, 251 were pregnant, and 31 were controls. The serum was tested for serum PTH levels using Beckman coulter access 2 immunoassay.

**RESULTS:** The median value of PTH level in pregnant women was 31.6 pg/ml with range being 0.8-505.5 pg/ml in contrast to 45.9 pg/ml with range being 19-102.7 pg/ml in nonpregnant female. This difference was statistically significant ( $P = 0.0012$ ). There was no significant difference in median level of PTH in different age group. Although the median PTH levels were lower in second trimester (25.25 pg/ml) than in first trimester (35.5 pg/ml) and in third trimester (32.4 pg/ml), the difference was not statistically significant. There was no significant difference in PTH level in HRP (median value - 31.6 pg/ml) as compared to low-risk pregnancies (31.5 pg/ml).

**CONCLUSION:** Serum PTH levels are significantly lower during pregnancy as compared to nonpregnant state. However, age, parity, and HRP did not alter PTH level during pregnancy.

180: Sharma N, Arora T, Jain V, Agarwal T, Jain R, Jain V, Yadav CP, Titiyal J, Satpathy G. Gatifloxacin 0.3% Versus Fortified Tobramycin-Cefazolin in Treating Nonperforated Bacterial Corneal Ulcers: Randomized, Controlled Trial. *Cornea*. 2016 Jan;35(1):56-61. doi: 10.1097/ICO.0000000000000664. PubMed PMID: 26509763.

**PURPOSE:** To compare the equivalence of gatifloxacin 0.3% with a combination of fortified cefazolin sodium 5% and tobramycin sulfate 1.3% eye drops in the treatment of nonperforated bacterial corneal ulcers.

**METHODS:** In randomized, controlled, equivalence clinical trials, microbiologically proven cases of nonperforated bacterial corneal ulcers were enrolled and were allocated randomly to one of the 2 treatment groups. Group A was given combination therapy (fortified cefazolin sodium 5% and tobramycin sulfate 1.3%) and group B was given monotherapy (gatifloxacin 0.3%). The primary outcome measure was the percentage of corneal ulcers that healed at 3 months of follow-up.

**RESULTS:** Out of 204 patients enrolled, 103 patients were randomized to group A, whereas 101 patients were randomized to group B. The mean  $\pm$  SD of ulcer size in groups A and B were  $4.35 \pm 1.36$  and  $4.18 \pm 1.31$  mm, respectively ( $P = 0.376$ ). The most common bacterial isolate was coagulase-negative Staphylococcus (51.5% in group A and 45.5% in group B). Worsening of the ulcer was seen in 27.2% (28/103) of the cases in group A and in 21.8% (22/101) of the cases in group B. The percentage healing difference was calculated to be 5.4% (90% confidence interval, -4.5 to 15.3). No serious events attributable to therapy were reported in any group.

**CONCLUSIONS:** Using the prespecified definition of equivalence of  $\pm 20\%$ , this trial found evidence that gatifloxacin monotherapy was equivalent to combination therapy with cefazolin and tobramycin for the treatment of nonperforated bacterial corneal ulcers.

181: Sharma N, Sharma VK, Arora T, Singh KR, Agarwal T, Vajpayee RB. Novel Technique for Descemet Membrane Remnant Stripping in Hazy Cornea During DSAEK. *Cornea*. 2016 Jan;35(1):140-2. doi: 10.1097/ICO.0000000000000659. PubMed PMID: 26509760.

**METHODS:** The DM tags or remnants may be difficult to visualize in the presence of hazy corneas. To identify and remove the residual DM remnants and tags, a crescent knife is introduced into the anterior chamber through the 3.2 mm temporal corneoscleral tunnel and is placed intracamerally, parallel to the iris plane underneath scored DM (which had been previously stained with the trypan blue solution). Under direct illumination from the operating microscope, the crescent blade acts as a light reflector so that the blue DM remnants and tags are highlighted against the silver background of the crescent knife. These tags or remnants may then be identified and then peeled off using intravitreal forceps. The donor lenticule is inserted and air tamponade is used for apposition of the donor lenticule to the recipient host.



**RESULTS:** This technique was used successfully in 10 eyes. No DM tags were present in any of the eyes postoperatively and all the grafts were well apposed.

**CONCLUSIONS:** The crescent blade as a reflector is a simple and useful tool to identify trypan blue stained DM remnants or tags in the presence of hazy corneas during endothelial keratoplasty.

182: Sharma V, Purkait S, Takkar S, Malgulwar PB, Kumar A, Pathak P, Suri V, Sharma MC, Suri A, Kale SS, Kulshreshtha R, Sarkar C. Analysis of EZH2: micro-RNA network in low and high grade astrocytic tumors. *Brain Tumor Pathol.* 2016 Apr;33(2):117-28. doi: 10.1007/s10014-015-0245-1. Epub 2016 Jan 8. PubMed PMID: 26746204.

Enhancer of Zeste homologue2 (EZH2) is an epigenetic regulator that functions as oncogene in astrocytic tumors, however, EZH2 regulation remains little studied. In this study, we measured EZH2 levels in low (Gr-II,DA) and high grade (Gr-IV,GBM) astrocytic tumors and found significant increased EZH2 transcript level with grade (median DA-8.5, GBM-28.9). However, a different trend was reflected in protein levels, with GBMs showing high EZH2 LI (median-26.5) compared to DA (median 0.3). This difference in correlation of EZH2 protein and RNA levels suggested post-transcriptional regulation of EZH2, likely mediated by miRNAs. We selected eleven miRNAs that strongly predicted to target EZH2 and measured their expression. Three miRNAs (miR-26a-5p, miR27a-3p and miR-498) showed significant correlation with EZH2 protein, suggesting them as regulators of EZH2, however miR-26a-5p levels decreased with grade. ChIP analyses revealed H3K27me3 modifications in miR-26a promoter suggesting feedback loop between EZH2 and miR26a. We further measured six downstream miRNA targets of EZH2 and found significant downregulation of four (miR-181a/b and 200b/c) in GBM. Interestingly, EZH2 associated miRNAs were predicted to target 25 genes in glioma-pathway, suggesting their role in tumor formation or progression. Collectively, our work suggests EZH2 and its miRNA interactors may serve as promising biomarkers for progression of astrocytic tumors and may offer novel therapeutic strategies.

183: Sharma VK, Chiramel MJ, Rao A. Dermoscopy: A rapid bedside tool to assess monilethrix. *Indian J Dermatol Venereol Leprol.* 2016 Jan-Feb;82(1):73-4. doi: 10.4103/0378-6323.172910. PubMed PMID: 26728817.

184: Shukla J, Dinda AK, Srivastava AK, Srivastava K, Mittal BR, Bandopadhyaya GP. Nanotamoxifen Delivery System: Toxicity Assessment After Oral Administration and Biodistribution Study After Intravenous Delivery of Radiolabeled Nanotamoxifen. *World J Nucl Med.* 2016 Jan-Apr;15(1):7-11. doi: 10.4103/1450-1147.167594. PubMed PMID: 26912972; PubMed Central PMCID: PMC4729022.

Tamoxifen is the most prescribed anticancer oral drug for increasing overall survival and decreasing recurrence and the risk of contralateral disease. However, some side effects, such as endometrial and liver tumors, thromboembolic disorders, and drug resistance, are associated with long-term tamoxifen treatment. We assessed the hematologic and organ toxicity after oral administration of three different doses of nanotamoxifen formulations. We also performed biodistribution studies of Technetium-99m (<sup>99m</sup>Tc)-nanotamoxifen after intravenous administration. The results demonstrated that nanotamoxifen was well-tolerated, with no adverse effect on biochemical parameters of blood and at the cellular level. Nitric oxide (NO) levels indicated no free radical formation. Oral nanotamoxifen is well-tolerated, with no hepatic or renal toxicity. Intravenous nanotamoxifen has potential to escape the liver, and is known for producing the harmful metabolite 4-hydroxytamoxifen (4OH-tamoxifen), which can cause uterine cancer.

185: Siddiqui S, Akhter N, Deo SV, Shukla NK, Husain SA. A study on promoter methylation of PTEN in sporadic breast cancer patients from North India. *Breast Cancer.* 2016 Jan 11. [Epub ahead of print] PubMed PMID: 26754093.

**BACKGROUND:** Epigenetic silencing of phosphatase and tensin homolog deleted on chromosome 10 (PTEN) through DNA methylation has been implicated in the pathogenesis of breast cancer. Present study investigates the contribution of PTEN promoter methylation and its associated protein expression in sporadic breast cancer patients from North India.

**METHODS:** A total of 360 paired breast carcinoma and adjacent normal tissue samples from 180 sporadic breast cancer patients were included in the present study and examined for PTEN promoter methylation status by methylation-specific polymerase chain reaction. Immunohistochemistry method was used for determining PTEN protein expression. Molecular findings were statistically correlated with various clinicopathological parameters to identify associations of clinical relevance.

**RESULTS:** Presence of PTEN promoter methylation (39.44 %) significantly correlated with its expression downregulation (45.56 %) in breast tumors ( $P = 0.0001$ ). Furthermore, their interaction with various clinical parameters was evidenced in stratified analysis. Correlation of PTEN promoter methylation with histologically more malignant grade and PTEN expression loss with triple negative tumor status remained significant even after Bonferroni correction ( $P < 0.003$ ).

**CONCLUSIONS:** Results implicate promoter methylation to be a mechanism partially responsible for PTEN silencing in sporadic breast cancer for North Indian women. Besides, methylation and expression loss of PTEN exhibited promising potential as candidate biomarkers of risk assessment in subcategorized breast tumors with critical pathologic parameters.

186: Singh A, Mandal A, Seth R, Kabra SK. Noma in a child with acute leukaemia: when the 'face of poverty' finds an ally. *BMJ Case Rep.* 2016 Jan 6;2016. pii: bcr2015211674. doi: 10.1136/bcr-2015-211674. PubMed PMID: 26740267.

A 2-year-6-month old, appropriately immunised, well-thriving boy, symptomatic for

the past 6 months, presented with recurrent fever, progressive pallor,

lymphadenopathy and a raw area on the right cheek, with discharging sinus. The necrotising infection of the face developed after one and half months of febrile illness. This febrile illness with bicytopenia was diagnosed as enteric fever and treated with antibiotics. Skin grafting was performed for the full-thickness defect of the face. The patient continued to have a non-healing oral ulcer with progressive pallor and was finally diagnosed as having acute lymphoblastic leukaemia. Immunodeficiency was ruled out by appropriate investigations. Noma is an indirect measure of extreme poverty, but malignancy is known to predispose to this debilitating condition. The worldwide incidence of Noma is reported to be 30,000-140,000, with a preponderance in sub-Saharan Africa. This case emphasises the need for a thorough search for the underlying illness predisposing to a rare opportunistic infection such as Noma in a well-thriving child.

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187: Singh A, Chandrashekhara SH, Handa N, Baliyan V, Kumar P. "Periportal neoplasms"-a CT perspective: review article. *Br J Radiol.* 2016 Apr;89(1060):20150756. doi: 10.1259/bjr.20150756. Epub 2016 Jan 22. PubMed PMID: 26800313.

The periportal space is a potential space surrounding the portal vein and its intrahepatic branches. A variety of neoplasms can involve the periportal region, whether primary or secondary, owing to contiguous spread from surrounding hepatic parenchyma or from adjacent organs. CT plays an important role in not only diagnosing these lesions but also determining the extent of the disease. Most of the malignancies leading to the periportal spread manifest as periportal hypodensity either distinctly or in contiguity with the primary tumour. Even in known malignancies, periportal hypodensity commonly results from non-neoplastic causes like periportal oedema; hence, a knowledge of the imaging findings to ascertain its presence as well as to conclude the definite neoplastic spread is

prudent. Periportal spread of neoplasm may suggest locally aggressive or disseminated disease (in extrahepatic malignancies), which may change management accordingly.

188: Singh H, Mohan P, Kumar R, Gupta YK. Difference in described indications of medicines among drug information sources in India: An issue urgently to be addressed. *J Nat Sci Biol Med.* 2016 Jan-Jun;7(1):93-7. doi: 10.4103/0976-9668.175098. PubMed PMID: 27003979; PubMed Central PMCID: PMC4780177.

**BACKGROUND:** Drug information can be obtained from various sources such as National Formularies, drug package inserts (PI), other sources such as Monthly Index of Medical Specialities (MIMS), Current Index of Medical Specialities, and the information available with the regulators. Any variation in the information available in different sources can promote irrational drug use. In this study, we assessed this variation in a sample of commonly used drugs.

**MATERIALS AND METHODS:** Fifty commonly used drugs were analyzed for any variation (both quantitative and qualitative) in information on indications as mentioned in commonly used drug information sources such as Central Drugs and Standards Control Organization (CDSCO) website, National Formulary of India (NFI), MIMS, and PI of medicines.

**RESULTS:** We observed a variation in average number of indications per drugs given in CDSCO ( $2.2 \pm 0.25$ ), NFI ( $3.51 \pm 0.42$ ), MIMS ( $2.98 \pm 0.29$ ), and PI ( $3.18 \pm 3.52$ ). The CDSCO and NFI did not contain information about indication for 10 and 17 drugs, respectively, while MIMS and PI contained information about all the selected drugs. A subset analysis was done for 24 such drugs which were mentioned in all the four sources and it was found that NFI had listed the maximum number of indications per drug ( $3.79 \pm 0.53$ ), followed by PI ( $3.08 \pm 0.44$ ), MIMS ( $3.04 \pm 0.51$ ), and CDSCO website ( $2.66 \pm 0.37$ ) and this difference was found to be statistically significant ( $P = 0.02$ ). We also observed some gross qualitative variation regarding drug information given in different sources.

**CONCLUSION:** Variation exists in the quantity and quality of information available on indications about drugs available in various sources. Necessary steps need to be taken to harmonize drug information available across various sources so as to provide reliable and uniform drug information thereby promoting rational drug use.

189: Singh I, Agnihotri A, Sharma A, Verma AK, Das P, Thakur B, Sreenivas V, Gupta SD, Ahuja V, Makharia GK. Patients with celiac disease may have normal weight or may even be overweight. *Indian J Gastroenterol.* 2016 Jan;35(1):20-4. doi: 10.1007/s12664-016-0620-9. Epub 2016 Feb 18. PubMed PMID: 26892766.

**BACKGROUND:** It is believed that patients with celiac disease (CeD) are likely to be underweight. Data from west suggest that 8 % to 40 % of them can be overweight or obese. We reviewed data on body mass index (BMI) of our patients with CeD and derived the correlations between BMI and other disease characteristics.

**METHODS:** We retrospectively studied case records of 210 adolescent and adult patients with CeD at the Celiac Disease Clinic. We classified BMI as underweight, normal weight, overweight, and obese based on the Consensus Statement for Diagnosis of Obesity, Abdominal Obesity and the Metabolic Syndrome for Asian Indians for those with age >18 years and revised Indian Association of Pediatrics BMI-for-age charts for those between 12 and 18 years.

**RESULTS:** Of 210 patients, 76 (36.2 %) were underweight, 115 (54.8 %) were normal weight, 13 (6.2 %) were overweight, and 6 (2.9 %) were obese. There was no difference in the proportion of underweight between male and female patients with CeD. The mean age of underweight patients was similar to those having normal or overweight. There was no difference in the mean duration of symptoms; frequencies of diarrhea, anorexia, and weakness; anemia; titer of anti-tissue transglutaminase antibody; and severity of villous atrophy in those with underweight or normal weight or overweight.

**CONCLUSIONS:** In our practice, only one third of patients with CeD had low BMI. A diagnosis of CeD should not be excluded if patient has normal or high BMI.

190: Singh L, Singh G, Bhardwaj S, Sinha A, Bagga A, Dinda A. Dense Deposit

Disease Mimicking a Renal Small Vessel Vasculitis. *J Am Soc Nephrol.* 2016 Jan;27(1):59-62. doi: 10.1681/ASN.2015020187. Epub 2015 Sep 11. PubMed PMID: 26361799; PubMed Central PMCID: PMC4696585.

Dense deposit disease is caused by fluid-phase dysregulation of the alternative complement pathway and frequently deviates from the classic membranoproliferative pattern of injury on light microscopy. Other patterns of injury described for dense deposit disease include mesangioproliferative, acute proliferative/exudative, and crescentic GN. Regardless of the histologic pattern, C3 glomerulopathy, which includes dense deposit disease and C3 GN, is defined by immunofluorescence intensity of C3c two or more orders of magnitude greater than any other immune reactant (on a 0-3 scale). Ultrastructural appearances distinguish dense deposit disease and C3 GN. Focal and segmental necrotizing glomerular lesions with crescents, mimicking a small vessel vasculitis such as ANCA-associated GN, are a very rare manifestation of dense deposit disease. We describe our experience with this unusual histologic presentation and distinct clinical course of dense deposit disease, discuss the pitfalls in diagnosis, examine differential diagnoses, and review the relevant literature.

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191: Singh N, Sreenivas V, Sheoran A, Sharma S, Gupta KB, Khuller GK, Mehta PK. Serodiagnostic potential of immuno-PCR using a cocktail of mycobacterial antigen 85B, ESAT-6 and cord factor in tuberculosis patients. *J Microbiol Methods.* 2016 Jan;120:56-64. doi: 10.1016/j.mimet.2015.11.016. Epub 2015 Nov 25. PubMed PMID: 26625715.

A novel indirect immuno-polymerase chain reaction (I-PCR) assay was developed for the detection of circulating anti-Ag85B (antigen 85B, Rv1886c), anti-ESAT-6 (early secretory antigenic target-6, Rv3875) and anti-cord factor (trehalose 6,6'-dimycolate) antibodies from the sera samples of pulmonary tuberculosis (PTB) and extrapulmonary tuberculosis (EPTB) patients and the results were compared with an analogous enzyme-linked immunosorbent assay (ELISA). We covalently attached the amino-modified reporter DNA to the dithiothreitol (DTT)-reduced anti-human IgG antibody through a chemical linker succinimidyl 4-[N-maleimidomethyl]-cyclohexane-1-carboxylate (SMCC). The detection of cocktail of anti-Ag85B, anti-ESAT-6 and anti-cord factor antibodies was found to be superior to the detection of individual antibodies. The sensitivities of 89.5% and 77.5% with I-PCR and 70.8% and 65% with ELISA were observed in smear-positive and smear-negative PTB cases, respectively with high specificity (90.9%). On the other hand, a sensitivity of 77.5% with I-PCR and 65% with ELISA was observed in EBTB cases. The detection of cocktail of antibodies by I-PCR is likely to improve the utility of existing algorithms for TB diagnosis.

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192: Singh P, Yadav S, Mahapatra S, Seth A. Outcomes following retroperitoneal lymph node dissection in postchemotherapy residual masses in advanced testicular germ cell tumors. *Indian J Urol.* 2016 Jan-Mar;32(1):40-4. doi: 10.4103/0970-1591.173102. PubMed PMID: 26941493; PubMed Central PMCID: PMC4756548.

**INTRODUCTION:** We aimed to study the outcomes of retroperitoneal lymph node dissection (RPLND) in postchemotherapy residual masses in advanced testicular germ cell tumor (GCT) in the Indian population.  
**PATIENTS AND METHODS:** We retrospectively analyzed 35 patients who underwent postchemotherapy RPLND at our institute after primary (29 patients) or salvage (6 patients) chemotherapy over a period of 9 years (June 2003 to July 2012).  
**RESULTS:** The mean age of our patients was 26.8 years. 18 (51.42%) presented with primary tumor in the right testis and 3 (8.51%) had bilateral tumors. Mixed GCT was the most common histology among 19 (54.3%) patients. 14 (40%) patients had the residual mass in para-aortic location, which was the most common site. 14 (40%) patients required an adjunctive procedure, most commonly nephrectomy which was required in 9 out of 14 (25.7%). We recorded 25 complications, mostly

Clavien-Dindo grade II. Histopathology of residual mass was necrosis in 17 (48.57%), teratoma in 12 (34.28%), and viable tumor in 6 (17.14%) patients. CONCLUSION: Nearly half of the patients had either teratoma or viable tumor, thus justifying the surgical resection of postchemotherapy residual mass. Although nearly half of the patients had complications, they were adequately managed and there was no mortality. Thus, postchemotherapy RPLND can be a useful procedure in multimodality approach to GCT in carefully selected patients.

193: Singh P, Arora S, Lal S, Strand TA, Makharia GK. Celiac Disease in Women With Infertility: A Meta-Analysis. *J Clin Gastroenterol*. 2016 Jan;50(1):33-9. doi: 10.1097/MCG.0000000000000285. PubMed PMID: 25564410.

BACKGROUND: Celiac disease (CeD) is a systemic disease with manifestations not limited to small intestine. The data on association between CeD and infertility is contradictory. There are no recommendations for the screening of female patients with infertility for CeD.

AIM: We conducted a meta-analysis to find out whether women with infertility are at higher risk of CeD.

METHODS: Literature search was performed using the MeSH keywords "CeD," "gluten," and "infertility." Diagnosis of CeD was based on positive serology and biopsies showing villous atrophy. Data were extracted about CeD patients in 3 groups-women with infertility (including unexplained infertility), unexplained infertility, and controls. Pooled odds ratio (OR) and prevalence, with 95% confidence intervals (CI), were calculated.

RESULTS: Of 105 relevant studies, 5 studies were included for calculation of pooled OR. Four additional studies, where data on controls were not available, were also considered for calculation of pooled prevalence of CeD. Women with infertility had 3.5 times higher odds of having CeD in comparison with control population (OR=3.5; 95% CI, 1.3-9; P<0.01). Similarly, women with "unexplained infertility" had 6 times higher odds of having CeD than controls (OR=6; 95% CI, 2.4-14.6). Of 884 women with infertility, 20 had CeD indicating a pooled prevalence of 2.3% (95% CI, 1.4-3.5). Of 623 women with "unexplained infertility," 20 had CeD. The pooled prevalence of CeD in women with unexplained infertility was 3.2 (95% CI, 2-4.9).

CONCLUSIONS: CeD is more prevalent in women with "all-cause" infertility and "unexplained" infertility than that in general population.

194: Singh P, Yadav S, Singh A, Saini AK, Kumar R, Seth A, Dogra PN. Systemic Inflammatory Response Syndrome Following Percutaneous Nephrolithotomy: Assessment of Risk Factors and Their Impact on Patient Outcomes. *Urol Int*. 2016;96(2):207-11. doi: 10.1159/000441954. Epub 2016 Jan 9. PubMed PMID: 26745881.

OBJECTIVES: To identify perioperative risk factors for postoperative systemic inflammatory response syndrome (SIRS) and suggest possible modifications to reduce morbidity.

MATERIAL AND METHODS: We prospectively analysed perioperative data such as history of previous stone surgery, number and configuration of stones, presence of stent or nephrostomy, any previous positive urine culture, intraoperative renal pelvic urine and stone culture, aspiration of turbid urine on initial puncture, number of tracts required and clearance of stones, operative time and intraoperative hypotension and tachycardia of all patients who underwent percutaneous nephrolithotomy over a period of 15 months.

RESULTS: A total of 182 patients were included, average stone size was 2.8 cm, 36.2% had staghorn stones and 15.9% had an indwelling stent or nephrostomy. Despite sterile preoperative urine culture, renal pelvic urine culture (RPUC) was positive in 14.8% (27 patients) and stone culture was positive in 21.9% (40 patients). SIRS developed in 17.5% (32 patients) and septic shock in 1.09% (2 patients). On analysis younger age, positive RPUC and stone culture, longer operative time and intraoperative tachycardia correlated significantly with the development of SIRS.

CONCLUSION: Intra-operative cultures are only therapy-guiding cultures during SIRS, as preoperative urine cultures seldom accurately depict bacteriological status of upper tracts and thus should be obtained in all patients.

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195: Singh PM, Borle A, Ramachandran R, Trikha A, Goudra BG. Fontan's circulation with dextrocardia, recent pulmonary embolism, and inferior vena cava filter: Anesthetic challenges for urgent hysterectomy. *Ann Card Anaesth*. 2016 Jan-Mar;19(1):177-81. doi: 10.4103/0971-9784.173044. PubMed PMID: 26750698.

Fontan's circulation is a unique challenge for the anesthesiologist. Venous pressure is the only source of blood flow for the pulmonary circulation. Patients with such circulation are extremely sensitive to progression of cyanosis (decreased pulmonary blood flow) or circulatory failure. Any major venous compression can compromise the pulmonary blood flow worsening cyanosis; simultaneously, an increased afterload can precipitate circulatory failure. We present a rare patient of surgically corrected Ivemark syndrome with Fontan's physiology with dextrocardia who developed a large uterine fibroid compressing inferior vena cava (IVC). As a result of compression, not only the pulmonary circulation was compromised but she also developed stasis-induced venous thrombosis in the lower limbs that lead to pulmonary embolism (PE) (increased afterload). In addition to oral anticoagulation an IVC filter was inserted to prevent ongoing recurrent PE. Further, to prevent both circulatory compromise and deep venous thrombosis an urgent myomectomy/hysterectomy was planned. In the present case, we discuss the issues involved in the anesthetic management of such patients and highlight the lacunae in the present guidelines for managing perioperative anticoagulation these situations.

196: Singh S, Balhara YP. A Review of Indian Research on Co-occurring Psychiatric Disorders and Alcohol use Disorders. *Indian J Psychol Med*. 2016 Jan-Feb;38(1):10-9. doi: 10.4103/0253-7176.175089. Review. PubMed PMID: 27011396; PubMed Central PMCID: PMC4782438.

Excessive use of alcohol has been identified as a major contributor to the global burden of disease. Excessive use of alcohol is a component cause of more than 200 disease and injury conditions. Alcohol use has been associated with increased morbidity and mortality across all regions of the world including South-East Asia. Epidemiological as well as clinic-based studies from Western countries have reported a high prevalence of co-occurrence of alcohol use disorder and psychiatric disorders. The research has established the clinical relevance of this comorbidity as it is often associated with poor treatment outcome, severe illness course, and high service utilization. Understandably, dual disorders in from of alcohol use disorders and psychiatric disorders present diagnostic and management challenge. The current article is aimed to review systematically the published Indian literature on comorbid alcohol use disorders and psychiatric disorders.

197: Singh SP, Chauhan S, Bisoi AK, Sahoo M. Lactate clearance for initiating and weaning off extracorporeal membrane oxygenation in a child with regressed left ventricle after arterial switch operation. *Ann Card Anaesth*. 2016 Jan-Mar;19(1):188-91. doi: 10.4103/0971-9784.173046. PubMed PMID: 26750700.

We hereby report a child with transposition of great arteries and regressed ventricle who underwent arterial switch operation (ASO) with the aid of cardiopulmonary bypass and "integrated" extracorporeal membrane oxygenation (ECMO) circuit. The significance of lactate clearance as a guide to initiate and terminate veno-arterial ECMO in a post ASO child with regressed left ventricle is discussed.

198: Singh UB, Pandey P, Mehta G, Bhatnagar AK, Mohan A, Goyal V, Ahuja V, Ramachandran R, Sachdeva KS, Samantaray JC. Genotypic, Phenotypic and Clinical Validation of GeneXpert in Extra-Pulmonary and Pulmonary Tuberculosis in India. *PLoS One*. 2016 Feb 19;11(2):e0149258. doi: 10.1371/journal.pone.0149258. eCollection 2016. PubMed PMID: 26894283; PubMed Central PMCID: PMC4760939.

BACKGROUND: Newer molecular diagnostics have brought paradigm shift in early

diagnosis of tuberculosis [TB]. WHO recommended use of GeneXpert MTB/RIF [Xpert] for Extra-pulmonary [EP] TB; critics have since questioned its efficiency.

**METHODS:** The present study was designed to assess the performance of GeneXpert in 761 extra-pulmonary and 384 pulmonary specimens from patients clinically suspected of TB and compare with Phenotypic, Genotypic and Composite reference standards [CRS].

**RESULTS:** Comparison of GeneXpert results to CRS, demonstrated sensitivity of 100% and 90.68%, specificity of 100% and 99.62% for pulmonary and extra-pulmonary samples. On comparison with culture, sensitivity for Rifampicin [Rif] resistance detection was 87.5% and 81.82% respectively, while specificity was 100% for both pulmonary and extra-pulmonary TB. On comparison to sequencing of *rpoB* gene [Rif resistance determining region, RRDR], sensitivity was respectively 93.33% and 90% while specificity was 100% in both pulmonary and extra-pulmonary TB. GeneXpert assay missed 533CCG mutation in one sputum and dual mutation [517 & 519] in one pus sample, detected by sequencing. Sequencing picked dual mutation [529, 530] in a sputum sample sensitive to Rif, demonstrating, not all RRDR mutations lead to resistance.

**CONCLUSIONS:** Current study reports observations in a patient care setting in a high burden region, from a large collection of pulmonary and extra-pulmonary samples and puts to rest questions regarding sensitivity, specificity, detection of infrequent mutations and mutations responsible for low-level Rif resistance by GeneXpert. Improvements in the assay could offer further improvement in sensitivity of detection in different patient samples; nevertheless it may be difficult to improve sensitivity of Rif resistance detection if only one gene is targeted. Assay specificity was high both for TB detection and Rif resistance detection. Despite a few misses, the assay offers major boost to early diagnosis of TB and MDR-TB, in difficult to diagnose pauci-bacillary TB.

199: Sinha DN, Suliankatchi RA, Amarchand R, Krishnan A. Prevalence and Sociodemographic Determinants of Any Tobacco Use and Dual Use in Six Countries of the WHO South-East Asia Region: Findings From the Demographic and Health Surveys. *Nicotine Tob Res.* 2016 May;18(5):750-6. doi: 10.1093/ntr/ntv286. Epub 2016 Jan 4. PubMed PMID: 26729735.

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

**AIMS:** We aimed to estimate the age-standardized prevalence of any tobacco use and dual tobacco use and determine their association with sociodemographic variables in six countries (Bangladesh, Indonesia, India, Maldives, Nepal, and Timor Leste) of the WHO South-East Asia Region.

**METHODS:** The main outcome variables "any tobacco use" and "current dual use" were created from the latest available Demographic and Health Surveys data for each country. The prevalence estimates were weighted using sample weights and age standardized using the WHO standard population. Associations between the sociodemographic variables and tobacco use were calculated by performing multivariable logistic regression analysis. Analyses were performed in Stata 12 using "svyset" and "svy" commands.

**RESULTS:** The highest prevalence of any tobacco use among men was in Indonesia (76.4%) and among women in Nepal (15.7%). Also, Nepal had the highest prevalence of dual tobacco use in both men (17.9%) and women (1.5%). With regard to sociodemographic determinants, despite the inter-country variations, any and dual tobacco use were significantly associated with age, higher education, greater wealth, rural residence, and ever-married marital status. The poor and uneducated had a higher odds ratio for these practices.

**CONCLUSION:** Prevalence of dual tobacco use and its underlying socioeconomic disparities should be taken into account for the planning of tobacco control activities in the region.

**IMPLICATIONS:** The dual tobacco use phenomenon is being increasingly recognized as a distinct entity in the fight against tobacco addiction. When compared with single product users, dual users have a greater risk of developing tobacco related diseases and are less likely to quit their habits. However, this phenomenon has not been studied adequately in the South-East Asia region. In this

context, this study has provided a detailed and comprehensive view of dual tobacco use and its sociodemographic determinants in six countries of the region. This study recommends that tobacco control interventions should be targeted specifically at the disadvantaged sections of the society, such as the poor and the uneducated, who are more likely to engage in "dual" as well as "any" tobacco use. This study could prove as an important reference and tool for policy making in the South-East Asia region.

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200: Sinha R, Kumar KR, Chandiran R. A novel technique to prevent damage to the inflation tube of the cuffed endotracheal tube during air-Q guided intubation. *Acta Anaesthesiol Taiwan*. 2016 Mar;54(1):33-4. doi: 10.1016/j.aat.2015.12.001. Epub 2016 Jan 2. PubMed PMID: 26818959.

201: Sinha R, Sharma A, Ray BR, Chandiran R, Chandralekha C, Sinha R. Effect of addition of magnesium to local anesthetics for peribulbar block: A prospective randomized double-blind study. *Saudi J Anaesth*. 2016 Jan-Mar;10(1):64-7. doi: 10.4103/1658-354X.169478. PubMed PMID: 26955313; PubMed Central PMCID: PMC4760046.

**BACKGROUND:** Magnesium sulphate has been used along with local anesthetics in different regional blocks and found to be effective in decreasing the time of onset of the block and increasing the duration of the block.

**OBJECTIVE:** To evaluate the effect of addition of magnesium sulfate to standard local anesthetics mixture on the time for onset of the globe and lid akinesia for peribulbar block in ophthalmic surgeries.

**MATERIALS AND METHODS:** Sixty patients with American Society of Anesthesiologists status I to III undergoing ophthalmic surgery under peribulbar block were included in this study. Patients were randomized into two groups. Both the groups received 4.5 ml of 2% lidocaine, 4.5 ml of 0.5% bupivacaine with 150 IU hyaluronidase. Group NS received normal saline 1 ml in the peribulbar block and Group MS, magnesium sulfate 50 mg in 1 ml normal saline. The onset of akinesia, satisfactory block and complications were observed by an independent observer.

**RESULTS:** Demographic data was statistically similar. In the Group NS at 3, 5, 10 and 15 min after the block, complete akinesia was seen in 0, 2, 11 and 28 patients respectively. In the Group MS, at 3, 5, 10 and 15 min after the block, complete akinesia was seen in 13, 23, 27 and 28 patients respectively. Patients received magnesium sulfate showed the statistically significant rapid onset of lid and globe akinesia than the control group till 10 min ( $P < 0.000$ ). None of the patients needed a supplementary block and had complications during the surgery.

**CONCLUSION:** Addition of 50 mg of magnesium sulfate to the lidocaine-bupivacaine mixture for peribulbar block decreases the onset of akinesia without any obvious side effect.

202: Sinha R, Maitra S. The Effect of Peribulbar Block with General Anesthesia for Vitreoretinal Surgery in Premature and Ex-Premature Infants with Retinopathy of Prematurity. *A A Case Rep*. 2016 Jan 15;6(2):25-7. doi: 10.1213/XAA.0000000000000250. PubMed PMID: 26556110.

Safe anesthesia in premature and ex-premature infants remains a challenge for the anesthesiologist. These infants are at risk of postoperative apnea, desaturation, and bradycardia after general anesthesia. We describe our experience of peribulbar block in 24 infants who underwent vitreoretinal surgery for retinopathy of prematurity. None of our patients had postoperative apnea or required neonatal intensive care admission. A possible opioid and muscle relaxant-sparing effect of peribulbar block might have reduced the incidence of postoperative complications.

203: Solanki HK, Ahamed F, Gupta SK, Nongkynrih B. Road Transport in Urban India:



Its Implications on Health. *Indian J Community Med.* 2016 Jan-Mar;41(1):16-22. doi: 10.4103/0970-0218.170959. PubMed PMID: 26917868; PubMed Central PMCID: PMC4746948.

204: Som D, Tak M, Setia M, Patil A, Sengupta A, Chilakapati CM, Srivastava A, Parmar V, Nair N, Sarin R, Badwe R. A grid matrix-based Raman spectroscopic method to characterize different cell milieu in biopsied axillary sentinel lymph nodes of breast cancer patients. *Lasers Med Sci.* 2016 Jan;31(1):95-111. doi: 10.1007/s10103-015-1830-6. Epub 2015 Nov 9. PubMed PMID: 26552923.

Raman spectroscopy which is based upon inelastic scattering of photons has a potential to emerge as a noninvasive bedside in vivo or ex vivo molecular diagnostic tool. There is a need to improve the sensitivity and predictability of Raman spectroscopy. We developed a grid matrix-based tissue mapping protocol to acquire cellular-specific spectra that also involved digital microscopy for localizing malignant and lymphocytic cells in sentinel lymph node biopsy sample. Biosignals acquired from specific cellular milieu were subjected to an advanced supervised analytical method, i.e., cross-correlation and peak-to-peak ratio in addition to PCA and PC-LDA. We observed decreased spectral intensity as well as shift in the spectral peaks of amides and lipid bands in the completely metastatic (cancer cells) lymph nodes with high cellular density. Spectral library of normal lymphocytes and metastatic cancer cells created using the cellular specific mapping technique can be utilized to create an automated smart diagnostic tool for bench side screening of sampled lymph nodes. Spectral library of normal lymphocytes and metastatic cancer cells created using the cellular specific mapping technique can be utilized to develop an automated smart diagnostic tool for bench side screening of sampled lymph nodes supported by ongoing global research in developing better technology and signal and big data processing algorithms.

205: Somasundaram V, Soni S, Chopra A, Rai S, Mahapatra M, Kumar R, Pati H. Value of Quantitative assessment of Myeloid Nuclear Differentiation Antigen expression and other flow cytometric parameters in the diagnosis of Myelodysplastic syndrome. *Int J Lab Hematol.* 2016 Apr;38(2):141-50. doi: 10.1111/ijlh.12458. Epub 2016 Jan 29. PubMed PMID: 26822549.

**INTRODUCTION:** The diagnosis of myelodysplastic syndrome (MDS) based on morphology is particularly difficult in low-grade MDS. Thus, the role of myeloid nuclear differentiation antigen (MNDA) and other flow cytometric (FCM) parameters in MDS was evaluated.

**METHODS:** Bone marrow aspirates (BMA) collected from 52 patients with unexplained persistent cytopenias were divided into three groups: (i) proven MDS (n = 12) based on morphology and/or cytogenetics; (ii) suspected MDS (n = 6), noncontributory morphology, and cytogenetics; and (iii) non-MDS (n = 34). Sixteen control BMA were studied. Cases were analyzed for MNDA expression (on granulocytes, blasts, monocytes, and lymphocytes) and for seven quantitative parameters: CD34(+) myeloblasts % in nucleated cells, CD34(+) B-cell progenitor% in CD34(+) cells, lymphocyte/myeloblast CD45 MFI ratio, granulocyte/lymphocyte SSC peak channel ratio and the proportion of CD34(+) myeloblasts expressing CD15, CD11b, and CD56. A score of 1 was given to each parameter beyond the cutoff, and score  $\geq 3$  was considered FCM positive.

**RESULTS:** MNDA expression on granulocytes and blasts was significantly lower in proven MDS and suspected MDS vs. non-MDS. Quantitative FCM parameters successfully distinguished MDS and suspected MDS from non-MDS.

**CONCLUSION:** MNDA expression is an independent marker for the evaluation of dyspoiesis and may be added to the standard panel for quantitative assessment by FCM.

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206: Srivastava A, Dixit AB, Banerjee J, Tripathi M, Sarat Chandra P. Role of inflammation and its miRNA based regulation in epilepsy: Implications for therapy. *Clin Chim Acta.* 2016 Jan 15;452:1-9. doi: 10.1016/j.cca.2015.10.023.

Epub 2015 Oct 23. Review. PubMed PMID: 26506013.

There is a need to develop innovative therapeutic strategies to counteract epilepsy, a common disabling neurological disorder. Despite the recent advent of additional antiepileptic drugs and respective surgery, the treatment of epilepsy remains a major challenge. The available therapies are largely based on symptoms, and these approaches do not affect the underlying disease processes and are also associated frequently with severe side effects. This is mainly because of the lack of well-defined targets in epilepsy. The discovery that inflammatory mediators significantly contribute to the onset and recurrence of seizures in experimental seizure models, as well as the presence of inflammatory molecules in human epileptogenic tissue, highlights the possibility of targeting specific inflammation related pathways to control seizures that are otherwise resistant to the available AEDs. Emerging studies suggest that miRNAs have a significant role in regulating inflammatory pathways shown to be involved in epilepsy. These miRNAs can possibly be used as novel therapeutic targets in the treatment of epilepsy as well as serve as diagnostic biomarkers of epileptogenesis. This review highlights the immunological features underlying the pathogenesis of epileptic seizures and the possible miRNA mediated approaches for drug resistant epilepsies that modulate the immune-mediated pathogenesis.

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207: Srivastava K, Narang R, Bhatia J, Saluja D. Expression of Heat Shock Protein 70 Gene and Its Correlation with Inflammatory Markers in Essential Hypertension. PLoS One. 2016 Mar 18;11(3):e0151060. doi: 10.1371/journal.pone.0151060. eCollection 2016. PubMed PMID: 26989902; PubMed Central PMCID: PMC4798713.

**OBJECTIVES:** Hypertension is characterized by systemic high blood pressure and is the most common and important risk factor for the development of cardiovascular diseases. Studies have shown that the circulating levels of certain inflammatory markers such as tumor necrosis factor- $\alpha$  (TNF- $\alpha$ ), interleukin-6 (IL-6), c-reactive protein (CRP), and tumor suppressor protein-53 (p53) are upregulated and are independently associated with essential hypertension. However, mechanism of increase in the levels of HSP70 protein is not clear. No such studies are reported in the blood circulation of patients with essential hypertension. In the present study, we investigated the expression of circulating HSP70 at mRNA and protein levels and its relationship with other inflammatory markers in patients with essential hypertension.

**MATERIALS AND METHODS:** We recruited 132 patients with essential hypertension and 132 normal controls from similar socio-economic-geographical background. The expression of HSP70 at mRNA levels was determined by Real Time PCR and at protein levels by indirect Elisa and Western Blot techniques.

**RESULTS:** We found a significantly higher expression of HSP70 gene expression (approximately 6.45 fold,  $P < 0.0001$ ) in hypertensive patients as compared to healthy controls. A significant difference ( $P < 0.0001$ ) in the protein expression of HSP70 was also observed in plasma of patients as compared to that of controls.

**CONCLUSION:** Higher expression of HSP70 is positively correlated with inflammatory markers in patients with essential hypertension and this correlation could play an important role in essential hypertension.

208: Suchal K, Malik S, Gamad N, Malhotra RK, Goyal SN, Chaudhary U, Bhatia J, Ojha S, Arya DS. Kaempferol Attenuates Myocardial Ischemic Injury via Inhibition of MAPK Signaling Pathway in Experimental Model of Myocardial Ischemia-Reperfusion Injury. Oxid Med Cell Longev. 2016;2016:7580731. doi: 10.1155/2016/7580731. Epub 2016 Mar 21. PubMed PMID: 27087891; PubMed Central PMCID: PMC4819110.

Kaempferol (KMP), a dietary flavonoid, has antioxidant, anti-inflammatory, and antiapoptotic effects. Hence, we investigated the effect of KMP in ischemia-reperfusion (IR) model of myocardial injury in rats. We studied male albino Wistar rats that were divided into sham, IR-control, KMP-20 + IR, and KMP

20 per se groups. KMP (20mg/kg; i.p.) was administered daily to rats for the period of 15 days, and, on the 15th day, ischemia was produced by one-stage ligation of left anterior descending coronary artery for 45min followed by reperfusion for 60min. After completion of surgery, rats were sacrificed; heart was removed and processed for biochemical, morphological, and molecular studies. KMP pretreatment significantly ameliorated IR injury by maintaining cardiac function, normalizing oxidative stress, and preserving morphological alterations. Furthermore, there was a decrease in the level of inflammatory markers (TNF- $\alpha$ , IL-6, and NF $\kappa$ B), inhibition of active JNK and p38 proteins, and activation of ERK1/ERK2, a prosurvival kinase. Additionally, it also attenuated apoptosis by reducing the expression of proapoptotic proteins (Bax and Caspase-3), TUNEL positive cells, and increased level of antiapoptotic proteins (Bcl-2). In conclusion, KMP protected against IR injury by attenuating inflammation and apoptosis through the modulation of MAPK pathway.

209: Swain R, Behera C, Arava SK, Kundu N. Sudden death of a child due to respiratory diphtheria. *Med Leg J.* 2016 Jan 14. pii: 0025817215626542. [Epub ahead of print] PubMed PMID: 26768902.

A four-year-old girl presented to the emergency department with respiratory distress. Death occurred despite attempted resuscitation. The illness was not clinically diagnosed. Her father revealed that she had a fever and sore throat for the last four days and was not immunised for diphtheria. Characteristic gross and microscopic pathology of respiratory diphtheria and microbiological findings were observed. The cause of death was acute respiratory failure consequent upon upper airway obstruction from diphtheria. Forensic pathologists should remember that the diphtheria cases can cause sudden death especially in developing countries.

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210: Talwar P, Sinha J, Grover S, Agarwal R, Kushwaha S, Srivastava MV, Kukreti R. Meta-analysis of apolipoprotein E levels in the cerebrospinal fluid of patients with Alzheimer's disease. *J Neurol Sci.* 2016 Jan 15;360:179-87. doi: 10.1016/j.jns.2015.12.004. Epub 2015 Dec 3. PubMed PMID: 26723997.

The possible association between Apolipoprotein E (ApoE) levels in the cerebrospinal fluid (CSF) and Alzheimer's disease (AD) has been studied extensively. However, previous findings have been inconsistent. We conducted a meta-analysis of observational studies, seeking to provide insights into ApoE's potential as a biomarker for AD. A systematic literature search of PubMed (MEDLINE), EMBASE, and Web of Science was performed to retrieve relevant studies evaluating ApoE levels in CSF from AD subjects and controls. The association between ApoE levels in the CSF and AD was estimated by the weighted mean difference (WMD) and 95% confidence interval (CI) using a random-effect model. We identified 24 studies that included 1064AD cases and 1338 non-demented controls. Although the pooled WMD did not indicate a significant association between AD and ApoE levels (-0.30mg/l; 95% CI: -0.69 to 0.09; P=0.13), sub-group analysis controlling for patient sample size (n $\geq$ 43) revealed significantly lower ApoE levels (WMD: -0.66mg/l; 95% CI: -1.02 to -0.31; P=0.0002) among patients with AD than in controls. Publication bias was absent and sensitivity analysis did not result in any significant change in the pooled estimates, indicating highly

stable results. The present meta-analysis indicates the potential of CSF ApoE levels as a predictor of AD association.

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211: Talwar S, Kamat NA, Choudhary SK, Ramakrishnan S, Saxena A, Juneja R, Kothari SS, Airan B. Mid-term outcomes of patients undergoing adjustable pulmonary artery banding. *Indian Heart J.* 2016 Jan-Feb;68(1):72-6. doi: 10.1016/j.ihj.2015.06.036. Epub 2016 Jan 14. PubMed PMID: 26896271; PubMed Central PMCID: PMC4759487.

**OBJECTIVE:** The adjustable pulmonary artery band (APAB) has been demonstrated by us earlier to be superior to the conventional pulmonary artery banding (CPAB), in terms of reduced early morbidity and mortality. In this study, we assessed the adequacy of the band and its complications over the mid-term.

**METHODS:** Between 2002 and 2012, 73 patients underwent adjustable PAB, and their operative and follow-up data were collected and analyzed.

**RESULTS:** There was one early death following the APAB. Follow-up data were available for 57 patients of which 44 patients (61.7%) underwent definitive repair, 10 were awaiting definitive repair, and 3 patients were kept on medical follow-up because of inadequate fall in pulmonary artery (PA) pressures. 14 patients (19%) were lost to follow-up. Major PA distortion or stenosis was absent in the majority. 1 patient had pseudoaneurysm of the main pulmonary artery (MPA) with sternal sinus infection and required surgical reconstruction. 1 patient had infective endocarditis of the pulmonary valve managed medically. Band migration was not encountered. There were two deaths after definitive repair and one after APAB.

**CONCLUSIONS:** Patients undergoing APAB fulfilled the desired objectives of the pulmonary artery banding (PAB) with minimum PA complications in the mid-term. This added to the early postoperative benefits, makes the APAB an attractive alternative to the CPAB.

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212: Tandon R. Re: Waltz et al.: Clinical outcomes of TECNIS toric intraocular lens implantation after cataract removal in patients with corneal astigmatism (*Ophthalmology* 2015;122:39-47). *Ophthalmology.* 2016 Jan;123(1):e4. doi: 10.1016/j.ophtha.2015.05.032. PubMed PMID: 26707441.

213: Tripathi M, Tripathi M, Garg A, Damle N, Bal C. Ictal onset zone and seizure propagation delineated on ictal F-18 fluorodeoxyglucose positron emission tomography/computed tomography. *Indian J Nucl Med.* 2016 Jan-Mar;31(1):77-8. doi: 10.4103/0972-3919.172372. PubMed PMID: 26917906; PubMed Central PMCID: PMC4746853.

The present case highlights the utility of ictal F-18 fluorodeoxyglucose (FDG) positron emission tomography (PET)/computed tomography (CT) in delineating the seizure onset zone in a child with complex partial seizures. Although F-18 FDG PET has been successfully used to delineate interictal hypometabolism, planned ictal FDG PET, in cases with prolonged seizure activity, can provide better spatial resolution than single-photon emission CT by delineating the seizure onset zone and propagation pathway.

214: Tripathi M, Tang CC, Feigin A, De Lucia I, Nazem A, Dhawan V, Eidelberg D. Automated Differential Diagnosis of Early Parkinsonism Using Metabolic Brain Networks: A Validation Study. *J Nucl Med.* 2016 Jan;57(1):60-6. doi: 10.2967/jnumed.115.161992. Epub 2015 Oct 8. PubMed PMID: 26449840.

The differentiation of idiopathic Parkinson disease (IPD) from multiple system atrophy (MSA) and progressive supranuclear palsy (PSP), the most common atypical parkinsonian look-alike syndromes (APS), can be clinically challenging. In these disorders, diagnostic inaccuracy is more frequent early in the clinical course

when signs and symptoms are mild. Diagnostic inaccuracy may be particularly relevant in trials of potential disease-modifying agents, which typically involve participants with early clinical manifestations. In an initial study, we developed a probabilistic algorithm to classify subjects with clinical parkinsonism but uncertain diagnosis based on the expression of metabolic covariance patterns for IPD, MSA, and PSP. Classifications based on this algorithm agreed closely with final clinical diagnosis. Nonetheless, blinded prospective validation is required before routine use of the algorithm can be considered. METHODS: We used metabolic imaging to study an independent cohort of 129 parkinsonian subjects with uncertain diagnosis; 77 (60%) had symptoms for 2 y or less at the time of imaging. After imaging, subjects were followed by blinded movement disorders specialists for an average of 2.2 y before final diagnosis was made. When the algorithm was applied to the individual scan data, the probabilities of IPD, MSA, and PSP were computed and used to classify each of the subjects. The resulting image-based classifications were then compared with the final clinical diagnosis.

RESULTS: IPD subjects were distinguished from APS with 94% specificity and 96% positive predictive value (PPV) using the original 2-level logistic classification algorithm. The algorithm achieved 90% specificity and 85% PPV for MSA and 94% specificity and 94% PPV for PSP. The diagnostic accuracy was similarly high (specificity and PPV > 90%) for parkinsonian subjects with short symptom duration. In addition, 25 subjects were classified as level I indeterminate parkinsonism and 4 more subjects as level II indeterminate APS.

CONCLUSION: Automated pattern-based image classification can improve the diagnostic accuracy in patients with parkinsonism, even at early disease stages.

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215: Tripathy K, Chawla R, Sharma YR, Venkatesh P, Sagar P, Vohra R, Singh HI, Kumawat B, Byreddy R. Prophylactic laser photocoagulation of fundal coloboma: does it really help? *Acta Ophthalmol.* 2016 Jan 29. doi: 10.1111/aos.12975. [Epub ahead of print] PubMed PMID: 26821601.

216: Tripathy K, Chawla R, Mittal K, Temkar S. Egg yolk in the eye: an ultrawide field evaluation. *BMJ Case Rep.* 2016 Jan 27;2016. pii: bcr2016214358. doi: 10.1136/bcr-2016-214358. PubMed PMID: 26818692.

217: Tripathy K, Sharma YR. Poor vision in a patient with white hair and pale skin. *BMJ.* 2016 Jan 13;352:i24. doi: 10.1136/bmj.i24. PubMed PMID: 26762602.

218: Tyagi K, Hossain ME, Thakur V, Aggarwal P, Malhotra P, Mohammed A, Sharma YD. Plasmodium vivax Tryptophan Rich Antigen PvTRAg36.6 Interacts with PvETRAMP and PvTRAg56.6 Interacts with PvMSP7 during Erythrocytic Stages of the Parasite. *PLoS One.* 2016 Mar 8;11(3):e0151065. doi: 10.1371/journal.pone.0151065. eCollection 2016. PubMed PMID: 26954579; PubMed Central PMCID: PMC4783080.

Plasmodium vivax is most wide spread and a neglected malaria parasite. There is a lack of information on parasite biology of this species. Genome of this parasite encodes for the largest number of tryptophan-rich proteins belonging to 'Pv-fam-a' family and some of them are potential drug/vaccine targets but their functional role(s) largely remains unexplored. Using bacterial and yeast two hybrid systems, we have identified the interacting partners for two of the P. vivax tryptophan-rich antigens called PvTRAg36.6 and PvTRAg56.2. The PvTRAg36.6 interacts with early transcribed membrane protein (ETRAMP) of P.vivax. It is apically localized in merozoites but in early stages it is seen in parasite periphery suggesting its likely involvement in parasitophorous vacuole membrane (PVM) development or maintenance. On the other hand, PvTRAg56.2 interacts with P.vivax merozoite surface protein7 (PvMSP7) and is localized on merozoite surface. Co-localization of PvTRAg56.2 with PvMSP1 and its molecular interaction with PvMSP7 probably suggest that, PvTRAg56.2 is part of MSP-complex, and might assist or stabilize the protein complex at the merozoite surface. In conclusion,

the PvTRAg proteins have different sub cellular localizations and specific associated functions during intra-erythrocytic developmental cycle.

219: Udiya AK, Shetty GS, Chauhan U, Singhal S, Prabhu SM. Multiple Isolated Enteric Duplication Cysts in an Infant - A Diagnostic Dilemma. *J Clin Diagn Res.* 2016 Jan;10(1):TD15-6. doi: 10.7860/JCDR/2016/15129.7129. Epub 2016 Jan 1. PubMed PMID: 26894149; PubMed Central PMCID: PMC4740677.

Completely isolated enteric duplication cysts are a rare variety of enteric duplication cysts having an independent blood supply with no communication with any part of the adjacent bowel segment. We report a case showing two completely isolated enteric duplication cysts originating in the greater omentum and transverse mesocolon in an infant. Multiple isolated enteric duplication cysts involving non-contiguous bowel segments have not been previously reported in the literature. In addition the transverse mesocolon duplication cyst was infected showing septations and loss of double wall sign resulting in difficulty in imaging diagnosis. Both the cysts were excised and confirmed on histopathology.

220: Vallonthaiel AG, Singh MK, Dinda AK, Kakkar A, Thakar A, Das SN. Prognostic significance of cytoplasmic p27 in oral squamous cell carcinoma. *J Oral Pathol Med.* 2016 Jan 11. doi: 10.1111/jop.12392. [Epub ahead of print] PubMed PMID: 26750594.

**OBJECTIVE:** p27 is a cell cycle-dependent kinase inhibitor whose presence in nucleus is associated with good prognosis. Recent studies propose that when localized to cytoplasm, it functions as an oncogene and confers a poorer prognosis. This study aimed at analysing the subcellular localization of p27 and its prognostic significance in oral squamous cell carcinomas (OSCCs).  
**METHODS:** Immunohistochemistry for p27 was carried out on 60 cases of OSCC (30 cases each of those with lymph node metastasis [LN+ve SCC] and without lymph node metastasis [LN-ve SCC]) and 30 normal mucosa. The relationship between p27 localization and prognosis was analysed statistically.  
**RESULTS:** Nuclear immunopositivity was seen in 15%, 23%, 7% and 60%, while cytoplasmic immunopositivity was seen in 80%, 63%, 97% and 43% of all SCC, LN+ve OSCC, LN-ve SCC cases and normal mucosa, respectively. There was a significant inverse correlation between nuclear and cytoplasmic p27 immunopositivity ( $P = 0.001$ ). Nodal status and tumour stage were the only two parameters that correlated with disease-free survival (DFS) in OSCC cases. However, in LN+ve SCC, a significantly shortened DFS was seen in cases with cytoplasmic p27 expression compared to those without ( $P = 0.02$ ). Conversely, LN+ve SCC with nuclear p27 had longer DFS on comparison with those without ( $P = 0.04$ ).  
**CONCLUSIONS:** To the best of our knowledge, this is the first study to analyse cytoplasmic localization of p27 in OSCC and correlate with prognosis. Cytoplasmic localization is associated with poor prognosis in OSCC with lymph node metastasis allowing the consideration of cytoplasmic p27 in predicting prognosis and targeted therapeutic approaches.

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221: Vazirani J, Ali MH, Sharma N, Gupta N, Mittal V, Atallah M, Amescua G, Chowdhury T, Abdala-Figuerola A, Ramirez-Miranda A, Navas A, Graue-Hernández EO, Chodosh J. Autologous simple limbal epithelial transplantation for unilateral limbal stem cell deficiency: multicentre results. *Br J Ophthalmol.* 2016 Jan 27. pii: bjophthalmol-2015-307348. doi: 10.1136/bjophthalmol-2015-307348. [Epub ahead of print] PubMed PMID: 26817481.

**PURPOSE:** To report outcomes of autologous simple limbal epithelial transplantation (SLET) performed for unilateral limbal stem cell deficiency (LSCD) at multiple centres worldwide.  
**METHODS:** In this retrospective, multicentre, interventional case series, records of patients who had undergone autologous SLET for unilateral LSCD, with a minimum

of 6 months of follow-up, were reviewed. The primary outcome measure was clinical

success, defined as a completely epithelised, avascular corneal surface. Kaplan-Meier survival curves were constructed and survival probability was calculated. A Cox proportional hazards analysis was done to assess association of preoperative characteristics with risk of failure. Secondary outcome measures included the percentage of eyes achieving visual acuity of 20/200 or better, percentage of eyes gaining two or more Snellen lines and complications encountered.

RESULTS: 68 eyes of 68 patients underwent autologous SLET, performed across eight centres in three countries. Clinical success was achieved in 57 cases (83.8%).

With a median follow-up of 12 months, survival probability exceeded 80%. Presence

of symblepharon (HR 5.8) and simultaneous keratoplasty (HR 10.8) were found to be significantly associated with a risk of failure. 44 eyes (64.7%) achieved a visual acuity of 20/200 or better, and 44 eyes (64.7%) gained two or more Snellen lines. Focal recurrences of pannus were noted in 21 eyes (36.8%) with clinical success.

CONCLUSION: Autologous SLET is an effective and safe modality for treatment of unilateral LSCD. Clinical success rates and visual acuity improvement are equal to or better than those reported with earlier techniques.

222: Venkataraman V, Anjana RM, Pradeepa R, Deepa M, Jayashri R, Anbalagan VP, Akila B, Madhu SV, Lakshmy R, Mohan V. Stability and reliability of glycated haemoglobin measurements in blood samples stored at  $-20^{\circ}\text{C}$ . *J Diabetes Complications*. 2016 Jan-Feb;30(1):121-5. doi: 10.1016/j.jdiacomp.2015.09.014. Epub 2015 Sep 30. PubMed PMID: 26508472.

AIM: To validate the stability of glycated haemoglobin (HbA1c) measurements in blood samples stored at  $-20^{\circ}\text{C}$  for up to one month.

METHODS: The study group comprised 142 type 2 diabetic subjects visiting a tertiary centre for diabetes at Chennai city in south India. The HbA1c assay was done on a fasting blood sample using the Bio-Rad Variant machine on Day 0 (day of blood sample collection). Several aliquots were stored at  $-20^{\circ}\text{C}$  and the assay was repeated on the 3rd, 7th, 15th, and 30th day after the sample collection. Bland-Altman plots were constructed and variation in the HbA1c levels on the different days was compared with the day 0 level.

RESULTS: The median differences between HbA1c levels measured on Day 0 and the 3rd, 7th, 15th, and 30th day after blood collection were 0.0%, 0.2%, 0.3% and 0.5% respectively. Bland-Altman plot analysis showed that the differences between the day '0' and the different time points tend to get larger with time, but these were not clinically significant.

CONCLUSIONS: HbA1c levels are relatively stable up to 2 weeks, if blood samples are stored at  $-20^{\circ}\text{C}$ .

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223: Verma KK, Singh S, Kumar P, Pandey RM. Seasonal Variation in Contact Hypersensitivity to Parthenium in Patients of Parthenium Dermatitis. *Indian J Dermatol*. 2016 Jan-Feb;61(1):53-6. doi: 10.4103/0019-5154.174026. PubMed PMID: 26955095; PubMed Central PMCID: PMC4763695.

BACKGROUND: Titer of contact hypersensitivity (TCH) is a measure of contact hypersensitivity to an allergen in an individual. Clinical severity of Parthenium dermatitis varies with season. However, the effect of seasonal variation on the TCH as determined by patch test to Parthenium has not been studied.

OBJECTIVE: To study the effect of seasonal variation on TCH to Parthenium hysterothorus in patients with Parthenium dermatitis.

**MATERIALS AND METHODS:** It was a prospective investigational study on clinically and patch test confirmed patients with airborne contact dermatitis to *P. hystrophorus*. The TCH values at baseline and after 6 months were recorded. The patients who were recruited in summers (April to September) and whose repeat patch test and TCH were determined in winters (October to March) were identified as Group I and those who were recruited in reverse order were identified as Group II.

**RESULTS:** The study had 47 patients, of which 23 were in Group I and 24 in Group II. Mean TCH in Group, I (summer to winter) in period I (summer) was  $0.11 \pm 0.28$  whereas that in period II (winter), was  $0.76 \pm 0.41$ . Similarly, mean TCH in Group II (winter to summer) in period I (winter) and period II (summer) were  $0.34 \pm 0.44$  and  $0.166 \pm 0.32$ , respectively. The difference in TCH values (95% confidence interval) in the two groups with a change of season was  $-0.41$  ( $-0.58, -0.24$ ) ( $P < 0.0001$ ).

**CONCLUSIONS:** TCH values in *Parthenium* dermatitis are lower in the summer season, indicating increased sensitivity to *Parthenium* allergen in summer.

224: Verma KK, Bhari N, Sethuraman G. Azathioprine does not influence patch test reactivity in *Parthenium* dermatitis. *Contact Dermatitis*. 2016 Jan;74(1):64-5. doi: 10.1111/cod.12466. PubMed PMID: 26690284.

225: Victora CG, Bahl R, Barros AJ, FranÃ§a GV, Horton S, Krasevec J, Murch S, Sankar MJ, Walker N, Rollins NC; Lancet Breastfeeding Series Group. Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *Lancet*. 2016 Jan 30;387(10017):475-90. doi: 10.1016/S0140-6736(15)01024-7. Review. PubMed PMID: 26869575.

The importance of breastfeeding in low-income and middle-income countries is well recognised, but less consensus exists about its importance in high-income countries. In low-income and middle-income countries, only 37% of children younger than 6 months of age are exclusively breastfed. With few exceptions, breastfeeding duration is shorter in high-income countries than in those that are resource-poor. Our meta-analyses indicate protection against child infections and malocclusion, increases in intelligence, and probable reductions in overweight and diabetes. We did not find associations with allergic disorders such as asthma or with blood pressure or cholesterol, and we noted an increase in tooth decay with longer periods of breastfeeding. For nursing women, breastfeeding gave protection against breast cancer and it improved birth spacing, and it might also protect against ovarian cancer and type 2 diabetes. The scaling up of breastfeeding to a near universal level could prevent 823,000 annual deaths in children younger than 5 years and 20,000 annual deaths from breast cancer. Recent epidemiological and biological findings from during the past decade expand on the known benefits of breastfeeding for women and children, whether they are rich or poor.

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226: Wadhvani M, Venkatesh P, Gogia V, Gupta S, Sharma Y, Pandey V. Patterns of pseudophakic retinal detachment in a referral tertiary care center and the need for improving cataract surgical training. *Eur J Ophthalmol*. 2016 Jan 22:0. doi: 10.5301/ejo.5000737. [Epub ahead of print] PubMed PMID: 26833227.

**PURPOSE:** To determine the risk factors associated with development of rhegmatogenous retinal detachment (RRD) in patients undergoing different types of cataract surgery.

**METHODS:** Records of 200 patients presenting with pseudophakic retinal detachment (PRD) between January 2012 and July 2013 at a tertiary care center were reviewed. Duration and type of cataract surgery (phacoemulsification, extracapsular cataract extraction [ECCE], and small-incision cataract surgery [SICS]) and history of YAG capsulotomy with risk factors were recorded. Presence or absence of these risk factors was analyzed and their association with type of cataract surgery was evaluated.

**RESULTS:** Of these 200 patients, 137 were male and 63 were female. The mean age of



the patients was  $55.19 \pm 12.60$  years and mean duration of cataract surgery to diagnosis of RRD was  $8.64 \pm 5.15$  months. Most patients underwent phacoemulsification (45%), followed by ECCE (31.5%) and SICS (23.5%). Most of the patients with PRD had complicated cataract surgery with intraocular lens (IOL) in sulcus in 63%, anterior chamber IOL in 3%, and aphakia in 0.5%. There was no difference among the 3 types of surgery performed in mean presenting visual acuity, duration between cataract surgery and YAG capsulotomy, or number of posterior chamber IOLs. Incidence of posterior capsular rent ( $p = 0.02$ ) and presence of vitreous in anterior chamber ( $p = 0.01$ ) were significantly higher for patients with retinal detachment (RD) who underwent SICS.

CONCLUSIONS: Many risk factors are associated with RD development after cataract surgery. More stringent efforts at improving the quality of cataract surgical training are likely to help in reducing the risk of PRD.

227: Yadav A, Raheel MS, Kumar R L, Sharma SK, Kanwar H. Cut-throat wounds: Suicidal and homicidal-two case reports and review of literature. *Med Sci Law*. 2016 Jan;56(1):53-7. doi: 10.1177/0025802415591200. Epub 2015 Jun 21. PubMed PMID: 26101442.

Cut-throat wounds are a well-recognized method of homicide, are less commonly used in suicides and are rarely accidental. The forensic pathologist has a very challenging and important task when commenting on the manner of infliction of such wounds when such a case is presented with no proper history or witnesses. We present two cases of cut-throat wounds, one suicide and one homicide, to show the differences between the pattern of wounds. We highlight the differences between the two cases in relation to other external injuries, the circumstances in which the bodies were found and other factors. We intend to update the literature regarding this topic in reference to our cases. We also hope that our presentation will be beneficial to doctors performing autopsies on such cases, so as to distinguish the manner of cut-throat wounds in equivocal cases of death.

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228: Yadav R, Balasundaram P, Mridha AR, Iyer VK, Mathur SR. Primary ovarian non-Hodgkin lymphoma: Diagnosis of two cases on fine needle aspiration cytology. *Cytojournal*. 2016 Jan 28;13:2. doi: 10.4103/1742-6413.173588. eCollection 2016. PubMed PMID: 26955396; PubMed Central PMCID: PMC4763460.

Lymphoma of the female genital tract is a rare condition. Involvement of the ovary by non-Hodgkin lymphoma (NHL) is usually secondary to systemic disease and primary ovarian lymphomas are unusual. In most cases, the diagnosis is not suspected initially and is confirmed only after detailed histopathological evaluation. We describe two cases of primary ovarian NHL which were diagnosed on fine needle aspiration cytology (FNAC). One of the patients was a 40 years old female who presented with abdominal distension and lump. She was found to have bilateral adnexal masses on ultrasound and computed tomography (CT) scan. A USG guided fine needle aspiration of the ovarian masses was performed, following which a diagnosis of primary ovarian diffuse large B-cell lymphoma was established. The second patient was a 14 years old female who presented with pelvic lump, which was lobulated and mildly enhancing on contrast enhanced CT. A diagnosis of high grade NHL of ovaries was made on cytology. Subsequently, the lymphoma was characterized as Burkitt's on histopathological examination. Both the patients were started on R-CHOP chemotherapy regimen. FNAC serves as an extremely useful minimally invasive procedure for the diagnosis of ovarian lymphomas and early institution of appropriate chemotherapeutic regimens.

229: Yadav S, Nayyar R, Seth A. Sequential unusual site metastases in renal cell cancer: Saga of repeated tumor implantation and prolonged survival without systemic therapy. *Urol Ann*. 2016 Jan-Mar;8(1):102-4. doi: 10.4103/0974-7796.171501. PubMed PMID: 26834414; PubMed Central PMCID: PMC4719499.

Renal cell cancer (RCC) is known to produce metastasis to unusual sites both synchronously and metachronously several years after the primary treatment. We

report a rare case of RCC with three different, sequential, and each time isolated rare site metastasis to ureteric stump, surgical site, and urinary bladder over a period of 6 years after radical nephrectomy. At each recurrence, metastasectomy was carried out and no systemic therapy was administered. Eleven years after radical nephrectomy and 5 years after last resection, the patient remains disease free. Multiple recurrences can occur in RCC and complete surgical resection results in disease free survival.

230: Yadava OP, Sharma V, Prakash A, Ahlawat V, Kundu A, Mohanty BK, Mishra R, Dinda AK. Correlation between Doppler, Manual Morphometry, and Histopathology Based Morphometry of Radial Artery as a Conduit in Coronary Artery Bypass Grafting. *Cardiol Res Pract*. 2016;2016:8047340. doi: 10.1155/2016/8047340. Epub 2016 Mar 7. PubMed PMID: 27047699; PubMed Central PMCID: PMC4800083.

**Background.** Long-term graft patency is the major factor impacting survival after coronary artery bypass grafting. Arteries are superior in this regard. Radial artery is considered the second best conduit after internal mammary artery. Several studies have shown excellent radial artery patency. We evaluated the morphologic characteristics of radial artery by three modalities, (i) preoperative Doppler ultrasound, (ii) intraoperative manual morphometry, and (iii) postoperative histology-based morphometry, and compared these with the aim of validating Doppler as a noninvasive test of choice for preoperative assessment of radial artery. **Methods.** This was a prospective study involving 100 patients undergoing coronary artery bypass grafting in which radial artery was used. The radial artery was assessed using preoperative Doppler ultrasound studies, intraoperative morphometry, and postoperative histopathology and morphometry. The morphometric measurements included (i) luminal diameter, (ii) intimal and medial thickness, and (iii) intima-media thickness ratio. **Results.** Using Bland-Altman plots, there was a 95% limit of agreement between the preoperative Doppler measurements and the postoperative histopathology and morphometry. **Conclusion.** Doppler ultrasound is an accurate screening test for evaluation of radial artery, in terms of intimal/medial thickness and luminal diameter as a conduit in coronary artery bypass grafting and has been validated by both morphometric and histopathology based studies.