B.B. Dikshit Library
AIIMS
New Delhi

List of publications of AIIMS, New Delhi for the month of July, 2016
[Source: www.pubmed.com].

1: Acharya SK, Shalimar, Kedia S. Editorial: short-length stenoses of hepatic venous outflow tract - an Asian specificity? Authors' reply. Aliment Pharmacol Ther. 2016 Jul;44(2):201-2. doi: 10.1111/apt.13668. PubMed PMID: 27296683.

2: Agarwal N, Bathwal S, Kriplani A, Deorari A, Bhatla N. Intra-amniotic instillation of surfactants for the prevention of neonatal respiratory distress syndrome following preterm delivery. Int J Gynaecol Obstet. 2016 Nov;135(2):196-199. doi: 10.1016/j.ijgo.2016.03.039. PubMed PMID: 27594379.

OBJECTIVE: To assess the efficacy of intra-amniotic administration of surfactants in reducing the incidence and severity of respiratory distress syndrome (RDS), and the need for postnatal endotracheal surfactant during preterm delivery.
METHODS: A prospective pilot study enrolled pregnant women at 28-34 weeks of pregnancy between July 1, 2013 and December 31, 2014 who were randomly assigned in a 1:1 ratio to a control group or to receive intra-amniotic surfactant (3mL) administered under ultrasonography guidance within 2-8 hours of expected delivery. The primary outcomes, the incidence and severity of RDS, and the need for postnatal surfactants, were analyzed on an intention-to-treat basis.
RESULTS: The study enrolled 20 patients to each group. The incidence of RDS did not differ between the two groups (P=0.110). Severe RDS was more common in the control group (P=0.018) and postnatal surfactants were required more frequently in the control group (P=0.02).
CONCLUSION: Intra-amniotic administration of surfactants reduced RDS severity and the need for postpartum endotracheal surfactants. Clinical Trials Registry India: CTRI/2015/12/006399.

DOI: 10.1016/j.ijgo.2016.03.039
PMID: 27594379 [PubMed - in process]

3: Aggarwal S, Das SN. Thiodigalactoside shows antitumour activity by beta-galactoside-binding protein and regulatory T cells inhibition in oral squamous cell carcinoma. Oral Dis. 2016 Jul;22(5):445-53. doi: 10.1111/odi.12479. PubMed PMID: 27004748.

OBJECTIVE: Thiodigalactoside (TDG), a synthetic inhibitor of β-galactoside-binding protein (β-GBP) suppresses tumour growth by inhibiting multiple cancer enhancing activities of β-GBP. Hence, we attempted to understand whether disruption of β-GBP functions and indirect inhibition of Treg cells by TDG affect the growth and establishment of oral cancer cells.
METHOD: The growth, morphology, cell cycle regulation, apoptosis induction and angiogenesis of oral cancer cell lines (SCC-4, SCC-9, SCC-25) via MACS-purified Treg cells were performed by MTT, propidium iodide (PI) staining, annexin-V-binding assay and ELISA respectively.
RESULTS: Treatment with β-GBP showed growth-promoting effects on Tregs and oral cancer cells. However, the treatment with its inhibitor TDG resulted in inhibition of Treg subsets and also decreased the frequency of IL10(+) and IL35(+) Tregs indicating its immunomodulatory effects. Additionally, TDG treatment significantly ($P < 0.001$) inhibited the growth of OSCC cells with a concomitant induction of apoptosis, cell cycle arrest and anti-angiogenesis.
CONCLUSION: It appears that TDG concurrently prevents many tumour-promoting effects of β-GBP in oral cancer cells possibly by Treg inhibition. This offers a preclinical proof of the concept that therapeutic targeting of β-GBP can overcome Treg -mediated tumour promotion and immunosuppression in oral cancer patients.

DOI: 10.1111/odi.12479
PMID: 27004748 [PubMed - in process]

4: Anjum S, Gupta A, Sharma D, Gautam D, Bhan S, Sharma A, Kapil A, Gupta B. Development of novel wound care systems based on nanosilver nanohydrogels of polymethacrylic acid with Aloe vera and curcumin. Mater Sci Eng C Mater Biol Appl. 2016 Jul 1;64:157-66. doi: 10.1016/j.msec.2016.03.069. PubMed PMID: 27127040.

This study is aimed at the development of a composite material for wound dressing containing nanosilver nanohydrogels (nSnH) along with Aloe vera and curcumin that promote antimicrobial nature, wound healing and infection control. Nanosliver nanohydrogels were synthesized by nanoemulsion polymerization of methacrylic acid (MAA) followed by subsequent crosslinking and silver reduction under irradiation. Both the polymerization and irradiation time had significant influence on the nanoparticle shape, size and its formation. Polyvinyl alcohol/polyethylene oxide/carboxymethyl cellulose matrix was used as gel system to blend with nSnH, A. vera, curcumin and coat it on the hydrolysed PET fabric to develop antimicrobial dressings. The cumulative release of silver from the dressing was found to be ~42% of the total loading after 48h. The antimicrobial activity of the dressings was studied against both Staphylococcus aureus and Escherichia coli. In vivo wound healing studies were carried out over a period of 16d on full-thickness skin wounds created on Swiss albino mice. Fast healing was observed in Gel/nSnH/Aloe treated wounds with minimum scarring, as compared to other groups. The histological studies showed A. vera based dressings to be the most optimum one. These results suggest that nSnH along with A. vera based dressing material could be promising candidates for wound dressings.

DOI: 10.1016/j.msec.2016.03.069
PMID: 27127040 [PubMed - in process]

5: Anoop S, Misra A, Mani K, Pandey RM, Gulati S. Diabetes risk prediction model for non-obese Asian Indians residing in North India using cut-off values for pancreatic and intra-abdominal fat volume and liver span. J Diabetes. 2016 Sep;8(5):729-31. doi: 10.1111/1753-0407.12396. PubMed PMID: 26992160.

6: Aravindan A, Sinha R, Priyadarshini N, Malviya A, Hussain I. Standardising markings on paediatric tracheal tubes. Anaesthesia. 2016 Jul;71(7):852-3. doi: 10.1111/anae.13510. PubMed PMID: 27291607.

7: Bairwa D, Kumar V, Vyas S, Das BK, Srivastava AK, Pandey RM, Sharma SK, Jagannathan NR, Sinha S. Case control study: magnetic resonance spectroscopy of brain in HIV infected patients. BMC Neurol. 2016 Jul 12;16:99. doi: 10.1186/s12883-016-0628-x. PubMed PMID: 27405321; PubMed Central PMCID: PMC4942893.

BACKGROUND: In vivo proton magnetic resonance spectroscopy ((1)H-MRS) studies on brain in HIV infected patients have shown significant alteration in neuro-biochemicals.
METHODS: In this study, we measured the neuro-biochemical metabolites from the left frontal white matter (FWM) and left basal ganglia (BG) caudate head nucleus in 71 subjects that include 30 healthy controls, 20 asymptomatic HIV and 21 HIV patients with CNS lesion. Proton MR spectra were acquired at 3 T MRI system and the concentration (institutional units) of tNAA (N-acetylaspartate, NAA+N-acetylaspartylglutamate, NAAG), tCr (Creatine, Cr+phosphocreatine, PCr), choline containing compounds (tCho), glutamate+glutamine (Glx) and lipid and macromolecules at 0.9 ppm were determined using LC Model.
RESULTS: In BG, the concentration of tNAA (6.71±0.64) was decreased and in FWM, the concentration of Glx (20.4±7.8), tCr (9.14±3.04) and lipid and

macromolecules at 0.9 ppm (8.69±2.96) were increased in HIV patients with CNS lesion. In healthy controls, the concentration of tNAA in BG was 7.31±0.47 and concentration of Glx, tCr and lipid and macromolecules in FWM were 15.0±6.06, 6.95±2.56, 5.59±1.56, respectively.
CONCLUSION: Reduced tNAA in BG suggests neuronal loss in HIV patients with CNS lesion while increased Glx in FWM may suggest excito-toxicity. In addition, increased levels of tCr in FWM of HIV patients were observed. The study indicates region specific metabolic changes in tNAA, tCr and Glx in brain of HIV infected patients.

DOI: 10.1186/s12883-016-0628-x
PMCID: PMC4942893
PMID: 27405321 [PubMed - indexed for MEDLINE]

8: Basak T, Garg G, Bhardwaj N, Tanwar VS, Seth S, Karthikeyan G, Sengupta S. Low holo-transcobalamin levels are prevalent in vegetarians and is associated with coronary artery disease in Indian population. Biomarkers. 2016 Jul;21(5):436-40. doi: 10.3109/1354750X.2016.1153718. PubMed PMID: 26999557.

Coronary artery disease (CAD) has been increasing alarmingly in India. We had earlier shown that vitamin B12 deficiency is associated with CAD in Indian population. However, only about a quarter of the total vitamin B12 is internalised in the cells by the proteins transcobalamin II. Vitamin B12-bound transcobalamin II (holotranscobalamin, holoTC) is thus referred to as biologically active B12. In this study, we ascertained the levels of holoTC in 501 CAD cases and 1253 healthy controls and for the first time show that holoTC levels are significantly lower (p=2.57E-4) in CAD (26.81pmol/l) cases as compared to controls (29.97pmol/l).

DOI: 10.3109/1354750X.2016.1153718
PMID: 26999557 [PubMed - in process]

9: Batra A, Kain R, Kumari M, Paul R, Dhawan D, Bakhshi S. Parents' Perspective of Quality of Life of Retinoblastoma Survivors. Pediatr Blood Cancer. 2016 Jul;63(7):1287-9. doi: 10.1002/pbc.25982. PubMed PMID: 27038275.

Health-related quality of life (HRQOL) in retinoblastoma survivors was assessed using parent proxy report of PedsQL(TM) 4.0 generic core scale. One hundred twenty-two parents of retinoblastoma survivors filled the questionnaire satisfactorily. This was compared with parent-reported HRQOL of 50 siblings. The median age of survivors was 98 (range, 60-247) months and male:female ratio was 2:1. The overall parent-reported HRQOL was significantly worse in survivors as compared to controls (74.4 ± 8.5 vs. 85.1 ± 4.6, P < 0.001). All health domains were significantly affected when compared with controls. None of the baseline and treatment-related factors predicted HRQOL.

DOI: 10.1002/pbc.25982
PMID: 27038275 [PubMed - in process]

10: Bhardwaj M, Sharma A, Sen S, Kumar L, Satpathy G, Kashyap S, Pushker N, Singh VK, Rai A. Chlamydia and ocular adnexal lymphomas: An Indian experience. Exp Mol Pathol. 2016 Aug;101(1):74-80. doi: 10.1016/j.yexmp.2016.07.001. PubMed PMID: 27435913.

CHLAMYDIA AND OCULAR ADNEXAL LYMPHOMAS: AN INDIAN EXPERIENCE: Ocular adnexal lymphomas (OALs) are a heterogeneous group of malignancies, majority being extranodal mucosa-associated lymphoid tissue (MALT) type. Different geographical regions have reported association of Chlamydia with OALs (MALT type). In India,

role of Chlamydia in OALs remains unexplored. The aim of this study was to detect Chlamydia and to correlate with clinicopathological features of OALs in India. The clinicopathological features of 41 OAL cases were studied prospectively. Chlamydia DNA was detected by genus specific PCR amplifying major outer membrane protein (MOMP) gene followed by DNA sequencing. Chlamydia immunoexpression was evaluated by immunofluorescence and immunohistochemistry. The results were correlated with clinicopathological features including follow-up and survival. Chlamydia genome was detected in 3/41 (7.3%) OAL cases by PCR. Direct sequencing revealed C. trachomatis in 3 positive cases. Immunofluorescence and immunohistochemistry showed Chlamydia antigen in 5/41 and 1/41 cases respectively. Immunofluorescence demonstrated higher sensitivity than immunohistochemistry. A significant association was observed between Chlamydia positivity and orbital location (P=0.05). Follow-up revealed relapse in 2 Chlamydia positive cases (P=0.056). Our results demonstrate for the first time presence of C. trachomatis genome in 7.3% OAL cases in India. As no other reports are documented, more detailed studies from different regions within India are needed to explore status of Chlamydia in OALs.

DOI: 10.1016/j.yexmp.2016.07.001
PMID: 27435913 [PubMed - in process]

11: Bhari N, Jangid BL, Singh S, Mittal S, Ali F, Yadav S. Urethrocutaneous fistula: a rare presentation of penile tuberculosis. Int J STD AIDS. 2017 Jan;28(1):97-99. doi: 10.1177/0956462416647624. PubMed PMID: 27105661.

A man in his 50s presented with two urethrocutaneous fistulae with intermittent dribbling of urine from the opening of fistula on the surface of glans penis. A skin biopsy from indurated margin of fistula was suggestive of fibrosing granulomatous reaction. Anti-tubercular therapy was given with a diagnosis of penile tuberculosis and there was 50% improvement within two months of treatment.

DOI: 10.1177/0956462416647624
PMID: 27105661 [PubMed - in process]

12: Bhatnagar S, Gupta M. Integrated pain and palliative medicine model. Ann Palliat Med. 2016 Jul;5(3):196-208. doi: 10.21037/apm.2016.05.02. PubMed PMID: 27334349.

Pain is one of the most common, distressing and feared symptom among cancer and other patients in need of palliative care. An estimated 25% of cancer patients and 25 million people die in pain each year. Effective pain and symptom management are the core elements of palliative care which aims at reducing suffering and improving quality of life (QOL) throughout the course of illness starting from diagnosis, in sync with curative treatments and at end of life. There is a prevailing shortage of manpower apt to deal with pain and providing cost-effective palliative care and with the rise of cancer, other chronic diseases and explosion of new life-prolonging therapeutic modalities, this 'Patient-pain and palliative physician' discrepancy is only going to increase, more so in developing countries. The need of the hour is to train all healthcare physicians and nurses especially those working in the field of chronic pain in principles of effective pain and symptom palliation, to integrate cancer pain and symptom management into existing pain management fellowships and to introduce a holistic pain and palliative care model at all levels of healthcare system. Simultaneously, of equal importance is to conduct research, evidence building and formulate policies and guidelines for meticulous symptom management among the diverse category of patients and diseases so as to have a personalized and individualistic approach to patient management. In this comprehensive review, we have pondered upon the need, advantages, barriers and recommendations to achieve ideal 'Integrated pain and palliative medicine' services, their equitable implementation and delivery to 'whomsoever in need of them'.

DOI: 10.21037/apm.2016.05.02
PMID: 27334349 [PubMed - in process]

13: Bhattacharjee HK, Jalaludeen A, Bansal V, Krishna A, Kumar S, Subramanium R, Ramachandran R, Misra M. Impact of standard-pressure and low-pressure pneumoperitoneum on shoulder pain following laparoscopic cholecystectomy: a randomised controlled trial. Surg Endosc. 2016 Jul 21. [Epub ahead of print] PubMed PMID: 27444831.

BACKGROUND: The incidence of shoulder pain (SP) following laparoscopic cholecystectomy (LC) varies between 21 and 80 %. A few randomised controlled trials and meta-analysis have shown lesser SP in LC performed under low-pressure carbon dioxide pneumoperitoneum (LPCP) than under standard-pressure carbon dioxide pneumoperitoneum (SPCP). However, the possible compromise in adequate exposure and effective working space during LPCP has negatively influenced its uniform adoption for LC.
MATERIALS AND METHODS: All consecutive patients undergoing elective LC for gallstone disease who met the inclusion and exclusion criteria were enroled. Fourty patients were randomised to SPCP group (pressure of 14 mmHg) and 40 to LPCP group (pressure of 9-10 mmHg). Primary outcome measured was incidence of SP and its severity on visual analogue scale (VAS) at 4, 8, 24 h and 7 days after LC. Secondary outcomes measured were procedural time, technical difficulty, surgeons' satisfaction score on exposure and working space, intra-operative changes in heart rate and blood pressure, abdominal pain and analgesic requirement. Analyses were performed using Stata software.
RESULTS: There was no conversion to open surgery, bile duct injury or need to increase intra-abdominal pressure on either group. Twenty-three patients (57.5 %) in SPCP group and nine patients (22.5 %) in LPCP group had SP (p = 0.001). The severity of SP was significantly more in SPCP group at 8 and 24 h (p = 0.009 and 0.005, respectively). Both the groups had similar procedural time, surgeons' satisfaction score, intra-operative changes in heart rate and blood pressure.
CONCLUSION: The incidence and severity of SP following LC performed at LPCP are significantly less compared to that in SPCP. The safety, efficacy and surgeons' satisfaction appear to be comparable in both the groups. Hence, a routine practice of low-pressure carbon dioxide pneumoperitoneum may be recommended in selected group of patients undergoing laparoscopic cholecystectomy.
CLINICAL TRIAL REGISTRATION NUMBER: CTRI/2016/02/006590.

DOI: 10.1007/s00464-016-5108-2
PMID: 27444831 [PubMed - as supplied by publisher]

14: Bhushan G, Gupta S, Gupta S, Nischal N. Approach to tubercular disc edema. Indian J Ophthalmol. 2016 Jul;64(7):548-9. doi: 10.4103/0301-4738.190176. PubMed PMID: 27609176; PubMed Central PMCID: PMC5026091.

15: Bopanna S, Roy M, Das P, Dattagupta S, Sreenivas V, Mouli VP, Kedia S, Dhingra R, Pradhan R, Kumar NS, Yadav DP, Makharia G, Ahuja V. Role of random biopsies in surveillance of dysplasia in ulcerative colitis patients with high risk of colorectal cancer. Intest Res. 2016 Jul;14(3):264-9. doi: 10.5217/ir.2016.14.3.264. PubMed PMID: 27433149; PubMed Central PMCID: PMC4945531.

BACKGROUND/AIMS: Recent data suggest that the incidence of ulcerative colitis (UC) related colorectal cancer (CRC) in India is similar to that of West. The optimum method for surveillance is still a debate. Surveillance with random biopsies has been the standard of care, but is a tedious process. We therefore undertook this study to assess the yield of random biopsy in dysplasia surveillance.
METHODS: Between March 2014 and July 2015, patients of UC attending the Inflammatory Bowel Disease clinic at the All India Institute of Medical Sciences

with high risk factors for CRC like duration of disease >15 years and pancolitis, family history of CRC, primary sclerosing cholangitis underwent surveillance colonoscopy for dysplasia. Four quadrant random biopsies at 10 cm intervals were taken (33 biopsies). Two pathologists examined specimens for dysplasia, and the yield of dysplasia was calculated.
RESULTS: Twenty-eight patients were included. Twenty-six of these had pancolitis with a duration of disease greater than 15 years, and two patients had associated primary sclerosing cholangis. No patient had a family history of CRC. The mean age at onset of disease was 28.89±8.73 years and the duration of disease was 19.00±8.78 years. Eighteen patients (64.28%) were males. A total of 924 biopsies were taken. None of the biopsies revealed any evidence of dysplasia, and 7/924 (0.7%) were indefinite for dysplasia.
CONCLUSIONS: Random biopsy for surveillance in longstanding extensive colitis has a low yield for dysplasia and does not suffice for screening. Newer techniques such as chromoendoscopy-guided biopsies need greater adoption.

DOI: 10.5217/ir.2016.14.3.264
PMCID: PMC4945531
PMID: 27433149 [PubMed]

16: Chan TC, Agarwal T, Vajpayee RB, Jhanji V. Cross-linking for microbial keratitis. Curr Opin Ophthalmol. 2016 Jul;27(4):348-52. doi: 10.1097/ICU.0000000000000271. Review. PubMed PMID: 27093100.

PURPOSE OF REVIEW: Microbial keratitis is one of the leading causes of ocular morbidity. The standard treatment consists of antibiotics, which is intensive and is fraught with risks of antibiotic resistance. Corneal collagen cross-linking (CXL) has recently been advocated as an adjunctive therapy for management of microbial keratitis. The addition of CXL to ongoing antimicrobial treatment can have a potential effect on overall duration of the disease, need for corneal transplantation, final visual outcome, and long-term impact on drug resistance pattern.
RECENT FINDINGS: CXL has been used in cases with bacterial, fungal as well as amoebic keratitis. However, so far the reported results have been variable and the evidence is largely anecdotal. The debate over the safety and efficacy of this modality continues especially with regards to its utilization in early phases of the disease when the corneal involvement is limited to the anterior stroma.
SUMMARY: CXL appears to be a promising adjunctive treatment in selective cases of mild to moderate bacterial keratitis. Its efficacy in fungal and amoebic keratitis is questionable. Treatment protocols in microbial keratitis need to be individualized. Long-term, prospective, randomized trials are needed to determine its usefulness in microbial keratitis.

DOI: 10.1097/ICU.0000000000000271
PMID: 27093100 [PubMed - indexed for MEDLINE]

17: Chandra PS, Tripathi M. Letter to the Editor: Endoscope-assisted hemispherotomy and corpus callostomy. J Neurosurg Pediatr. 2016 Jul;18(1):141-4. doi: 10.3171/2015.12.PEDS15681. PubMed PMID: 27035546.

18: Chandrashekhara SH, Rahul K, Handa N, Panda A. Imaging of Retrosternal Space Lesions - A Pictorial Review. Pol J Radiol. 2016 Jul 16;81:331-7. doi: 10.12659/PJR.896744. Review. PubMed PMID: 27504144; PubMed Central PMCID: PMC4954193.

The retrosternal region (RSS) can be involved by diverse lesions. The RSS is the region behind the sternum and anterior to the ascending aorta. It normally is less than 3 cm deep. Chest X-ray is usually the first imaging modality to raise a suspicion of RSS pathology; however computed tomography is the mainstay to delineate and characterize lesions in this location. Lesions in this location

include thyroid, thymic and lymph node lesions; germ cell tumors and vascular lesions. Lesions arising from the sternum, lungs as well as the pleura can also involve this space. The pictorial review depicts the diverse spectrum of lesions in this location.

DOI: 10.12659/PJR.896744
PMCID: PMC4954193
PMID: 27504144 [PubMed]

19: Chaudhari PK, Kharbanda OP. Letter To The Editor. Cleft Palate Craniofac J. 2016 Jul 26. [Epub ahead of print] PubMed PMID: 27458648.

20: Chauhan MS, Behera C, Naagar S, Sreenivas M. Ingestion of safety razor blade and delayed hanging in a complex suicide. Med Leg J. 2016 Dec;84(4):215-218. PubMed PMID: 27465314.

Ingestion of a foreign body is mostly accidental in children and intentional in prisoners to achieve hospitalization; however, use of this method of suicide is rare. We report a case where the victim first ingested a safety razor blade, but failed to die and then hanged himself, but failed again and finally succumbed to the complications on the sixth day. He had also attempted suicide by inflicting multiple incised wounds on his neck four days before the safety blade ingestion, but none were fatal.

DOI: 10.1177/0025817216661118
PMID: 27465314 [PubMed - in process]

21: Chawla B, Hasan F, Seth R, Pathy S, Pattebahadur R, Sharma S, Upadhyaya A, Azad R. Multimodal Therapy for Stage III Retinoblastoma (International Retinoblastoma Staging System): A Prospective Comparative Study. Ophthalmology. 2016 Sep;123(9):1933-9. doi: 10.1016/j.ophtha.2016.05.034. PubMed PMID: 27449712.

PURPOSE: To compare the efficacy of 2 chemotherapeutic drug combinations as part of multimodal therapy for orbital retinoblastoma.
DESIGN: Prospective, comparative, study.
PARTICIPANTS: Patients with stage III retinoblastoma (International Retinoblastoma Staging System).
METHODS: Demographic and clinical features were recorded at presentation. Treatment consisted of a multimodal protocol with neoadjuvant chemotherapy, enucleation, orbital external-beam radiotherapy, and adjuvant chemotherapy. For chemotherapy, patients were randomized into 2 groups: group A patients were treated with vincristine, etoposide, and carboplatin (VEC) and group B patients were treated with carboplatin and etoposide, alternating with cyclophosphamide, idarubicin, and vincristine. Treatment outcomes and adverse effects were recorded. Efficacy parameters were compared between the groups.
MAIN OUTCOME MEASURES: Survival probability, cause of death, and chemotherapy-related toxicity.
RESULTS: A total of 54 children were recruited (27 in each group). The mean ± SD follow-up was 21.3±11.34 months. The overall Kaplan-Meier survival probability was 80% (95% confidence interval [CI], 0.67-0.89) and 42% (95% CI, 0.24-0.59) at 1 year and 4 years, respectively. There were 9 deaths in group A and 15 deaths in group B. The Kaplan-Meier survival probability at 1 year was similar between the groups: 81% (95% CI, 0.60-0.91) and 79% (95% CI, 0.58-0.9) for groups A and B, respectively. At 4 years, the survival probability for group A was higher (63% [95% CI, 0.41-0.79] vs. 25% [95% CI, 0.08-0.46] for groups A and B, respectively), with a strong trend of better survival in group A over time (P = 0.05). The major cause of death was central nervous system relapse (8 patients in group A and 7 patients in group B). Two patients in group B died of sepsis after febrile neutropenia. Grade 3 and grade 4 hematologic toxicities were more common

in group B, with a significant difference in grade 4 neutropenia (P = 0.002).
CONCLUSIONS: This study compared the outcomes of VEC chemotherapy with a 5-drug combination of vincristine and carboplatin, alternating with cyclophosphamide, idarubicin, and vincristine, for stage III retinoblastoma. The VEC combination was found to be more effective and may be recommended as neoadjuvant and adjuvant chemotherapy.

DOI: 10.1016/j.ophtha.2016.05.034
PMID: 27449712 [PubMed - in process]

22: Chawla B, Jain A, Seth R, Azad R, Mohan VK, Pushker N, Ghose S. Clinical outcome and regression patterns of retinoblastoma treated with systemic chemoreduction and focal therapy: A prospective study. Indian J Ophthalmol. 2016 Jul;64(7):524-9. doi: 10.4103/0301-4738.190143. PubMed PMID: 27609166; PubMed Central PMCID: PMC5026079.

PURPOSE: To prospectively study the clinical outcome and regression patterns of early retinoblastoma (Groups A and B) after systemic chemotherapy and focal consolidation in Indian children.
MATERIALS AND METHODS: Group A eyes were treated with focal therapy (transpupillary thermotherapy/cryotherapy) and Group B with systemic chemoreduction and focal therapy. Outcome measures were efficacy and safety of treatment, risk factors for treatment failure, regression patterns, and factors predictive of regression patterns.
RESULTS: Of 119 eyes (216 tumors), 14 (11.8%) were Group A and 105 (88.2%) were Group B eyes. The mean follow-up was 22.6 months. Tumor control was achieved in 111/119 eyes (93.3% overall, 100% Group A, 92.4% Group B). Eight Group B eyes (6.7%) had treatment failure. No serious systemic side-effects were noted. Risk factors for failure included larger tumors (P = 0.001) and proximity to posterior pole (P = 0.014). Regression patterns were Type 4 (50.2%), Type 3 (31.7%), Type 1 (11.1%), and Type 2 (7%). Factors predictive of Type 4 regression were smaller tumors, anterior location, younger age; Type 3 regression was associated with larger tumors, macular location, and older age.
CONCLUSIONS: Systemic chemoreduction and focal therapy provided effective tumor control in Indian children. Factors predictive of regression patterns included age, tumor size and its location, and the modality of treatment.

DOI: 10.4103/0301-4738.190143
PMCID: PMC5026079
PMID: 27609166 [PubMed - in process]

23: Chawla N, Charan D, Kumar S, Pattanayak RD. Pica associated with initiation of atypical antipsychotic drugs: Report of two cases. Psychiatry Clin Neurosci. 2016 Aug;70(8):363-4. doi: 10.1111/pcn.12408. PubMed PMID: 27214004.

24: Chhavi S, Abhyuday K, Parin L. Video laryngoscope as the new standard of care in trauma ED. Am J Emerg Med. 2016 Jul;34(7):1313-4. doi: 10.1016/j.ajem.2016.04.039. PubMed PMID: 27165719.

25: Dabas A, Batra A, Khadgawat R, Jyotsna VP, Bakhshi S. Growth and Endocrinal Abnormalities in Pediatric Langerhans Cell Histiocytosis. Indian J Pediatr. 2016 Jul;83(7):657-60. doi: 10.1007/s12098-016-2053-y. PubMed PMID: 26988579.

OBJECTIVE: To ascertain the growth and endocrinal disturbances associated with Pediatric Langerhans Cell Histiocytosis (LCH).
METHODS: Retrospective analysis of hospital records of subjects with LCH, aged 1 mo to 18 y was performed. The diagnosis of LCH was made as per Histiocyte Society criteria. Subjects were classified as group A: multifocal bone disease;

B: soft tissue involvement without organ dysfunction; and C: organ dysfunction and treated as per DAL-HX-83 protocol of the Histiocyte Society LCH treatment guidelines. Paired t-test was used to compare the baseline and follow-up data. RESULTS: Total 62 records (group A- 18, B-32 and C-12) were identified with median follow-up of 5.3±3.3 y. Growth failure [measured as weight/ height Standard deviation score (SDS) ≤-2] was the commonest disorder seen in 27 (44 %) subjects. Central Diabetes Insipidus (DI) was seen in 12 (19 %) subjects. Subjects with group C of LCH had poorer weight and height at baseline and follow-up than subjects with group A or B. Height SDS were lower in subjects with concomitant DI than those without DI at baseline (-2.35±1.9 and -1.69±1.4; P 0.18). Subjects with DI did not show significant catch-up in their height (P 0.12) unlike those without DI who showed a catch-up in height (P 0.03) on follow-up.
CONCLUSIONS: Growth monitoring and screening for DI should be essential part of follow-up in all subjects with LCH.

DOI: 10.1007/s12098-016-2053-y
PMID: 26988579 [PubMed - in process]

26: Dash C, Garg K, Kale SS. Letter to the Editor: Topical vancomycin use following craniotomy. J Neurosurg. 2016 Jul;125(1):234-5. doi: 10.3171/2016.1.JNS16103. PubMed PMID: 27128586.

27: Durey MA, Sinha A, Togarsimalemath SK, Bagga A. Anti-complement-factor H-associated glomerulopathies. Nat Rev Nephrol. 2016 Sep;12(9):563-78. doi: 10.1038/nrneph.2016.99. Review. PubMed PMID: 27452363.

Atypical haemolytic uraemic syndrome (aHUS), an important cause of acute kidney injury, is characterized by dysregulation of the complement pathway, frequent need for dialysis, and progression to end-stage renal disease. Autoantibodies against complement factor H (FH), the main plasma regulatory protein of the alternative pathway of the complement system, account for a considerable proportion of children with aHUS. The autoantibodies are usually associated with the occurrence of a homozygous deletion in the genes encoding the FH-related proteins FHR1 and FHR3. High levels of autoantibodies, noted at the onset of disease and during relapses, induce functional deficiency of FH, whereas their decline, in response to plasma exchanges and/or immunosuppressive therapy, is associated with disease remission. Management with plasma exchange and immunosuppression is remarkably effective in inducing and maintaining remission in aHUS associated with FH autoantibodies, whereas terminal complement blockade with eculizumab is considered the most effective therapy in other forms of aHUS. Anti-FH autoantibodies are also detected in a small proportion of patients with C3 glomerulopathies, which are characterized by chronic glomerular injury mediated by activation of the alternative complement pathway and predominant C3 deposits on renal histology.

DOI: 10.1038/nrneph.2016.99
PMID: 27452363 [PubMed - in process]

28: Ganie MA, Marwaha RK, Dhingra A, Nisar S, Mani K, Masoodi S, Chakraborty S, Rashid A. Observation of phenotypic variation among Indian women with polycystic ovary syndrome (PCOS) from Delhi and Srinagar. Gynecol Endocrinol. 2016 Jul;32(7):566-70. doi: 10.3109/09513590.2016.1141879. PubMed PMID: 26878496.

Polycystic ovary syndrome (PCOS) is a heterogeneous disorder that demonstrates ethnic and regional differences. To assess the phenotypic variability among Indian PCOS women, we evaluated clinical, biochemical and hormonal parameters of these women being followed in two tertiary care institutions located in Delhi and Srinagar. A total of 299 (210 PCOS diagnosed by Rotterdam 2003 criteria and 89 healthy) women underwent estimation of T4, TSH, LH, FSH, total testosterone, prolactin, cortisol, 17OHP, and lipid profile, in addition to post OGTT,

C-peptide, insulin, and glucose measurements. Among women with PCOS, mean age, age of menarche, height, systolic, diastolic blood pressure, and serum LH were comparable. PCOS women from Delhi had significantly higher BMI (26.99±5.38 versus 24.77±4.32 kg/m(2); P=0.01), glucose intolerance (36 versus 10%), insulin resistance as measured by HOMA-IR (4.20±3.39 versus 3.01±2.6; P=0.006) and QUICKI (0.140±0.013 versus 0.147±0.015; P=0.03) while PCOS from Srinagar had higher FG score (12.12±3.91 versus 10.32±2.22; P=0.01) and serum total testosterone levels (0.65±0.69 versus 0.86±0.41 ng/ml; P=0.01. Two clear phenotypes, i.e. obese hyperinsulinaemic dysglycemic women from Delhi and lean hyperandrogenic women from Srinagar are emerging. This is the first report on North Indian women with PCOS showing phenotypic differences in clinical, biochemical and hormonal parameters despite being in the same region.

DOI: 10.3109/09513590.2016.1141879
PMID: 26878496 [PubMed - in process]

29: Gaur K, Batra VV, Gupta R, Sharma MC, Narang P, Pandey PN. Lipomatous ependymoma: report of a rare differentiation pattern with a comprehensive review of literature. Brain Tumor Pathol. 2016 Jul;33(3):209-15. doi: 10.1007/s10014-016-0253-9. PubMed PMID: 26942599.

We report the case of a 13-year-old girl presenting with left-sided hemiparesis, altered sensorium and episodic headache with bouts of projectile vomiting. Imaging revealed a large heterodense intraventricular mass lesion displaying focal calcification and hyperintensity on T1- and T2- weighted fluid attenuated inversion recovery (FLAIR) magnetic resonance images suggesting the presence of intratumoral fat. Histologically, the tumour showed sheets of glial cells, focal perithelial rosettes and individual cells showing fat vacuoles. The morphological impression was of an ependymoma with lipomatous differentiation. Glial fibrillary acid protein (GFAP) immunohistochemistry revealed positivity in the cytoplasmic processes of the tumour cells as well as in the cytoplasmic rim of the cells having an adipocytic appearance. S100 and vimentin were also immunoreactive. Ultrastructural studies confirmed the ependymal differentiation of the tumour and the presence of an osmiophilic fat component confirming the diagnosis. After 1 year of follow-up, the patient presented with similar complaints and MRI evidence of recurrence of the tumour. A comprehensive literature review revealed that half of the reported cases of this pattern recurred suggesting a possibly tenacious clinical course.

DOI: 10.1007/s10014-016-0253-9
PMID: 26942599 [PubMed - in process]

30: Gaur P, Chawla A, Verma K, Mukherjee S, Lalvani S, Malhotra R, Mayer C. Characterisation of human diaphragm at high strain rate loading. J Mech Behav Biomed Mater. 2016 Jul;60:603-16. doi: 10.1016/j.jmbbm.2016.02.031. PubMed PMID: 27062242.

Motor vehicle crashes (MVC's) commonly results in life threating thoracic and abdominal injuries. Finite element models are becoming an important tool in analyzing automotive related injuries to soft tissues. Establishment of accurate material models including tissue tolerance limits is critical for accurate injury evaluation. The diaphragm is the most important skeletal muscle for respiration having a bi-domed structure, separating the thoracic cavity from abdominal cavity. Traumatic rupture of the diaphragm is a potentially serious injury which presents in different forms depending upon the mechanisms of the causative trauma. A major step to gain insight into the mechanism of traumatic rupture of diaphragm is to understand the high rate failure properties of diaphragm tissue. Thus, the main objective of this study was to estimate the mechanical and failure properties of human diaphragm at strain rates associated with blunt thoracic and abdominal trauma. A total of 23 uniaxial tensile tests were performed at various strain rates ranging from 0.001-200s(-1) in order to characterize the mechanical

and failure properties on human diaphragm tissue. Each specimen was tested to failure at one of the four strain rates (0.001s(-1), 65s(-1), and 130s(-1), 190s(-1)) to investigate the effects of strain rate dependency. High speed video and markers placed on the grippers were used to measure the gripper to gripper displacement. Engineering stresses reported in the study is calculated from the ratio of force measured and initial cross sectional area whereas engineering strain is calculated from the ratio of the elongation to the undeformed length (gauge length) of the specimen.The results of this study showed that the diaphragm tissues is rate dependent with higher strain rate tests giving higher failure stress and higher failure strains. The failure stress for all tests ranged from 1.17MPa to 4.1MPa and failure strain ranged from 12.15% to 24.62%.

DOI: 10.1016/j.jmbbm.2016.02.031
PMID: 27062242 [PubMed - in process]

31: Gogi N, Khan SA. Editorial: Pediatric Orthopedics at the Doorstep of the Pediatrician. Indian J Pediatr. 2016 Aug;83(8):814-6. doi: 10.1007/s12098-016-2194-z. PubMed PMID: 27392617.

32: Gogna P, Gaba S, Mukhopadhyay R, Rohilla R, Singh A. Neglected epiphyseal injuries of the distal end of the radius with ulnar impaction: analysis of distal osteotomy of both bones using a dorsal midline approach. J Orthop Traumatol. 2016 Jul 28. [Epub ahead of print] PubMed PMID: 27468849.

BACKGROUND: To evaluate results of a technique for treating neglected epiphyseal injuries of the distal radius with ulnar impaction.
MATERIALS AND METHODS: This retrospective study involved six cases (four males; two females), all of whom sustained the primary injury during childhood (range 9-12 years of age). All presented with wrist deformity and ulnar-sided wrist pain. They were managed with osteotomy of the distal radius, osteotomy and shortening of the ulna, harvesting the bone grafts, and distal radioulnar joint (DRUJ) reduction performed simultaneously through a dorsal midline approach. Mean follow-up was 30 months (range 24-36).
RESULTS: Deformity correction and pain relief was observed in all patients. Flexion arc increased from an average of 60° to 102.5°, supination from an average of 31.67° to 67.50°, and pronation from an average of 30.83° to 61.67°. The mean preoperative DASH score was 87.5, which improved to 18.72 postoperatively.
CONCLUSION: Neglected epiphyseal injuries of the distal radius are difficult to manage and many variations are described for handing each of the associated problems. Our technique provides an option for managing this injury with an easy surgical approach, single incision, and cost effectiveness. All the four components of the surgery, which include osteotomy of the distal radius, osteotomy of the ulna, harvesting the bone grafts, and DRUJ reduction were done through a single incision and in a single sitting.
LEVEL OF EVIDENCE IV:

DOI: 10.1007/s10195-016-0423-x
PMID: 27468849 [PubMed - as supplied by publisher]

33: Grover S, Sarkar S, Bhalla A, Chakrabarti S, Avasthi A. Religious coping among self-harm attempters brought to emergency setting in India. Asian J Psychiatr. 2016 Oct;23:78-86. doi: 10.1016/j.ajp.2016.07.009. PubMed PMID: 27969084.

This study attempted to evaluate religious coping and its correlates among patients presenting with self-harm to an emergency setting and compared it with a healthy control group. Religious coping was assessed using brief RCOPE. Beck Hopelessness Scale, Beck Depression Inventory, Barratt Impulsivity Scale, Scale for Suicidal Ideations and Irritability Depression Anxiety scale were used to

assess for hopelessness, depression, impulsiveness, suicidal ideations and irritability respectively. The study included 32 subjects with depression and 77 subjects without any psychiatric diagnosis who presented with self-harm and 50 healthy controls. Compared to healthy controls, those with self-harm irrespective of presence or absence of psychiatric diagnosis less often used positive religious coping and more often used negative religious coping. Further, among those without psychiatric diagnosis (with self harm), there was positive correlation of negative religious coping with impulsivity and hopelessness. Among those without psychiatric diagnosis with self-harm, both positive and negative religious coping correlated positively with depressive scores, severity of suicidal ideations, anxiety and irritability, but associations were stronger for negative religious coping than that for positive religious coping. The findings of the present study suggest that those who indulge in self harm have lower use of positive religious coping and higher use of negative religious coping.

DOI: 10.1016/j.ajp.2016.07.009
PMID: 27969084 [PubMed - in process]

34: Gupta A, Kharbanda OP, Sardana V, Balachandran R, Sardana HK. Accuracy of 3D cephalometric measurements based on an automatic knowledge-based landmark detection algorithm. Int J Comput Assist Radiol Surg. 2016 Jul;11(7):1297-309. doi: 10.1007/s11548-015-1334-7. PubMed PMID: 26704370.

PURPOSE: To evaluate the accuracy of three-dimensional cephalometric measurements obtained through an automatic landmark detection algorithm compared to those obtained through manual identification.
METHODS: The study demonstrates a comparison of 51 cephalometric measurements (28 linear, 16 angles and 7 ratios) on 30 CBCT (cone beam computed tomography) images. The analysis was performed to compare measurements based on 21 cephalometric landmarks detected automatically and those identified manually by three observers.
RESULTS: Inter-observer ICC for each landmark was found to be excellent ([Formula: see text]) among three observers. The unpaired t-test revealed that there was no statistically significant difference in the measurements based on automatically detected and manually identified landmarks. The difference between the manual and automatic observation for each measurement was reported as an error. The highest mean error in the linear and angular measurements was found to be 2.63 mm ([Formula: see text] distance) and [Formula: see text] ([Formula: see text]-Me angle), respectively. The highest mean error in the group of distance ratios was 0.03 (for N-Me/N-ANS and [Formula: see text]).
CONCLUSION: Cephalometric measurements computed from automatic detection of landmarks on 3D CBCT image were as accurate as those computed from manual identification.

DOI: 10.1007/s11548-015-1334-7
PMID: 26704370 [PubMed - in process]

35: Gupta D, Bijarnia-Mahay S, Kohli S, Saxena R, Puri RD, Shigematsu Y, Yamaguchi S, Sakamoto O, Gupta N, Kabra M, Thakur S, Deb R, Verma IC. Seventeen Novel Mutations in PCCA and PCCB Genes in Indian Propionic Acidemia Patients, and Their Outcomes. Genet Test Mol Biomarkers. 2016 Jul;20(7):373-82. doi: 10.1089/gtmb.2016.0017. PubMed PMID: 27227689.

AIMS: The goal of this study was to identify mutations in the propionyl-CoA carboxylase alpha subunit (PCCA) and propionyl-CoA carboxylase beta subunit (PCCB) genes, and to assess their effects on propionic academia (PA) patients.
METHODOLOGY: Twenty-five Indian children with PA were enrolled in this study. Bidirectional Sanger sequencing was performed on both the coding and flanking regions of the PCCA and PCCB genes and the chromatograms were analyzed. Bioinformatic tools were used to classify novel variations into pathogenic or

benign.
RESULTS: The majority of the cases (19/25, 76%) were of the early-onset (<90 days of age) type and 5 were of the late-onset type. The majority of patients had mutations in the PCCA gene (18/25). A total of 26 mutations were noted: 20 in the PCCA gene and 6 in PCCB gene. Seventeen mutations were novel (14 in PCCA and 3 in PCCB). The SNP c.937C>T (p.Arg313Ter), was noted in 9/36 (25%) alleles in the PCCA gene. All of the children were symptomatic and only three survived who are doing well with no major disabilities.
CONCLUSION: The spectrum of mutations in the PCCA and PCCB genes among Indians is distinct from other populations. The absence of a common mutation signifies the heterogeneity and admixture of various subpopulations. These findings also suggest that individuals of Indian origin may not benefit from the mutation-based "carrier screening panels" offered by many genetic laboratories.

DOI: 10.1089/gtmb.2016.0017
PMID: 27227689 [PubMed - in process]

36: Gupta S, Gupta YK. Combination of Zizyphus jujuba and silymarin showed better neuroprotective effect as compared to single agent in MCAo-induced focal cerebral ischemia in rats. J Ethnopharmacol. 2016 Jul 22. pii: S0378-8741(16)30489-5. doi: 10.1016/j.jep.2016.07.060. [Epub ahead of print] PubMed PMID: 27452658.

ETHNOPHARMACOLOGICAL RELEVANCE: Traditionally, Zizyphus jujuba is used for anticonvulsant, hypnotic-sedative, anxiolytic, tranquilizer, antioxidant and anti-inflammatory properties. Likewise silymarin is popularly used for its potent antioxidant and hepatoprotective effects. Stroke being a multifactorial disease with unsatisfactory treatment outcomes, necessitates development of multimodal therapeutic interventions. Thus, we evaluated the therapeutic benefits of herbal combination of Z. jujuba and silymarin in a focal cerebral ischemia model.
AIM OF THE STUDY: To evaluate the neuroprotective potential of hydroalcoholic extract of Z. jujuba (HEZJ) fruit and silymarin alone and in combination in middle cerebral artery occlusion (MCAo) model of focal cerebral ischemia in rats.
MATERIALS AND METHODS: Male Wistar rats were pretreated with HEZJ (100, 250 and 500mg/kg, p.o.) or silymarin (250mg/kg, p.o.) for 3 days prior to induction of MCAo. Neurological deficit score, motor impairment and cerebral infarction were assessed 24h following MCAo. HEZJ (250mg/kg) co-administered with silymarin (250mg/kg) for 3 days prior to induction of MCAo was also evaluated for above parameters and oxidative stress. Malondialdehyde (MDA), nitric oxide (NO) and superoxide dismutase (SOD) levels in the cortex, striatum and hippocampal brain regions were estimated 24h post MCAo.
RESULTS: Pretreatment with HEZJ and silymarin reduced the neurological deficit score, motor impairment and cerebral infarction volume. HEZJ and silymarin pretreatment also ameliorated the oxidative stress in different brain regions, which was evident from increased SOD levels, decreased MDA and NO levels as compared to MCAo control rats. Interestingly neuroprotective efficacy was potentiated by pretreatment with HEZJ and silymarin combination.
CONCLUSION: Pretreatment with HEZJ and silymarin combination was observed to have better neuroprotection mediated via amelioration of oxidative stress in the focal cerebral ischemia model.

DOI: 10.1016/j.jep.2016.07.060
PMID: 27452658 [PubMed - as supplied by publisher]

37: Gupta S, Gupta V. Trabeculectomy Augmented With Cyclodialysis: A Surgical Option for Refractory Glaucomas. J Glaucoma. 2016 Jul;25(7):e726. doi: 10.1097/IJG.0000000000000417. PubMed PMID: 27027230.

38: Hasan R, Srivastava G, Alyass A, Sharma R, Saraya A, Chattopadhyay TK, DattaGupta S, Walfish PG, Chauhan SS, Ralhan R. Prediction of recurrence free survival for esophageal cancer patients using a protein signature based risk model. Oncotarget. 2016 Jul 18. doi: 10.18632/oncotarget.10656. [Epub ahead of print] PubMed PMID: 27447858.

39: Jagadish N, Parashar D, Gupta N, Agarwal S, Suri V, Kumar R, Suri V, Sadasukhi TC, Gupta A, Ansari AS, Lohiya NK, Suri A. Heat shock protein 70-2 (HSP70-2) is a novel therapeutic target for colorectal cancer and is associated with tumor growth. BMC Cancer. 2016 Jul 29;16:561. doi: 10.1186/s12885-016-2592-7. PubMed PMID: 27473057; PubMed Central PMCID: PMC4966739.

BACKGROUND: Biomarkers to predict the risk of disease recurrence in Esophageal squamous cell carcinoma (ESCC) patients are urgently needed to improve treatment. We developed proteins expression-based risk model to predict recurrence free survival for ESCC patients.
METHODS: Alterations in Wnt pathway components expression and subcellular localization were analyzed by immunohistochemistry in 80 ESCCs, 61 esophageal dysplastic and 47 normal tissues; correlated with clinicopathological parameters and clinical outcome over 86 months by survival analysis. Significant prognostic factors were identified by multivariable Cox regression analysis.
RESULTS: Biomarker signature score based on cytoplasmic β-catenin, nuclear c-Myc, nuclear DVL and membrane α-catenin was associated with recurrence free survival [Hazard ratio = 1.11 (95% CI = 1.05, 1.17), p < 0.001, C-index = 0.68] and added significant prognostic value over clinical parameters (p < 0.001). The inclusion of Slug further improved prognostic utility (p < 0.001, C-index = 0.71). Biomarker Signature Scoreslug improved risk classification abilities for clinical outcomes at 3 years, accurately predicting recurrence in 79% patients in 1 year and 97% in 3 years in high risk group; 73% patients within low risk group did not have recurrence in 1 year, with AUC of 0.76.
CONCLUSIONS: Our comprehensive risk model predictive for recurrence allowed us to determine the robustness of our biomarker panel in stratification of ESCC patients at high or low risk of disease recurrence; high risk patients are stratified for more rigorous personalized treatment while the low risk patients may be spared from harmful side effects of toxic therapy.

DOI: 10.18632/oncotarget.10656
PMID: 27447858 [PubMed - as supplied by publisher]

40: Kakkar A, Nambirajan A, Kaur K, Kumar A, Mallick S, Suri V, Sarkar C, Kale SS, Garg A, Sharma MC. ATRX loss in glioneuronal tumors with neuropil-like islands indicates similarity to diffuse astrocytic tumors. J Neurooncol. 2016 Oct;130(1):63-68. PubMed PMID: 27469217.

Glioneuronal tumor with neuropil-like islands (GTNI) is a rare, recently described neoplasm, whose pathogenesis has not been studied extensively. The role of ATRX mutations, a class-defining alteration in diffuse astrocytic neoplasms, has not been assessed in GTNIs previously. We therefore aimed to assess the status of ATRX, along with IDH1, 1p/19q and p53, in cases of GTNI in order to evaluate the molecular profile of these tumors. All cases of GTNI diagnosed at our Institute were retrieved and clinicopathological features were reviewed. Immunohistochemistry for ATRX, IDH1 and p53 was performed. We identified four cases of GTNI, majority of which occurred in young adults. Loss of ATRX immunoexpression, a surrogate marker for ATRX mutation, was seen in all four cases. All cases were immunopositive for p53, while IDH1 positivity was seen in all three cases assessed. 1p/19q codeletion was absent in the three cases analyzed. These results indicate that the molecular pathogenesis of GTNIs similar to that of diffuse astrocytic tumors. Further, the loss of ATRX expression is seen in both the glial as well as neuronal components, indicating that both arise from the same tumor stem/progenitor cell and that the latter may be a metaplastic change. Thus, loss of ATRX immunoexpression, shown for the first time in these

tumors, along with immunopositivity for p53 and IDH1, indicates that these tumors are molecular astrocytomas, and their clinical behaviour is likely to recapitulate that of ATRX-mutant and IDH-mutant diffuse astrocytomas of the same grade.

DOI: 10.1007/s11060-016-2224-8
PMID: 27469217 [PubMed - in process]

41: Kakkar A, Biswas A, Kalyani N, Chatterjee U, Suri V, Sharma MC, Goyal N, Sharma BS, Mallick S, Julka PK, Chinnaswamy G, Arora B, Sridhar E, Chatterjee S, Jalali R, Sarkar C. Intracranial germ cell tumors: a multi-institutional experience from three tertiary care centers in India. Childs Nerv Syst. 2016 Nov;32(11):2173-2180. Erratum in: Childs Nerv Syst. 2016 Nov;32(11):2181. PubMed PMID: 27476038.

OBJECTIVE: Central nervous system germ cell tumors (CNS GCTs) are relatively rare neoplasms. Incidence of CNS GCTs in Western literature is low (0.3-0.6 %) as compared to East Asia (3-4 %). No large study is available on CNS GCTs from India.
METHODS: Intracranial GCT cases were retrieved from databases of three tertiary care institutes in India; clinicopathological data was reviewed.
RESULTS: Ninety-five intracranial GCT cases were identified, accounting for 0.43 % of CNS tumors. Median age was 12 years (range, birth to 48 years); male preponderance was noted (66 %). Most patients (86.3 %) were aged <18 years. Pineal location was most common (45 %) and was associated with male gender and age >14 years. Germinoma was the commonest histopathological type (63.2 %), followed by teratoma (20 %). Suprasellar location was associated with germinoma histology. Follow-up was available for 71 patients (median, 15 months). Of these, 48 received adjuvant chemotherapy and/or radiotherapy. At the last follow-up, 44 patients showed no evidence of disease. Age >10 years, male gender, pineal location, and germinoma histology were associated with favorable outcome.
CONCLUSION: This is the first multicentric study from India establishing that incidence of CNS GCT in India is similar to that in the West and differs from that in East Asian countries. However, similar to both, germinoma is the commonest histological type, and pineal location is most frequent. Studies on molecular alterations based on ethnicity and geographical location are necessary to provide clarity on differences in incidence. Attention needs to be focused on decreasing treatment heterogeneity and minimizing treatment-related morbidity and mortality, improving the cure rate of these highly treatable tumors.

DOI: 10.1007/s00381-016-3167-2
PMID: 27476038 [PubMed - in process]

42: Kakkar A, Gupta RK, Khanna P, Balasundaram P, Ray R, Shukla NK. Kimura Disease of the Breast - A Previously Undescribed Entity. Breast J. 2016 Jul;22(4):456-459. doi: 10.1111/tbj.12603. PubMed PMID: 27058987.

Kimura disease (KD) is a rare chronic inflammatory disorder of unknown etiology, primarily seen in young Asian males. The disease is characterized by a triad of painless subcutaneous masses in the head and neck region, blood and tissue eosinophilia, and elevated serum immunoglobulin E levels. We report an unusual case of a 40-year-old woman found to have KD of the breast which presented clinically as carcinoma, leading to a diagnostic dilemma. To the best of our knowledge, this is the first case of KD in the breast to be documented in the literature. The patient also had scabies, which may have provided the stimulus for hypersensitivity, which is considered to be the pathogenetic mechanism responsible for development of KD.

DOI: 10.1111/tbj.12603
PMID: 27058987 [PubMed - as supplied by publisher]

43: Kakkar A, Baghmar S, Garg A, Suri V, Raina V, Sarkar C, Sharma MC. Recurrent rhabdoid meningioma with lymph node, pulmonary and bone metastases: a diagnostic and therapeutic challenge. Brain Tumor Pathol. 2016 Jul;33(3):228-33. doi: 10.1007/s10014-016-0250-z. PubMed PMID: 26875176.

Rhabdoid meningioma is a rare meningioma variant, classified as WHO grade III. Although this tumor is known for its aggressive behavior and poor prognosis, extracranial metastasis is rare. We report the rare case of a 31-year-old patient with rhabdoid meningioma which recurred several times despite gross total resection, radiation therapy, and gamma knife radiosurgery, and the last recurrence was associated with metastases to lungs, lymph node and bone. The patient showed no response to paclitaxel-carboplatin, or vincristine-cyclophosphamide-adriamycin chemotherapy, and succumbed to the disease. Metastases from rhabdoid meningioma prove to be a diagnostic challenge, and treatment for metastatic meningiomas is not optimized, thus necessitating documentation and interdisciplinary consensus on management protocols.

DOI: 10.1007/s10014-016-0250-z
PMID: 26875176 [PubMed - in process]

44: Kandasamy D, Gamanagatti S, Gupta AK. Pediatric Interventional Radiology: Vascular Interventions. Indian J Pediatr. 2016 Jul;83(7):702-10. doi: 10.1007/s12098-016-2055-9. Review. PubMed PMID: 26964551.

Pediatric interventional radiology (PIR) comprises a range of minimally invasive diagnostic and therapeutic procedures that are performed using image guidance. PIR has emerged as an essential adjunct to various surgical and medical conditions. Over the years, technology has undergone dramatic and continuous evolution, making this speciality grow. In this review, the authors will discuss various vascular interventional procedures undertaken in pediatric patients. It is challenging for the interventional radiologist to accomplish a successful interventional procedure. There are many vascular interventional radiology procedures which are being performed and have changed the way the diseases are managed. Some of the procedures are life saving and have become the treatment of choice in those patients. The future is indeed bright for the practice and practitioners of pediatric vascular and non-vascular interventions. As more and more of the procedures that are currently being performed in adults get gradually adapted for use in the pediatric population, it may be possible to perform safe and successful interventions in many of the pediatric vascular lesions that are otherwise being referred for surgery.

DOI: 10.1007/s12098-016-2055-9
PMID: 26964551 [PubMed - in process]

45: Kandasamy D, Gamanagatti S, Gupta AK. Pediatric Interventional Radiology: Non-Vascular Interventions. Indian J Pediatr. 2016 Jul;83(7):711-6. doi: 10.1007/s12098-015-1987-9. Review. 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.

DOI: 10.1007/s12098-015-1987-9

PMID: 26762330 [PubMed - in process]

46: Kandwal P, Goswami A, Vijayaraghavan G, Subhash KR, Jaryal A, Upendra BN, Jayaswal A. Staged Anterior Release and Posterior Instrumentation in Correction of Severe Rigid Scoliosis (Cobb Angle >100 Degrees). Spine Deform. 2016 Jul;4(4):296-303. doi: 10.1016/j.jspd.2015.12.005. PubMed PMID: 27927520.

PURPOSE: Severe rigid curves present a big challenge to the treating spine surgeon. We evaluated the outcome of staged anterior release and posterior instrumentation for rigid scoliosis.
METHODS: Twenty-one patients with an average age of 14.4 years (range 11-17) having a rounded severe rigid scoliosis (Cobb angle >100 degrees) underwent surgical correction. Six patients had congenital scoliosis, 13 idiopathic scoliosis, and 2 syndromic. All patients underwent anterior release in Stage I with one or more Ponte osteotomies and in Stage II with all pedicle screw instrumentation, and 13 of the patients underwent an asymmetric pedicle subtraction osteotomy at the apex. Patients were assessed for deformity correction, operative time, blood loss, and any complications.
RESULTS: The preoperative Cobb angle of 116.6 degrees (range 101-124 degrees) improved to 74.0 degrees (range 54-86 degrees) after anterior release: 29.4% correction and the final postoperation Cobb angle after posterior instrumentation was 26.5 degrees (range 22-32 degrees), with final 76% correction. The average blood loss in anterior release was 585.95 mL (range 400-980 mL; % estimated blood volume = 19.5%), whereas the mean operative time was 223 minutes (165-315 minutes). One patient had prolonged chest drain and two, basal atelectasis following anterior release. The mean operative time for the posterior procedure was 340 minutes (range 280-420 minutes) and average blood loss was 2,066 mL (range 1,200-3,200 mL). The mean apical axial rotation of 56 degrees (range 26-79 degrees) improved to 28 degrees (range 9-42 degrees) ($p < .05$). There was loss of motor evoked potential signal in one and hook pullout, superficial infection, and local skin necrosis one case each.
CONCLUSION: The staged approach to the management of severe, rigid scoliosis helps get an excellent correction. Anterior release loosens up the rigid apex and provides with nearly 30% correction so that the extent of the osteotomies in the second stage from the back is substantially reduced, allowing for a final good correction.

DOI: 10.1016/j.jspd.2015.12.005
PMID: 27927520 [PubMed - in process]

47: Karwasra R, Kalra P, Gupta YK, Saini D, Kumar A, Singh S. Antioxidant and anti-inflammatory potential of pomegranate rind extract to ameliorate cisplatin-induced acute kidney injury. Food Funct. 2016 Jul 13;7(7):3091-101. doi: 10.1039/c6fo00188b. PubMed PMID: 27273121.

Cisplatin is a chemotherapeutic agent, but the therapeutic utility is limited due to its dose dependent nephrotoxicity. The aim of the present study was to evaluate the nephroprotective effect of pomegranate in cisplatin-induced acute kidney injury. Wistar rats were allocated into six groups as follows: the normal control, cisplatin-induced, pomegranate rind extract treatment (50, 100 and 200 mg kg(-1)) and pomegranate rind extract per se group. All the experimental test drugs/vehicle were administered orally for a period of ten days. Intraperitoneal injection of cisplatin (8 mg kg(-1)) was administered on day 7 to all the groups except the normal control and pomegranate per se group. On day 10, cisplatin resulted in significant nephrotoxicity in Wistar rats with a drastic elevation of serum creatinine and BUN, a decline in the concentrations of GSH, MDA and superoxide dismutase (SOD), and an elevation in the TNF-α level in renal tissues. Pathological changes in renal tissues were examined by histopathology and

dysfunction in mitochondria and proximal tubule cells was detected by transmission electron microscopy. The rate of apoptosis and the expression of caspase-3, Il-1β and IL-6 in rat renal tissues were detected by immunohistochemistry. The administration of pomegranate at a dose of 200 mg per kg body weight significantly ($p < 0.001$) ameliorates increased serum creatinine and BUN. In parallel to this, pomegranate also exhibits anti-apoptotic activity through the reduction of active caspase-3 expression in kidneys. Additionally, in-silico studies also confirmed a renoprotective effect of pomegranate. The above findings suggest that pomegranate can be used as a dietary supplement in the treatment of cisplatin-induced kidney injury by reducing apoptosis, oxidative stress and inflammation.

DOI: 10.1039/c6fo00188b
PMID: 27273121 [PubMed - in process]

48: Kataria K, Srivastava A, Qaiser D. What Is a False Negative Sentinel Node Biopsy: Definition, Reasons and Ways to Minimize It? Indian J Surg. 2016 Oct;78(5):396-401. PubMed PMID: 27994336; PubMed Central PMCID: PMC5127992.

Sentinel node biopsy helps in assessing the involvement of axillary lymph node without the morbidity of full axillary lymph node dissection, namely arm and shoulder pain, paraesthesia and lymphoedema. The various methods described in the literature identify the sentinel lymph nodes in approximately 96 % of cases and associated with a false negativity rate of 5 to 10 %. A false negative sentinel node is defined as the proportion of cases in whom sentinel node biopsy is reported as negative, but the rest of axillary lymph node(s) harbours cancer cells. The possible causes of a false negative sentinel lymph node may be because of blocked lymphatics either by cancer cells or following fibrosis of previous surgery/radiotherapy, and an alternative pathway opens draining the blue dye or isotope to another uninvolved node. The other reasons may be two lymphatic pathways for a tumour area, the one opening to a superficial node and the other in deep nodes. Sometimes, lymphatics do not relay into a node but traverse it going to a higher node. In some patients, the microscopic focus of metastasis inside a lymph node is so small-micrometastasis (i.e. between 0.2 and 2 mm) or isolated tumour cells (i.e. less than 0.2 mm) that is missed by the pathologist. The purpose of this review is to clear some fears lurking in the mind of most surgeons about the false negative sentinel lymph node (FNSLN).

DOI: 10.1007/s12262-016-1531-9
PMCID: PMC5127992 [Available on 2017-10-01]
PMID: 27994336 [PubMed]

49: Kaur H, Nanda A, Verma M, Koli D. Technique for adapting a spacer for a custom impression tray. J Prosthet Dent. 2016 Dec;116(6):851-852. doi: 10.1016/j.prosdent.2016.04.016. PubMed PMID: 27422226.

A method of adapting a spacer for the custom trays used to make a definite impression for complete dentures is presented. The technique can be used under a variety of conditions and offers several advantages.

DOI: 10.1016/j.prosdent.2016.04.016
PMID: 27422226 [PubMed - in process]

50: Kaur K, Kumari P, Sharma S, Sehgal S, Tyagi JS. DevS/DosS sensor is bifunctional and its phosphatase activity precludes aerobic DevR/DosR regulon expression in Mycobacterium tuberculosis. FEBS J. 2016 Aug;283(15):2949-62. doi: 10.1111/febs.13787. PubMed PMID: 27327040.

Two-component systems, comprising histidine kinases and response regulators,

empower bacteria to sense and adapt to diverse environmental stresses. Some histidine kinases are bifunctional; their phosphorylation (kinase) and dephosphorylation (phosphatase) activities toward their cognate response regulators permit the rapid reversal of genetic responses to an environmental stimulus. DevR-DevS/DosR-DosS is one of the best-characterized two-component systems of Mycobacterium tuberculosis. The kinase function of DevS is activated by gaseous stress signals, including hypoxia, resulting in the induction of ~ 48-genes DevR dormancy regulon. Regulon expression is tightly controlled and lack of expression in aerobic Mtb cultures is ascribed to the absence of phosphorylated DevR. Here we show that DevS is a bifunctional sensor and possesses a robust phosphatase activity toward DevR. We used site-specific mutagenesis to generate substitutions in conserved residues in the dimerization and histidine phosphotransfer domain of DevS and determined their role in kinase/phosphatase functions. In vitro and in vivo experiments, including a novel in vivo phosphatase assay, collectively establish that these conserved residues are critical for regulating kinase/phosphatase functions. Our findings establish DevS phosphatase function as an effective control mechanism to block aerobic expression of the DevR dormancy regulon. Asp-396 is essential for both kinase and phosphatase functions, whereas Gln-400 is critical for phosphatase function. The positive and negative functions perform opposing roles in DevS: the kinase function triggers regulon induction under hypoxia, whereas its phosphatase function prevents expression under aerobic conditions. A finely tuned balance in these opposing activities calibrates the dormancy regulon response output.

DOI: 10.1111/febs.13787
PMID: 27327040 [PubMed - in process]

51: Kedia S, Rampal R, Paul J, Ahuja V. Gut microbiome diversity in acute infective and chronic inflammatory gastrointestinal diseases in North India. J Gastroenterol. 2016 Jul;51(7):660-71. doi: 10.1007/s00535-016-1193-1. Review. PubMed PMID: 26994772.

The disease profile in the Indian population provides a unique opportunity for studying the host microbiome interaction in both infectious (amebiasis) and autoimmune diseases like inflammatory bowel disease (IBD) from a similar environment and genetic background. Analysis of fecal samples from untreated amebic liver abscess (ALA) patients, Entamoeba histolytica (Eh)-negative and -positive asymptomatic individuals, and pus samples from naive ALA patients revealed a significant reduction in Lactobacillus in asymptomatic individuals (Eh +ve) and ALA patients. Two anaerobic genera, namely Bacteroides and Peptostreptococcus, were detected in naive ALA pus samples. Analysis of fecal samples from amoebic colitis patients showed a significant decline in population of Bacteroides, Clostridium coccoides and leptum subgroup, Lactobacillus, Campylobacter, and Eubacterium, whereas a significant increase in Bifidobacterium was observed. Mucosa-associated bacterial flora analysis from IBD patients and healthy controls revealed a significant difference in concentration of bacteria among predominating and subdominating genera between ulcerative colitis (UC), Crohn's disease (CD) patients, and controls. In contrast to the mucosal studies, we found a significant increase in lactobacilli population in fecal samples of active UC patients. Another study revealed a significant decrease of Clostridium coccoides and leptum clusters in fecal samples of active UC patients along with decreased concentrations of fecal SCFAs, especially of n-butyrate, iso-butyrate, and acetate. We therefore found similar perturbations in gut microbiome in both infectious and autoimmune diseases, indicating inflammation to be the major driver for changes in gut microbiome.

DOI: 10.1007/s00535-016-1193-1
PMID: 26994772 [PubMed - in process]

52: Khan WH, Srungaram VL, Islam A, Beg I, Haider MS, Ahmad F, Broor S, Parveen

S. Biophysical characterization of G protein ectodomain of group B human respiratory syncytial virus from E. coli. Prep Biochem Biotechnol. 2016 Jul 3;46(5):483-8. doi: 10.1080/10826068.2015.1084512. PubMed PMID: 26444871.

Human respiratory syncytial virus (hRSV) is an important pathogen of acute respiratory tract infection. The G protein of hRSV is a transmembrane glycoprotein that is a neutralizing antigen and is thus a vaccine candidate. In this study, synthetic codon optimized ectodomain G protein [G(ΔTM)] of BA genotype of group B hRSV was cloned, expressed, and characterized using biophysical techniques. The molar absorption coefficient and mean residue ellipticity at 222 nm ([θ]222) of G (ΔTM) was found to be 7950 M(-1) cm(-1) and -19701.7 deg cm(2) dmol(-1) respectively. It was concluded that G(ΔTM) mainly consist of α-helix (74.9%) with some amount of β-sheet (4%). The protein was stable up to 85°C without any transition curve. However, heat-induced denaturation of G(ΔTM) resulted in total loss of β-sheet whereas not much change was observed in the α-helix part of the secondary structure. It was concluded that G(ΔTM) is an α-helical protein and it is highly stable at high temperature, but could be easily denatured using high concentrations of GdmCl/urea or acidic condition. This is the first investigation of cloning, expression, and characterization of G(ΔTM) of BA viruses from India. Structural characterization of G protein will assist in drug designing and vaccine development for hRSV.

DOI: 10.1080/10826068.2015.1084512
PMID: 26444871 [PubMed - in process]

53: Kirola L, Behari M, Shishir C, Thelma BK. Identification of a novel homozygous mutation Arg459Pro in SYNJ1 gene of an Indian family with autosomal recessive juvenile Parkinsonism. Parkinsonism Relat Disord. 2016 Oct;31:124-128. doi: 10.1016/j.parkreldis.2016.07.014. PubMed PMID: 27496670.

BACKGROUND: A novel homozygous missense mutation (c.773G > A, p.Arg258Gln) in Synaptojanin 1 (SYNJ1, 21q22.2) has recently been reported in two Italian and one Iranian consanguineous families with autosomal recessive juvenile Parkinsonism (ARJP). Contribution of this synaptic gene related to Parkinsonism phenotypes in other populations still remains unidentified.
METHODS: An ARJP family with two affected siblings characterized by frequent tremor with bradykinesia and rigidity was recruited in this study. Both siblings showed intense dyskinesia and dystonia on administration of Syndopa. The family was analyzed for both mutations and exon dosage variations in PARKIN, PINK1 and DJ1. Further, whole exome sequencing was performed in two affected and one unaffected sibling in the family.
RESULTS: We identified a novel homozygous mutation (c.1376C > G, p.Arg459Pro) in SYNJ1 segregating in this family. This p.Arg459Pro mutation was not observed in 285 additional Parkinson disease (PD) samples (32 familial, 81 early onset and 172 late onset) screened by PCR-Sanger-sequencing. It was also absent in dbSNP, 1000 Genomes, ExAC, NHLBI-ESP database and in >250 ethnically matched exomes available in our laboratory. The arginine residue is highly conserved across species and predicted to be damaging by several in silico tools. As with the previous mutation p.Arg258Gln, p.Arg459Pro is also present in Sac 1 domain of SYNJ1 wherein p.Arg258Gln mutation has already been described to impair the phosphatase activity.
CONCLUSIONS: We report another novel mutation in SYNJ1 of an Indian consanguineous ARJP family. Finding an additional mutation in this gene further supports the involvement of SYNJ1 in PD pathogenesis across different ethnicities.

DOI: 10.1016/j.parkreldis.2016.07.014
PMID: 27496670 [PubMed - in process]

54: Kulkarni K, Karssiens T, Kumar V, Pandit H. Obesity and osteoarthritis. Maturitas. 2016 Jul;89:22-8. doi: 10.1016/j.maturitas.2016.04.006. Review. PubMed PMID: 27180156.

This paper provides an up-to-date review of obesity and lower limb osteoarthritis (OA). OA is a major global cause of disability, with the knee being the most frequently affected joint. There is a proven association between obesity and knee OA, and obesity is suggested to be the main modifiable risk factor. Obese patients (Body Mass Index, BMI, over 30kg/m(2)) are more likely to require total knee arthroplasty (TKA). The global prevalence of obesity has doubled since 1980; by 2025, 47% of UK men and 36% of women are forecast to be obese. This rising global burden is a key factor in the growing rise in the use of TKA. It is therefore important to appreciate the outcomes of surgery in patients with end-stage OA and a high BMI. This review found that while OA is felt to contribute to weight gain, it is unclear whether TKA facilitates weight reduction. Surgery in obese patients is more technically challenging. This is reflected in the evidence, which suggests higher rates of short- to medium-term complications following TKA, including wound infection and medical complications, resulting in longer hospital stay, and potentially higher rates of malalignment, dislocation, and early revision. However, despite slower initial recovery and possibly lower functional scores and implant survival in the longer term, obese patients can still benefit from TKA in terms of improved function, quality of life and satisfaction. In conclusion, despite higher risks and more uncertain outcomes of surgery, higher BMI in itself should not be a contraindication to TKA; instead, each patient's individual circumstances should be considered.

DOI: 10.1016/j.maturitas.2016.04.006
PMID: 27180156 [PubMed - in process]

55: Kumar A, Gaba S, Sud A, Mandlecha P, Goel L, Nayak M. Comparative study between staples and eight plate in the management of coronal plane deformities of the knee in skeletally immature children. J Child Orthop. 2016 Oct;10(5):429-37. doi: 10.1007/s11832-016-0758-0. PubMed PMID: 27417295; PubMed Central PMCID: PMC5033777.

PURPOSE: To compare two commonly used methods of temporary hemiepiphysiodesis (staples and figure of eight plate) in the management of coronal plane deformities of the knee in skeletally immature children.
METHODS: This prospective study was conducted between November 2012 and November 2015. A total of 40 patients with 67 affected knee joints, having at least 1 year of skeletal growth remaining, were included in the study. Angular correction was measured by recording the mechanical lateral distal femoral angle (mLDFA), mechanical medial proximal tibial angle (mMPTA), and anatomical tibio-femoral angle (TFA) (for the overall alignment of lower limbs). Implant removal was done after 5° of overcorrection was achieved. The rate of correction (° per month) and complications related to each technique were recorded.
RESULTS: The most common diagnosis was idiopathic genu valgum. The overall rate of correction (TFA) was 1.2° for staples and 1.4° for eight plate (p = 0.70, not statistically significant). The correction in mLDFA was statistically better in the eight plate group, whereas an opposite trend was recorded in mMPTA. Implant-related complications were present in two cases of the staples group.
CONCLUSION: Although the overall correction rate was similar in both groups, implant-related complications were lower with figure of eight plate. In idiopathic genu valgum (the most common diagnosis), the correction was statistically better in the eight plate group. We recommend figure of eight plate over staples in managing these deformities.

DOI: 10.1007/s11832-016-0758-0
PMCID: PMC5033777
PMID: 27417295 [PubMed]

56: Kumar A, Aggarwal K, Agrawal H, Sharma S, Garg PK. Unicentric Castleman Disease: An Unusual Cause of An Isolated Neck Mass. Malays J Med Sci. 2016 Jul;23(4):86-9. doi: 10.21315/mjms2016.23.4.12. PubMed PMID: 27660550; PubMed Central PMCID: PMC5025068.

Castleman disease (CD) is a rare lymphoproliferative disorder of unknown aetiology. It manifests in two distinct clinical presentations: unicentric and multicentric. Unicentric CD is rare and may present as an isolated neck mass. A 22-year-old man presented with a 6-month history of right neck swelling that occupied the posterior triangle of the right neck region. After surgical exploration, a solitary, well defined, and hyper vascular mass was excise. A histopathological examination confirmed the lesion as CD, hyaline-vascular variant. CD of the neck is a diagnosis that is usually not taken into consideration while evaluating neck masses due to its rarity and unassuming presentation. It should be keep in the differential diagnosis of neck masses as the clinical and radiological features evade a firm diagnosis. The treatment of unicentric CD is complete surgical excision, which cures the patient.

DOI: 10.21315/mjms2016.23.4.12
PMCID: PMC5025068
PMID: 27660550 [PubMed]

57: Kumar A, Kumar P, Prasad M, Misra S, Kishor Pandit A, Chakravarty K. Association between Apolipoprotein ε4 Gene Polymorphism and Risk of Ischemic Stroke: A Meta-Analysis. Ann Neurosci. 2016 Jul;23(2):113-21. doi: 10.1159/000443568. Review. PubMed PMID: 27647962; PubMed Central PMCID: PMC5020389.

BACKGROUND: Previous studies examining the association of apolipoprotein E (APOE) gene polymorphism with the risk of ischemic stroke (IS) have yielded conflicting results. Therefore, we performed a meta-analysis to investigate the association between APOE ε4 gene polymorphism and risk of IS.
SUMMARY: A literature search for genetic association studies published before May 30, 2015, was conducted in the PubMed, EMBASE and Google Scholar databases. The following search terms were used: (apolipoprotein E) or (APOE) and (ε4) and (polymorphism) or (polymorphisms) and ('ischemic stroke' or 'IS') and ('cerebral infarction' or 'CI') and ('genetic polymorphism' or 'single nucleotide polymorphisms' or 'SNP'). ORs and 95% CIs were used to calculate the strength of association. Begg's funnel plot was used to assess the potential for publication bias. In our meta-analysis, 26 case-control studies involving 6,397 IS cases and 19,053 controls were included. Overall significant association between carrier of ε4 allele and risk of IS was observed (OR 1.43, 95% CI 1.10-1.85, p = 0.007). In the subgroup analysis based on ethnicity, a significant association between Apo ε4 carrier and risk of IS was observed in Asian studies (OR 1.53, 95% CI 1.04-2.25, p = 0.031) whereas borderline significant association between APO ε4 carrier and risk of IS was observed in Caucasian studies (OR 1.36, 95% CI 0.95-1.93, p = 0.093).
KEY MESSAGES: Our meta-analysis suggests that APOE ε4 allele is associated with higher risk of IS in Asian population as compared to Caucasian population.

DOI: 10.1159/000443568
PMCID: PMC5020389
PMID: 27647962 [PubMed]

58: Kumar A, Misra S, Kumar P, Sagar R, Prasad K, Pandit AK, Chakravarty K, Kathuria P, Yadav AK. Association between Endothelial nitric oxide synthase G894T gene polymorphism and risk of ischemic stroke in North Indian population: a case-control study. Neurol Res. 2016 Jul;38(7):575-9. doi: 10.1080/01616412.2016.1181376. PubMed PMID: 27168380.

BACKGROUND AND PURPOSE: Stroke is a multi-factorial disease influenced by both genetic and environmental factors. The aim of this case-control study was to determine the association between Endothelial Nitric Oxide Synthase G894T (rs1799983) gene polymorphism and susceptibility to ischemic stroke (IS) in North Indian population.
METHODS: In this present case-control study, genotyping was performed by using Polymerase chain reaction - Restriction fragment length polymorphism (PCR-RFLP) method for 250 IS patients and 250 age and sex matched controls. PCR results were confirmed by DNA sequencing. Frequency distribution of genotypes and alleles were compared between cases and controls using conditional logistic regression.
RESULTS: Hypertension, Diabetes, Dyslipidemia, Low Socioeconomic Status and Family History of Stroke were found to be independent risk factors for IS. Mean age of cases and controls were 52.83 ± 12.59 and 50.97 ± 12.70 years. Multivariate logistic regression analysis showed a significant association between eNOS G894T (rs1799983) polymorphism and risk of IS [OR = 1.57; 95%CI 1.05-2.37; p = 0.028] under dominant model. Based on Trial of Org 10172 in Acute Stroke Treatment classification, an independent association of large vessel disease (LVD) was observed with the risk of IS under the dominant [OR = 2.09; 95% CI 1.17-3.75; p = 0.01] and recessive [4.09 95% CI 1.06-15.68; p = 0.04] models. All the observed genotype frequencies were in accordance with the Hardy-Weinberg equilibrium (HWE) in both cases and controls.
CONCLUSION: The findings of the present study suggest that polymorphism in G894T position of eNOS gene might be a risk factor for IS mainly for LVD stroke subtype in North Indian population. Further large prospective studies are required to confirm these findings.

DOI: 10.1080/01616412.2016.1181376
PMID: 27168380 [PubMed - in process]

59: Kumar A, Agrawal M, Prakash S, Somorendra S, Singh PK, Garg A, Singh M, Sharma BS. Acute Foramen Magnum Syndrome Following Single Diagnostic Lumbar Puncture: Consequence of a Small Posterior Fossa? World Neurosurg. 2016 Jul;91:677.e1-7. doi: 10.1016/j.wneu.2016.04.111. PubMed PMID: 27157279.

BACKGROUND: Type I Chiari malformation (CMI) is a rare complication of lumbar cerebrospinal fluid (CSF) drainage that is usually reported after lumbar drain or lumboperitoneal shunt placement. It usually remains asymptomatic; however, even if it becomes symptomatic, symptoms are usually mild. There are only a few reports of acute foramen magnum syndrome following continuous lumbar CSF drainage, and acute foramen magnum syndrome after a single diagnostic lumbar puncture (LP) has not been previously reported. We encountered this catastrophic complication in one of our patient.
CASE DESCRIPTION: A 30-year-old woman with a large supratentorial meningioma and associated asymptomatic CMI presented with holocranial headache. She underwent successful and uneventful excision of the tumor. However, she developed quadriplegia and respiratory arrest 48 hours following a diagnostic LP performed on postoperative day 9. She underwent urgent posterior fossa decompression after magnetic resonance imaging showed increased tonsillar impaction and swelling along with cervicomedullary compression. Postoperatively, she steadily improved and regained normal power after 3 months. Retrospective quantitative analysis of magnetic resonance imaging (MRI) revealed a small posterior fossa.
CONCLUSIONS: The association of intracranial tumors and lumbar CSF drainage with CMI is uncommon. The documentation of a small posterior fossa signifies the importance of both developmental (small posterior fossa) and acquired (intracranial tumor/lumbar CSF drainage) factors in pathogenesis of CMI. Although the extreme rarity of acute deterioration following a single LP does not warrant LP to be contraindicated in such patients, documentation of resolution of CMI with postoperative MRI before performing lumbar CSF drainage (whether therapeutic or diagnostic), might be helpful in avoiding this rare complication.

DOI: 10.1016/j.wneu.2016.04.111

PMID: 27157279 [PubMed - in process]

60: Kumar C, Voppuru SR, Jamaluddin MA. Comments on: Cosyntropin stimulation testing on postoperative day 1 allows for selective glucocorticoid replacement therapy after adrenalectomy for hypercortisolism: Results of a novel, multidisciplinary institutional protocol. Surgery. 2016 Jul;160(1):248-9. doi: 10.1016/j.surg.2016.02.012. PubMed PMID: 27016333.

61: Kumar L, Gupta S. Integrating Chemotherapy in the Management of Cervical Cancer: A Critical Appraisal. Oncology. 2016;91 Suppl 1:8-17. doi: 10.1159/000447576. PubMed PMID: 27464068.

The management of locally advanced cervix cancer has undergone a paradigm shift during the last decade. Concurrent chemoradiation (CCRT) (with cisplatin alone or in combination) is currently the standard treatment approach. CCRT results in a 5-year overall survival rate of 66% and a disease-free survival of 58%. About 30-40% of patients with locally advanced cervical cancer fail to achieve complete response to CCRT; alternative approaches are needed to improve the outcome for such patients. Weekly paclitaxel and carboplatin for 4-6 weeks as dose-dense chemotherapy prior to CCRT could be one such potential approach. The role of adjuvant chemotherapy after CCRT in patients with positive lymph nodes, larger tumor volume and stage III-IVA disease needs further exploration. Adjuvant chemotherapy is also being investigated for early-stage (stages IA2, IB1 or IIA) cervical cancer with presence of risk factors such as lymph node metastasis, lymphovascular space invasion and invasion depth of more than 10 mm, microscopic parametrial invasion, non-squamous histology and positive surgical margins. For patients with early-stage disease (IA2-IIA), short-course chemotherapy prior to surgery is associated with an improved outcome in many studies. Neo-adjuvant chemotherapy followed by fertility preservation surgery is feasible in carefully selected young patients with bulky stage IB1 disease. Recently, a number of molecular pathways have been identified as potential therapeutic targets. Bevacizumab - an inhibitor of vascular endothelial growth factor - is associated with improved survival in patients with recurrent/metastatic cervical cancer. Whether bevacizumab and other similar novel agents targeting molecular pathways could be used in front-line treatment along with cytotoxic chemotherapy is likely to be an area of research in future studies.

DOI: 10.1159/000447576
PMID: 27464068 [PubMed - in process]

62: Kumar L. Prevention and Treatment of Cancer in India. Oncology. 2016;91 Suppl 1:V-VI. doi: 10.1159/000448125. PubMed PMID: 27463200.

63: Kumar P, Misra S, Kumar Yadav A, Kumar A, Sriwastva M, Prasad K. Relationship between Interleukin-6 (-174G/C and -572C/G) Promoter Gene Polymorphisms and Risk of Intracerebral Hemorrhage: A Meta-Analysis. Pulse (Basel). 2016 Sep;4(2-3):61-68. Review. PubMed PMID: 27752477; PubMed Central PMCID: PMC5052694.

BACKGROUND: Polymorphisms of -174G/C and -572C/G in the Interleukin-6 (IL-6) promoter gene can affect both transcription and secretion of IL-6 and may be involved in the inflammatory mechanisms in early and delayed phases after intracerebral hemorrhage (ICH). The role of these polymorphisms remains unclear for the pathogenesis of ICH.
METHODS: PubMed, EMBASE, MEDLINE and Google Scholar searches were conducted from January 1, 1950 to February 29, 2016 and were supplemented with relevant articles identified in the references. The following search terms were used: ('interleukin-6' or 'IL-6') and ('genetic polymorphism' or 'single nucleotide

polymorphisms' or 'SNP') and ('intracerebral hemorrhage' or 'ICH') and ('hemorrhagic stroke' or 'HS'). Fixed or random effects models were used to estimate the pooled odds ratios and 95% confidence intervals. Begg's funnel plot was used to assess the potential for publication bias.
RESULTS: In our meta-analysis, three case-control studies involving 446 ICH cases and 2,322 controls were included. No significant association was observed for the IL-6 (-174G/C and -572C/G) gene polymorphisms with the risk of ICH under dominant, recessive and allelic models.
CONCLUSION: Our meta-analysis suggests that IL-6 gene polymorphisms are not associated with the risk of ICH. However, caution must be taken while considering the results of our meta-analysis due to the presence of small sample size. Our results cannot be extrapolated to represent the effect of entire IL-6 genetic polymorphism on stroke patients worldwide. Therefore, further well-designed studies with large sample size are warranted to validate our findings and provide a profound conclusion.

DOI: 10.1159/000447677
PMCID: PMC5052694
PMID: 27752477 [PubMed - in process]

64: Kumar P, Yadav AK, Misra S, Kumar A, Chakravarty K, Prasad K. Prediction of upper extremity motor recovery after subacute intracerebral hemorrhage through diffusion tensor imaging: a systematic review and meta-analysis. Neuroradiology. 2016 Oct;58(10):1043-1050. PubMed PMID: 27438802.

INTRODUCTION: Early assessment of the pyramidal tracts is important for intracerebral hemorrhage (ICH) patients in order to decide the optimal treatment or to assess appropriate rehabilitation strategies, and management of patient expectations and goals. The purpose of this study was to systematically review and summarize the current available literature on the value of Fractional Anisotropy (FA) parameter of the diffusion tensor imaging (DTI) in predicting upper extremity (UE) motor recovery after subacute ICH.
METHODS: PubMed, EMBASE, MEDLINE, Google Scholar, and Cochrane CENTRAL searches were conducted from 1 January 1950 to 31 March 2016 which were supplemented with relevant articles identified in the references. Pooled estimate using correlation between DTI parameter FA and UE motor recovery was done using comprehensive meta-analysis software.
RESULTS: Out of 97 citations, only eight 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 UE motor recovery after subacute ICH (correlation coefficient = 0.56; 95 % confidence interval 0.44 to 0.65, P value <0.001). However, moderate heterogeneity was observed between the studies (Tau-squared = 0.28, I-squared = 70.3).
CONCLUSION: The studies reported so far on correlation between FA parameter of DTI and UE motor recovery in ICH patients are few with small sample sizes. This meta-analysis suggests a strong correlation between DTI parameter FA and UE motor recovery in ICH patients. Further well-designed prospective studies embedded with larger sample size are needed to confirm these findings.

DOI: 10.1007/s00234-016-1718-6
PMID: 27438802 [PubMed - in process]

65: Kumar P, Jithesh V, Gupta SK. A comparative cost analysis of polytrauma and neurosurgery Intensive Care Units at an apex trauma care facility in India. Indian J Crit Care Med. 2016 Jul;20(7):398-403. doi: 10.4103/0972-5229.186220. PubMed PMID: 27555693; PubMed Central PMCID: PMC4968061.

CONTEXT: Although Intensive Care Units (ICUs) only account for 10% of the hospital beds, they consume nearly 22% of the hospital resources. Few definitive costing studies have been conducted in Indian settings that would help determine appropriate resource allocation.

AIM: The aim of this study was to evaluate and compare the cost of intensive care delivery between multispecialty and neurosurgery ICUs at an apex trauma care facility in India.
MATERIALS AND METHODS: The study was conducted in a polytrauma and neurosurgery ICU at a 203-bedded Level IV trauma care facility in New Delhi, India, from May 1, 2012 to June 30, 2012. The study was cross-sectional, retrospective, and record-based. Traditional costing was used to arrive at the cost for both direct and indirect cost estimates. The cost centers included in the study were building cost, equipment cost, human resources, materials and supplies, clinical and nonclinical support services, engineering maintenance cost, and biomedical waste management.
STATISTICAL ANALYSIS: Statistical analysis was performed by Fisher's two tailed t-test.
RESULTS: Total cost/bed/day for the multispecialty ICU was Rs. 14,976.9/- and for the neurosurgery ICU, it was Rs. 14,306.7/-, workforce constituting nearly half of the expenditure in both ICUs. The cost center wise and overall difference in the cost among the ICUs were statistically significant.
CONCLUSIONS: Quantification of expenditure in running an ICU in a trauma center would assist health-care decision makers in better allocation of resources. Although multispecialty ICUs are more cost-effective, other factors will also play a role in defining the kind of ICU that needs to be designed.

DOI: 10.4103/0972-5229.186220
PMCID: PMC4968061
PMID: 27555693 [PubMed]

66: Kumar R, Singh AK, Kumar M, Shekhar S, Rai N, Kaur P, Parshad R, Dey S. Serum 5-LOX: a progressive protein marker for breast cancer and new approach for therapeutic target. Carcinogenesis. 2016 Sep;37(9):912-7. doi: 10.1093/carcin/bgw075. PubMed PMID: 27432812.

Lipoxygenase (LOX) pathway has emerged to have a role in carcinogenesis. There is an evidence that both 12-LOX and 5-LOX have procarcinogenic role. We have previously reported the elevated level of serum 12-LOX in breast cancer patients. This study evaluated the serum level of 5-LOX in breast cancer patients and its in vitro inhibition assessment with peptide inhibitor YWCS. The level of 5-LOX was determined by surface plasmon resonance (SPR). The peptide inhibitor of 5-LOX was designed by molecular modeling and kinetic assay was performed by spectrophotometry. The siRNA mediated 5-LOX gene silencing was performed to investigate the effect on proliferation of MDA-MB-231, breast cancer cell line. The serum 5-LOX level in breast cancer (5.69±1.97ng/µl) was almost 2-fold elevated compared to control (3.53±1.0ng/µl) ($P < 0.0001$). The peptide YWCS had shown competitive inhibitory effects with IC50, 2.2 µM and dissociation constant (K D), 4.92×10(-8) M. The siRNA mediated knockdown of 5-LOX, resulted in the decreased gene expression for 5-LOX and increased cell death in MDA-MB-231 cell line and thereby play a key role in reducing tumor proliferation. Thus, it can be concluded that 5-LOX is one of the potential serum protein marker for breast cancer and a promising therapeutic target for the same.

DOI: 10.1093/carcin/bgw075
PMID: 27432812 [PubMed - in process]

67: Kumar S, Dey S, Jain S. Extremely low-frequency electromagnetic fields: A possible non-invasive therapeutic tool for spinal cord injury rehabilitation. Electromagn Biol Med. 2017;36(1):88-101. PubMed PMID: 27399648.

Traumatic insults to the spinal cord induce both immediate mechanical damage and subsequent tissue degeneration. The latter involves a range of events namely cellular disturbance, homeostatic imbalance, ionic and neurotransmitters

derangement that ultimately result in loss of sensorimotor functions. The targets for improving function after spinal cord injury (SCI) are mainly directed toward limiting these secondary injury events. Extremely low-frequency electromagnetic field (ELF-EMF) is a possible non-invasive therapeutic intervention for SCI rehabilitation which has the potential to constrain the secondary injury-induced events. In the present review, we discuss the effects of ELF-EMF on experimental and clinical SCI as well as on biological system.

DOI: 10.1080/15368378.2016.1194290
PMID: 27399648 [PubMed - in process]

68: Kumar V, Chandra P, Kumar A. Ultra-wide field imaging in the diagnosis and management of adult-onset Coats' disease. Clin Exp Optom. 2017 Jan;100(1):79-82. doi: 10.1111/cxo.12418. PubMed PMID: 27476647.

BACKGROUND: The conventional fundus imaging covers up to 60 degrees of retina only. Although various montaging techniques can significantly increase the area that can be imaged, it is still difficult to image and document the peripheral retina. The purpose of this study is to describe the use of ultra-wide field imaging in the diagnosis and management of adult-onset Coats' disease.
METHODS: This is a retrospective case series of three patients diagnosed with adult-onset Coats' disease that were treated at the retina clinic of our institute. The case records, conventional and ultra-wide field fluorescein angiograms and optical coherence tomography scans were reviewed.
RESULTS: The ultra-wide field pseudo-colour photographs and fluorescein angiograms were able to provide clinically useful information over and above that provided by conventional imaging. In all three patients, ultra-wide field angiography showed the temporal avascular periphery. In addition, it revealed retinal neovascularisation, peripheral vascular leakage and documented peripheral telangiectasia in selected patients.
CONCLUSION: Ultra-wide field imaging provides information that can help in the diagnosis and management of adult-onset Coat's disease. This may lead to better visual outcomes in Coats' disease.

DOI: 10.1111/cxo.12418
PMID: 27476647 [PubMed - in process]

69: Kumar V, Salunkhe N, Ravani R, Chandra P, Kumar A. Dissociated optic nerve fibre layer after Nd:YAG laser membranotomy for premacular hemorrhage. Can J Ophthalmol. 2016 Oct;51(5):e139-e141. doi: 10.1016/j.jcjo.2016.05.009. PubMed PMID: 27769335.

70: Kumar V, Chandra P, Kumar A. Intraoperative optical coherence tomography guided removal of premacular hemorrhage in Valsalva retinopathy. Indian J Ophthalmol. 2016 Jul;64(7):530-1. doi: 10.4103/0301-4738.190151. PubMed PMID: 27609167; PubMed Central PMCID: PMC5026080.

71: Kumar V, Chandra P, Kumar A. Ultra-wide field angiography in the management of Eales disease. Indian J Ophthalmol. 2016 Jul;64(7):504-7. doi: 10.4103/0301-4738.190138. PubMed PMID: 27609162; PubMed Central PMCID: PMC5026075.

AIMS: This study aims to evaluate the use of ultra-wide field (UWF) angiography in patients with Eales disease (ED).
SETTINGS AND DESIGN: Prospective observational case series in tertiary eye care center.
SUBJECTS AND METHODS: This study involved 17 patients diagnosed with ED, who underwent UWF fluorescein angiography. The angiograms were analyzed to look for

additional information as compared to Early Treatment Diabetic Retinopathy Study seven standard field. The impact of this information in the management of patients was analyzed.
RESULTS: 24 eyes of 17 patients with mean age of 26.3 years were diagnosed with ED and underwent UWF angiography. UWF fluorescein angiography was helpful in the documentation of peripheral retinal changes (in 67% of eyes), exact localization of capillary nonperfusion (CNP) (in 54% of eyes), and in determination of vascular involvement (in 21% of eyes). In 33% of eyes, immediate treatment plan changed because of changes picked up on UWF angiography.
CONCLUSIONS: UWF angiography helped in the better documentation, exact quantification, and location of CNP areas and better determination of disease activity. UWF imaging may play an important part in the management of patients with ED.

DOI: 10.4103/0301-4738.190138
PMCID: PMC5026075
PMID: 27609162 [PubMed - in process]

72: Kumaran D, Anamalai M, Velu U, Nambirajan A, Julka PK. Carcinoma of Gall bladder with distant metastasis to breast parenchyma. Report of a case and review of literature. J Egypt Natl Canc Inst. 2016 Dec;28(4):263-266. doi: 10.1016/j.jnci.2016.06.002. PubMed PMID: 27381065.

BACKGROUND: Gall bladder carcinoma is one of the most common cancers in India. Gall bladder cancer with metastasis to the breast is very rare. Herein we intend to report a case of carcinoma gall bladder with breast metastasis and a short review of the literature.
METHODS: This report describes an interesting and unusual case of gall bladder carcinoma presenting with breast metastasis.
CASE REPORT: A 38-year lady presented with complaints of right abdominal pain. Bilateral breast examination showed 2×2cm palpable lump in the upper outer quadrant of the left breast. Contrast-enhanced CT of the abdomen and pelvis showed circumferential thickening of gall bladder with the loss of fat plane with the adjacent liver parenchyma. Biopsy from the breast lump was reported as metastatic adenocarcinoma compatible with primary in the gall bladder. Whole body PET-CT showed gall bladder mass with abdominal and pelvic nodes with metastasis to liver, left breast, C7 vertebral body and left supra-clavicular node. She was diagnosed to have disseminated carcinoma gall bladder with liver, breast and supraclavicular nodal metastasis. She received palliative chemotherapy with gemcitabine and carboplatin and radiotherapy to C7 vertebra. After receiving 3 cycles of chemotherapy, chemotherapy was changed to the second line with single agent capecitabine. In spite of two lines of chemotherapy, she succumbed to disease progression and expired.
CONCLUSION: There are limited examples of gall bladder adenocarcinoma with simultaneous metastasis to breast in the English literature. Our case showed an unusual dissemination of gall bladder cancer.

DOI: 10.1016/j.jnci.2016.06.002
PMID: 27381065 [PubMed - in process]

73: Kumawat BL, Gupta R, Sharma A, Sen S, Gupta S, Tandon R. Delayed onset of congenital hereditary endothelial dystrophy due to compound heterozygous SLC4A11 mutations. Indian J Ophthalmol. 2016 Jul;64(7):492-5. doi: 10.4103/0301-4738.190100. PubMed PMID: 27609159; PubMed Central PMCID: PMC5026072.

BACKGROUND: Congenital hereditary endothelial dystrophy (CHED) is an autosomal recessive disorder characterized by bilateral, symmetrical, noninflammatory corneal clouding (edema) present at birth or shortly thereafter. This study

reports on an unusual delayed presentation of CHED with compound heterozygous SLC4A11 mutations.
MATERIALS AND METHODS: A 45-year-old female, presenting with bilateral decreased vision since childhood that deteriorated in the last 5 years, was evaluated to rule out trauma, viral illness, chemical injury, glaucoma, and corneal endothelial dystrophies. Tear sample was sent for herpes simplex viral (HSV) antigen testing. Genomic DNA from peripheral blood was screened for mutations in all exons of SLC4A11 by direct sequencing. Full-thickness penetrating keratoplasty was done and corneal button was sent for histopathological examination.
RESULTS: Slit-lamp findings revealed bilateral diffuse corneal edema and left eye spheroidal degeneration with scarring. Increased corneal thickness (762 µm and 854 µm in the right and left eyes, respectively), normal intraocular pressure (12 mmHg and 16 mmHg in the right and left eyes, respectively), inconclusive confocal scan, and specular microscopy, near normal tear film parameters, were the other clinical features. HSV-polymerase chain reaction was negative. Histopathological examination revealed markedly thickened Descemet's membrane with subepithelial spheroidal degeneration. SLC4A11 screening showed a novel variant p.Ser415Asn, reported mutation p.Cys386Arg and two polymorphisms, all in the heterozygous state and not identified in 100 controls.
CONCLUSIONS: The study shows, for the first time, compound heterozygous SLC4A11 mutations impair protein function leading to delayed onset of the disease.

DOI: 10.4103/0301-4738.190100
PMCID: PMC5026072
PMID: 27609159 [PubMed - in process]

74: Luthra A, Dube SK, Kumar S, Goyal K. Intraoperative hyperthermia: Can surgery itself be a cause? Indian J Anaesth. 2016 Jul;60(7):515-7. doi: 10.4103/0019-5049.186023. PubMed PMID: 27512171; PubMed Central PMCID: PMC4966359.

75: Makkar JK, Singh PM, Jain D, Goudra B. Particulate vs Non-Particulate Steroids for Transforaminal Epidural Steroid Injections: Systematic Review and Meta-analysis of the Current Literature. Pain Physician. 2016 Jul;19(6):327-40. PubMed PMID: 27454262.

BACKGROUND: The efficacy of particulate and non-particulate steroids in patients receiving epidural steroid injections remains unclear.
OBJECTIVE: The purpose of this meta-analysis was to compare the efficacy of particulate and non-particulate steroids in patients receiving epidural injections for radicular pain over 3 months.
STUDY DESIGN: Systematic review and meta-analysis.
METHODS: We reviewed PubMed, PubMed Central, Scopus, Central Register of Clinical Trials of the Cochrane Collaboration, Google Scholar, and Directory of open access journals for trials that compared efficacy of particulate steroid with non-particulate. A meta-analysis was performed on treatment related to mean change in visual analogue score (VAS) between the particulate and non-particulate steroids. Two authors independently reviewed the data for inclusion.
RESULTS: Seven studies comprising 3,542 patients in the particulate group and 856 patients in the non-particulate group were included. Pooled mean maximum change of VAS was higher by 0.53 (95% CI: 0.14 to 0.92; P = 0.007; I2 = 50.2%) in the particulate group compared to the non-particulate group. The non-particulate group had a larger proportion of patients with more than 50% pain relief than the particulate group [OR 0.81 (95% CI: 0.68 to 0.97, P = 0.024).
LIMITATIONS: Limited number of trials that fit the inclusion criteria and were available for analysis.
CONCLUSIONS: As the use of particulate steroids seems to be associated with slightly better VAS scores only, clinicians need to weigh their clinical relevance in the light of complications and recent FDA recommendations on the use of particulate steroids.

PMID: 27454262 [PubMed - in process]

76: Malhotra S, Vashist P, Gupta N, Kalaivani M, Satpathy G, Shah A, Krishnan S, Azad R. Prevalence of Trachoma in Car-Nicobar Island, India after Three Annual Rounds of Mass Drug Administration with Azithromycin. PLoS One. 2016 Jul 8;11(7):e0158625. doi: 10.1371/journal.pone.0158625. PubMed PMID: 27391274; PubMed Central PMCID: PMC4938255.

BACKGROUND: A high proportion of active trachoma infection in children of Car-Nicobar Island was reported through the Trachoma Rapid Assessment survey conducted in year 2010 by the same researchers. Annual mass drug treatment with azithromycin was administered from years 2010-12 to all individuals residing in this island for reducing the burden of active trachoma infection. A cross-sectional prevalence survey was conducted in the year 2013 to assess the post-treatment burden of trachoma in this population.
METHODS: In the 15 randomly selected compact segments from each village of the island, children aged 1-9 years were examined for evidence of active trachoma infection and participants aged ten years and above were examined for trachomatous trichiasis and corneal opacity.
RESULTS: A total of 809 children (1-9 years) and 2735 adults were examined. Coverage with azithromycin for all the three rounds was more than 80%. The prevalence of active trachoma infection in children aged 1-9 years old was 6.8% (95% CI 5.1, 8.5) and Trachomatous Trichiasis (TT) was 3.9% (95% CI 3.2, 4.6). The risk factors associated with active trachoma infection were older age and unclean faces. The risk factors associated with TT were older age and lower literacy level.
CONCLUSION: Trachoma has not been eliminated from Car-Nicobar Island in accordance to 'Global Elimination of Trachoma, 2020' guidelines. Sustained efforts and continuous surveillance admixed with adequate programmatic response is imperative for elimination of trachoma in the island.

DOI: 10.1371/journal.pone.0158625
PMCID: PMC4938255
PMID: 27391274 [PubMed - in process]

77: Mallick S, Benson R, Hakim A, Rath GK. Management of glioblastoma after recurrence: A changing paradigm. J Egypt Natl Canc Inst. 2016 Dec;28(4):199-210. doi: 10.1016/j.jnci.2016.07.001. Review. PubMed PMID: 27476474.

Glioblastoma remains the most common primary brain tumor after the age of 40years. Maximal safe surgery followed by adjuvant chemoradiotherapy has remained the standard treatment for glioblastoma (GBM). But recurrence is an inevitable event in the natural history of GBM with most patients experiencing it after 6-9months of primary treatment. Recurrent GBM poses great challenge to manage with no well-defined management protocols. The challenge starts from differentiating radiation necrosis from true local progression. A fine balance needs to be maintained on improving survival and assuring a better quality of life. Treatment options are limited and ranges from re-excision, re-irradiation, systemic chemotherapy or a combination of these. Re-excision and re-irradiation must be attempted in selected patients and has been shown to improve survival outcomes. To facilitate the management of GBM recurrences, a treatment algorithm is proposed.

DOI: 10.1016/j.jnci.2016.07.001
PMID: 27476474 [PubMed - in process]

78: Mandal K, Ray S, Saxena D, Srivastava P, Moirangthem A, Ranganath P, Gupta N, Mukhopadhyay S, Kabra M, Phadke SR. Pycnodysostosis: mutation spectrum in five unrelated Indian children. Clin Dysmorphol. 2016 Jul;25(3):113-20. doi: 10.1097/MCD.0000000000000128. PubMed PMID: 27092432.

79: Meghwani H, Prabhakar P, Mohammed SA, Seth S, Hote MP, Banerjee SK, Arava S, Ray R, Maulik SK. Beneficial effects of aqueous extract of stem bark of Terminalia arjuna (Roxb.), An ayurvedic drug in experimental pulmonary hypertension. J Ethnopharmacol. 2016 Jul 9. pii: S0378-8741(16)30452-4. doi: 10.1016/j.jep.2016.07.029. [Epub ahead of print] PubMed PMID: 27401289.

ETHNOPHARMACOLOGICAL RELEVANCE: The stem bark of Terminalia arjuna (Roxb.) is widely used in Ayurveda in various cardiovascular diseases. Many animal and clinical studies have validated its anti-ischemic, antihypertensive, antihypertrophic and antioxidant effects. Pulmonary hypertension (PH) is a fatal disease which causes right ventricular hypertrophy and right heart failure. Pulmonary vascular smooth muscle hypertrophy and increased oxidative stress are major pathological features of PH. As available limited therapeutic options fail to reduce the mortality associated with PH, alternative areas of therapy are worth exploring for potential drugs, which might be beneficial in PH.
AIM OF THE STUDY: The effect of a standardised aqueous extract of the stem bark of Terminalia arjuna (Roxb.) in preventing monocrotaline (MCT)-induced PH in rat was investigated.
MATERIALS AND METHODS: The study was approved by Institutional Animal Ethics Committe. Male Wistar rats (150-200g) were randomly distributed into five groups; Control, MCT (50mg/kg subcutaneously once), sildenafil (175µg/kg/day three days after MCT for 25 days), and Arjuna extract (TA125 and TA250 mg/kg/day orally after MCT for 25 days). PH was confirmed by right ventricular weight to left ventricular plus septum weight (Fulton index), right ventricular systolic pressure (RVSP), echocardiography, percentage medial wall thickness of pulmonary arteries (%MWT). Oxidative stress in lung was assessed by super oxide dismutase (SOD), catalase, reduced glutathione (GSH) and thiobarbituric acid reactive substance (TBARS). The protein expressions of nicotinamide adenine dinucleotide phosphate (NADPH) oxidase (NOX-1) in lung and gene expression of Bcl2 and Bax in heart were analyzed by Western blot and RT PCR respectively.
RESULTS: MCT caused right ventricular hypertrophy (0.58±0.05 vs 0.31±0.05; P<0.001 vs. control) and increase in RVSP (33.5±1.5 vs 22.3±4.7mm of Hg; P<0.001). Both sildenafil and Arjuna prevented hypertrophy and RVSP. Pulmonary artery acceleration time to ejection time ratio in echocardiography was decreased in PH rats (0.49±0.05 vs 0.32±0.06; P<0.001) which was prevented by sildenafil (0.44±0.06; P<0.01) and TA250 (0.45±0.06; P<0.01). % MWT of pulmonary arteries was increased in PH and was prevented by TA250. Increase in TBARS (132.7±18.4 vs 18.8±1.6nmol/mg protein; P<0.001) and decrease in SOD (58.4±14.1 vs 117.4±26.9U/mg protein; P<0.001) and catalase (0.30±0.05 vs 0.75±0.31U/mg protein; P<0.001) were observed in lung tissue of PH rats, which were prevented by sildenafil and both the doses of Arjuna extract. Protein expression of NOX1 was significantly increased in lung and gene expression of Bcl2/Bax ratio was significantly decreased in right ventricle in MCT-induced PH, both were significantly prevented by Arjuna and sildenafil.
CONCLUSIONS: Aqueous extract of Terminalia arjuna prevented MCT-induced pulmonary hypertension which may be attributed to its antioxidant as well as its effects on pulmonary arteriolar wall thickening.

DOI: 10.1016/j.jep.2016.07.029
PMID: 27401289 [PubMed - as supplied by publisher]

80: Midha S, Chawla S, Garg PK. Modifiable and non-modifiable risk factors for pancreatic cancer: A review. Cancer Lett. 2016 Oct 10;381(1):269-77. doi: 10.1016/j.canlet.2016.07.022. PubMed PMID: 27461582.

Pancreatic ductal adenocarcinoma is associated with a poor prognosis and a high case-fatality rate. The reasons for poor prognosis are low rates of curative resection due to local infiltration and distant metastasis. To increase survival rates of patients with pancreatic cancer, early detection through surveillance and screening is important. However, screening could only be cost-effective in high-risk populations. Identification of significant risk factors therefore assumes significance. Risk factors could be non-modifiable or modifiable. Non-modifiable risk factors include increasing age, familial cancer syndromes, Afro-American race, hereditary and other forms of chronic pancreatitis, diabetes, and non-O blood group. Important modifiable risk factors include smoking, obesity, dietary factors such as non-vegetarian diet, and toxins. Preventive strategies at the population level and an effective screening program targeted at high-risk people may help in prevention and early detection of pancreatic ductal adenocarcinoma.

DOI: 10.1016/j.canlet.2016.07.022
PMID: 27461582 [PubMed - in process]

81: Muthiah T, Arora MK, Trikha A, Sunder RA, Prasad G, Singh PM. Efficacy of magnesium as an adjuvant to bupivacaine in 3-in-1 nerve block for arthroscopic anterior cruciate ligament repair. Indian J Anaesth. 2016 Jul;60(7):491-5. doi: 10.4103/0019-5049.186018. PubMed PMID: 27512165; PubMed Central PMCID: PMC4966353.

BACKGROUND AND AIMS: Three-in-one and femoral nerve blocks are proven modalities for postoperative analgesia following anterior cruciate ligament (ACL) reconstruction. The aim of this study was to evaluate the efficacy of magnesium (Mg) as an adjuvant to bupivacaine in 3-in-1 block for ACL reconstruction.
METHODS: Sixty patients undergoing arthroscopic ACL reconstruction were randomly allocated to Group I (3-in-1 block with 30 ml of 0.25% bupivacaine preceded by 1.5 ml of intravenous [IV] saline), Group II (3-in-1 block with 30 ml of 0.25% bupivacaine preceded by 1.5 ml of solution containing 150 mg Mg IV) or Group III (3-in-1 block with 30 ml containing 0.25% bupivacaine and 150 mg of Mg as adjuvant preceded by 1.5 ml of IV saline). Post-operatively, patients received morphine when visual analogue scale (VAS) score was ≥4. Quantitative parameters were compared using one-way ANOVA and Kruskal-Wallis test and qualitative data were analysed using Chi-square test.
RESULTS: Demographics, haemodynamic parameters, intra-operative fentanyl requirement, post-operative VAS scores and total morphine requirement were comparable between groups. Time to first analgesic requirement was significantly prolonged in Group III (789 ± 436) min compared to Group I (466 ± 290 min) and Group II (519 ± 274 min), (P = 0.02 and 0.05). Significantly less number of patients in Group III (1/20) received morphine in the first 6 h post-operatively, compared to Group I (8/20) and Group II (6/20) (P = 0.008 and 0.03). No side effects were observed.
CONCLUSION: Mg as an adjuvant to bupivacaine in 3-in-1 block for ACL reconstruction significantly prolongs the time to first analgesic requirement and reduces the number of patients requiring morphine in the immediate post-operative period.

DOI: 10.4103/0019-5049.186018
PMCID: PMC4966353
PMID: 27512165 [PubMed]

82: Nakashima H, Tetreault LA, Nagoshi N, Nouri A, Kopjar B, Arnold PM, Bartels R, Defino H, Kale S, Zhou Q, Fehlings MG. Does age affect surgical outcomes in patients with degenerative cervical myelopathy? Results from the prospective multicenter AOSpine International study on 479 patients. J Neurol Neurosurg Psychiatry. 2016 Jul;87(7):734-40. doi: 10.1136/jnnp-2015-311074. PubMed PMID: 26420885; PubMed Central PMCID: PMC4941131.

BACKGROUND: In general, older patients with degenerative cervical myelopathy (DCM) are felt to have lower recovery potential following surgery due to increased degenerative pathology, comorbidities, reduced physiological reserves and age-related changes to the spinal cord. This study aims to determine whether age truly is an independent predictor of surgical outcome and to provide evidence to guide practice and decision-making.
METHODS: A total of 479 patients with DCM were prospectively enrolled in the CSM-International study at 16 centres. Our sample was divided into a younger group (<65 years) and an elderly (≥65 years) group. A mixed model analytic approach was used to evaluate differences in the modified Japanese Orthopaedic Association (mJOA), Nurick, Short Form-36 (SF-36) and Neck Disability Index (NDI) scores between groups. We first created an unadjusted model between age and surgical outcome and then developed two adjusted models that accounted for variations in (1) baseline characteristics and (2) both baseline and surgical factors.
RESULTS: Of the 479 patients, 360 (75.16%) were <65 years and 119 (24.84%) were ≥65 years. Elderly patients had a worse preoperative health status (p<0.0001) and were functionally more severe (p<0.0001). The majority of younger patients (64.96%) underwent anterior surgery, whereas the preferred approach in the elderly group was posterior (58.62%, p<0.0001). Elderly patients had a greater number of decompressed levels than younger patients (p<0.0001). At 24 months after surgery, younger patients achieved a higher postoperative mJOA (p<0.0001) and a lower Nurick score (p<0.0001) than elderly patients. After adjustments for patient and surgical characteristics, these differences in postoperative outcome scores decreased but remained significant.
CONCLUSIONS: Older age is an independent predictor of functional status in patients with DCM. However, patients over 65 with DCM still achieve functionally significant improvement after surgical decompression.

DOI: 10.1136/jnnp-2015-311074
PMCID: PMC4941131
PMID: 26420885 [PubMed - in process]

83: Narula J, Kiran U, Malhotra Kapoor P, Choudhury M, Rajashekar P, Kumar Chowdhary U. Assessment of Changes in Hemodynamics and Intrathoracic Fluid Using Electrical Cardiometry During Autologous Blood Harvest. J Cardiothorac Vasc Anesth. 2016 Jul 26. pii: S1053-0770(16)30296-8. doi: 10.1053/j.jvca.2016.07.032. [Epub ahead of print] PubMed PMID: 27720494.

OBJECTIVE: To evaluate the effect of autologous blood harvest (ABH)-induced volume shifts using electrical cardiometry (EC) in patients with pulmonary artery hypertension secondary to left heart disease.
DESIGN: Prospective, randomized, controlled trial.
SETTING: A tertiary care hospital.
PARTICIPANTS: The study comprised 50 patients scheduled to undergo heart valve replacement.
INTERVENTIONS: Patients were divided randomly into 2 experimental groups that were distinguished by whether ABH was performed. Blood volume extracted in the test group was replaced simultaneously with 1:1 colloid (Tetraspan; B Braun Melsungen, Melsungen, Germany). Hemodynamic, respiratory, and EC-derived parameters were recorded at predefined set points (T1 [post-induction/pre-ABH] and T2 [20 minutes post-ABH]).
MEASUREMENTS AND MAIN RESULTS: Withdrawal of 15% of blood volume in the ABH group caused significant reductions in thoracic fluid content (TFC) (-10.1% [-15.0% to -6.1%]); right atrial pressure (-23% [-26.6% to -17.6%]); mean arterial pressure (-12.6% [-22.2% to -3.8%]); airway pressures: (peak -6.2% [-11.7% to -2.8%] and mean -15.4% [-25.0% to -8.3%]); and oxygenation index (-10.34% [-16.4% to -4.8%]). Linear regression analysis showed good correlation between the

percentage change in TFC after ABH and the percentage of change in right atrial pressure, stroke volume variation, autologous blood extracted, peak and mean airway pressures, and oxygen index.
CONCLUSIONS: In addition to its proven role in blood conservation, therapeutic benefits derived from ABH include decongestion of volume-loaded patients, decrease in TFC, and improved gas exchange. EC tracks beat-to-beat fluid and hemodynamic fluctuations during ABH and helps in the execution of an early patient-specific, goal-directed therapy, allowing for its safe implementation in patients with pulmonary hypertension secondary to left heart disease.

DOI: 10.1053/j.jvca.2016.07.032
PMID: 27720494 [PubMed - as supplied by publisher]

84: Nataraj V, Mathur N, Rani L, Gupta R, Bakhshi S. Serial assessment of circulating T regulatory cells and T helper 17 cells in pediatric non-Hodgkin lymphoma: a prospective study. Leuk Lymphoma. 2016 Jul;57(7):1739-42. doi: 10.3109/10428194.2015.1102244. PubMed PMID: 26690272.

85: Pandit AK, Kumar P, Kumar A, Chakravarty K, Misra S, Prasad K. High-dose statin therapy and risk of intracerebral hemorrhage: a meta-analysis. Acta Neurol Scand. 2016 Jul;134(1):22-8. doi: 10.1111/ane.12540. Review. PubMed PMID: 26647879.

Statin plays a major role in the primary and secondary prevention of cardiovascular disease (CVD). Inconsistent findings in the studies have been observed toward the risk of intracerebral hemorrhage (ICH) using higher dose of statin. To examine this issue, we performed a meta-analysis of randomized controlled trials (RCTs) to assess the association between higher dose of various statins and risk of ICH among patients with CVD. Literature was searched for studies published before June 10, 2015, using electronic database 'PubMed', 'EMBASE', and 'Google Scholar' as well as from many trial databases. The following search terms were used: 'Statin therapy' AND 'Cardiovascular Disease', AND 'Dose' AND 'Intracerebral hemorrhage', AND 'Randomized Controlled Trials' AND 'High Dose Statin'. High dose of statins was defined as atorvastatin 80 mg, simvastatin 80 mg, pravastatin 40 mg, rosuvastatin 20 mg per day. Fixed-effect model was used to estimate the risk ratio (RR) and 95% confidence interval (CI) if heterogeneity was <50%; otherwise, random-effect model was used. Begg's funnel plot was used to assess the publication bias. Seven RCTs involving 31,099 subjects receiving high-dose statin and 31,105 subjects receiving placebo were analyzed in our meta-analysis. A significant risk of ICH was observed in subjects with higher dose of statin (RR = 1.53; 95% CI: 1.16-2.01; P = 0.002). There was no difference in all-cause mortality between the two groups (RR = 0.95; 95% CI: 0.86-1.06; P = 0.36). No publication bias was observed through Begg's funnel plot. Higher dose of statins was found to be associated with the risk of ICH. Future studies are needed to confirm these findings.

DOI: 10.1111/ane.12540
PMID: 26647879 [PubMed - indexed for MEDLINE]

86: Panwar R, Pal S, Dash NR, Shalimar, Sahni P, Acharya SK, Pande GK, Chattopadhyay TK, Nundy S. Hepatic resection for predominantly large size hepatocellular carcinoma: Early and long-term results from a tertiary care center in India. Indian J Gastroenterol. 2016 Jul;35(4):280-6. doi: 10.1007/s12664-016-0678-4. Erratum in: Indian J Gastroenterol. 2016 Sep;35(5):403-404. PubMed PMID: 27515744.

BACKGROUND AND AIM: There are no large series on hepatic resection for

hepatocellular carcinoma (HCC) from India. We present the results of consecutive patients of HCC treated with hepatic resection at a tertiary care center in India.
METHODS: The records of all patients who underwent hepatic resection for HCC in the Department of Gastrointestinal Surgery, All India Institute of Medical Sciences (New Delhi), were reviewed. The relevant perioperative and follow up data were extracted from a prospectively maintained database.
RESULTS: Between January 1987 and December 2013, 81 patients [71 males; mean age: 49.2±15.6 years] underwent hepatic resection for HCC. Of these, 23 (28 %) were cirrhotic and 36 (49 %) had hepatitis B. Hepatitis B was significantly more common in cirrhotic (77 % vs. 37 %; p=0.001). Most patients had locally advanced disease at presentation [tumor size ≥10 cm in 61 (75 %); vascular tumor thrombus in 10 (12 %)]. Anatomical resection was done in 61 (75 %) including 56 major hepatic resections (≥3 segments). Overall in-hospital mortality was 13 (16 %) [cirrhotic 5 (22 %) vs. noncirrhotic 8 (14 %), p=0.503]. Grade III-V complications (modified Clavien-Dindo classification) occurred in 25 (31 %) patients (cirrhotic 48 % vs. noncirrhotic 24 %; p=0.037). Follow up information was available for 51 (75 %) patients. The median time to recurrence was 12 months, and most (86 %) occurred within 1 year. The recurrence-free survival at 1, 3, and 5 years was 48 %, 40 %, and 36 %, respectively. Positive resection margin and vascular invasion were significantly associated with very poor prognosis.
CONCLUSION: Majority of Indian HCC patients present with locally advanced disease. Despite this, surgical resection provides a chance for long-term recurrence-free survival in a third of them.

DOI: 10.1007/s12664-016-0678-4
PMID: 27515744 [PubMed - in process]

87: Parakh N, Karthikeyan G, Juneja R. Paradoxical Eisenmengerization Reversal of an obligatory shunt. Int J Cardiol. 2016 Oct 15;221:443-5. doi: 10.1016/j.ijcard.2016.07.019. PubMed PMID: 27409571.

88: Parmeswaran GG, Kalaivani M, Gupta SK, Goswami AK, Nongkynrih B. Assessment of home hazards for childhood injuries in an urban population in New Delhi. Child Care Health Dev. 2016 Jul;42(4):473-7. doi: 10.1111/cch.12328. PubMed PMID: 26892878.

BACKGROUND: Childhood injuries, especially the unintentional category of injuries, occur most commonly in the environment inside a child's home. The primary objective of the present study was to assess the presence of home hazards for childhood injuries in households in an urban resettlement colony in New Delhi.
METHODS: A community-based cross-sectional study was carried out in an urban resettlement colony in Delhi. A hazards assessment tool was used to check the presence of hazards in the houses.
RESULTS: A total of 225 households were included. It was seen that121 (53.7%) had a cooking stove within the reach of the child, and 190 (84.3%) had the gas pipe within reach. Fire hazard was seen in 84% of houses. About 78% of households did not have locked storage for chemicals.
CONCLUSION: The study revealed a significant burden of hazards for childhood injuries within their own homes, thus emphasizing the need for injury prevention interventions to reduce the number of hazards.

DOI: 10.1111/cch.12328
PMID: 26892878 [PubMed - in process]

89: Passah A, Tripathi M, Ballal S, Yadav MP, Kumar R, Roesch F, Meckel M, Sarathi Chakraborty P, Bal C. Evaluation of bone-seeking novel radiotracer

(68)Ga-NO2AP-Bisphosphonate for the detection of skeletal metastases in carcinoma breast. Eur J Nucl Med Mol Imaging. 2017 Jan;44(1):41-49. PubMed PMID: 27455986.

PURPOSE: The successful labelling of bisphosphonates (BP) with (68)Ga using macrocyclic chelators such as the based triazacyclononane (NO2AP) is a step forward in the in-house availability of a novel bone-seeking PET radiopharmaceutical with dual advantage of PET/CT imaging and generator production. In this study, we compared the novel generator-based skeletal radiotracer (68)Ga-1,4,7-triazacyclonone-1,4-diacetic acid ((68)Ga-NO2AP-BP) with sodium fluoride ((18)F-NaF) for the detection of skeletal metastases in breast cancer patients. In addition, dosimetric analysis of (68)Ga-NO2AP-BP was performed in a subset of patients.
METHODS: This was a prospective study of histopathologically proven cases of breast cancer patients who were referred for bone scintigraphy and underwent positron emission tomography/computed tomography (PET/CT) with (18)F-NaF and (68)Ga-NO2AP-BP within a week in random order. The scans of each patient were compared both qualitatively for image quality and quantitatively for number of lesions and SUVmax of lesions. Dosimetric analysis was performed in five patients. Their PET/CT scans were acquired at multiple time points and urine and blood samples were collected. Dosimetric calculations were performed using OLINDA/EXM 1.1 software. Statistical analysis was done using Stata 13 (StataCorp) software package. An agreement analysis regarding number of lesions detected with the two skeletal radiotracers was carried out.
RESULTS: The image quality of (68)Ga-NO2AP-BP PET/CT scans were comparable to that of (18)F-NaF. There was no statistically significant difference in the SUVmax of lesions, normal bone and lesion to background ratio between the two skeletal radiotracers. There was good agreement in the number of lesions detected by both skeletal radiotracers. The mean whole body effective dose for (68)Ga-NO2AP-BP was 0.00583 mSv/MBq and the effective dose equivalent was 0.0086 mSv/MBq.
CONCLUSION: The excellent lesion detection agreement between (68)Ga-NO2AP-BP and (18)F-NaF favours the former as an alternative for skeletal scintigraphy in centres without an on-site cyclotron. The favourable dosimetric results and its potential to be used as a theranostic agent makes it an important generator-based skeletal radiotracer.

DOI: 10.1007/s00259-016-3469-3
PMID: 27455986 [PubMed - in process]

90: Patil V, Gupta R, Verma R, Balhara YP. Neuroleptic Malignant Syndrome Associated with Lithium Toxicity. Oman Med J. 2016 Jul;31(4):309-11. doi: 10.5001/omj.2016.59. PubMed PMID: 27403245; PubMed Central PMCID: PMC4927730.

Neuroleptic Malignant Syndrome (NMS) is an idiosyncratic and potentially life-threatening reaction to neuroleptic drugs. Lithium is a first-line mood stabilizer used in the treatment and prophylaxis of bipolar disorder. There are several case reports of lithium-associated NMS, but only when it was given in combination with antipsychotics. Therefore, the possibility of NMS being secondary to the antipsychotics could not be ruled out in those cases. Here we present a case of lithium-induced NMS in a patient who was not being treated concomitantly with any other agent known to cause NMS. The patient, a 74-year-old female with a 30-year history of bipolar affective disorder, was admitted to the emergency room of the All India Institute of Medical Sciences, New Delhi, with history of high fever and generalized weakness for 10 days before the admission. NMS was established based the presence of three cardinal symptoms. She was started on intravenous fluids to correct her sodium levels slowly and requested to follow-up at the psychiatry clinic.

DOI: 10.5001/omj.2016.59
PMCID: PMC4927730
PMID: 27403245 [PubMed]

91: Pattnaik B, Bodas M, Bhatraju NK, Ahmad T, Pant R, Guleria R, Ghosh B, Agrawal A. IL-4 promotes asymmetric dimethylarginine accumulation, oxo-nitrative stress, and hypoxic response-induced mitochondrial loss in airway epithelial cells. J Allergy Clin Immunol. 2016 Jul;138(1):130-141.e9. doi: 10.1016/j.jaci.2015.11.036. PubMed PMID: 26915676.

BACKGROUND: Obesity is known to increase asthma risk and severity. Increased levels of asymmetric dimethylarginine (ADMA), an endogenous nitric oxide synthase inhibitor, are associated with mitochondrial toxicity, asthma, and metabolic syndrome. IL-4 upregulates the expression of protein arginine methyltransferases, which are essential for ADMA formation. Importantly, cross-talk between IL-4, ADMA, and mitochondrial dysfunction could explain how obesity and IL-4 can synergize to exacerbate allergic inflammation.
OBJECTIVE: We sought to investigate how IL-4, a key asthma-associated cytokine, can influence ADMA-related effects on lungs.
METHODS: BEAS2B (bronchial epithelial) cells were treated with IL-4 followed by ADMA and investigated for oxo-nitrative stress and resultant mitochondrial toxicity after 48 hours by using flow cytometry, confocal imaging, immunoblotting, and fluorimetric assays.
RESULTS: IL-4-induced mitotoxicity in BEAS2B cells was significantly higher in the presence of exogenous ADMA. IL-4 treatment led to proteolytic degradation of dimethylarginine dimethylaminohydrolase 2, which catabolizes ADMA. IL-4 pretreatment was associated with increased intracellular ADMA accumulation and increased ADMA-induced mitotoxicity. Airway epithelial cells treated with IL-4 followed by ADMA showed exaggerated oxo-nitrative stress and potent induction of the cellular hypoxic response, despite normoxic conditions. The hypoxic response was associated with reduced mitochondrial function but was reversible by overexpression of the mitochondrial biogenesis factor, mitochondrial transcription factor A.
CONCLUSION: We conclude that IL-4 promotes intracellular ADMA accumulation, leading to mitochondrial loss through oxo-nitrative stress and hypoxic response. This provides a novel understanding of how obesity, with high ADMA levels, and asthma, with high IL-4 levels, might potentiate each other and highlights the potential of mitochondrial-targeted therapeutics in obese subjects with asthma.

DOI: 10.1016/j.jaci.2015.11.036
PMID: 26915676 [PubMed - in process]

92: Pilania R, Sikka P, Rohit MK, Suri V, Kumar P. Fetal Cardiodynamics by Echocardiography in Insulin Dependent Maternal Diabetes and Its Correlation with Pregnancy Outcome. J Clin Diagn Res. 2016 Jul;10(7):QC01-4. doi: 10.7860/JCDR/2016/17993.8079. PubMed PMID: 27630907; PubMed Central PMCID: PMC5020204.

INTRODUCTION: Maternal diabetes mellitus is associated with an increased risk of fetal and neonatal morbidity and mortality. Usual screening tests have not proved to be good prognostic indicators of fetal distress. Fetal cardiodynamics is potentially a useful screening tool.
AIM: To determine if cardiodynamics of the fetus differ in pregnancy with diabetes requiring insulin than those without and to determine whether cardiodynamics predict fetal and neonatal outcomes.
MATERIALS AND METHODS: This prospective case control study was carried out in 40 pregnant women with diabetes who required insulin for blood sugar control. Twenty uncomplicated pregnant women were taken as controls. Systolic and diastolic cardiac functions along with interventricular septal thickness were assessed at 26-28 weeks and again at 34-36 weeks of gestation in fetuses by echocardiography. Fetal and neonatal adverse outcomes were evaluated in terms of major and minor morbidity.
RESULTS: Among all parameters, E/A ratio across both mitral and tricuspid valves, myocardial performance index and cardiac output were significantly different in

fetuses of diabetic mothers at both gestations. However, pulmonary vein pulsatility index and interventricular septal thickness were similar between the two groups. At 26-28 weeks of gestation myocardial performance index correlated with abnormal biophysical profile whereas cardiac output correlated with minor morbidity. At 34-36 weeks of gestation, cardiac output correlated with abnormal biophysical profile while both MPI and cardiac output correlated with minor morbidity.
CONCLUSION: Echocardiographic parameters of fetuses of diabetic women significantly differed from those of uncomplicated non-diabetic women. However, only myocardial performance index and cardiac output correlated with adverse fetal and neonatal outcomes.

DOI: 10.7860/JCDR/2016/17993.8079
PMCID: PMC5020204
PMID: 27630907 [PubMed]

93: Pruthi G, Bansal K, Sharma R, Goel R, Mangtani N, Jain V. Rehabilitation of Patient of Glass Cut Injury With Forehead Flap Repositioning and Implant-Retained Nasal Prosthesis. J Craniofac Surg. 2016 Jul;27(5):e441-4. doi: 10.1097/SCS.0000000000002733. PubMed PMID: 27391509.

Traumatic injuries, especially in maxillofacial region, not only lead to physical debilitation but also cause severe psychological distress in the affected individuals. Complete cosmetic and functional rehabilitation of such patients is a challenging task and thus requires a strategic treatment planning and a multidisciplinary team to execute the treatment. This patient report presents a patient who suffered with a severe glass cut injury leading to massive avulsion of face involving forehead, nose, upper lip, and anterior teeth. Patient was rehabilitated with a combined surgical and prosthetic approach, which involved flap repositioning in forehead, nasal and lip regions and an implant-supported nasal prosthesis to replace missing nose. Missing anterior teeth were replaced with fixed dental prostheses.

DOI: 10.1097/SCS.0000000000002733
PMID: 27391509 [PubMed - in process]

94: Puri P, Saraswat VA, Dhiman RK, Anand AC, Acharya SK, Singh SP, Chawla YK, Amarapurkar DN, Kumar A, Arora A, Dixit VK, Koshy A, Sood A, Duseja A, Kapoor D, Madan K, Srivastava A, Kumar A, Wadhawan M, Goel A, Verma A, Shalimar, Pandey G, Malik R, Agrawal S. Indian National Association for Study of the Liver (INASL) Guidance for Antiviral Therapy Against HCV Infection: Update 2016. J Clin Exp Hepatol. 2016 Jun;6(2):119-45. doi: 10.1016/j.jceh.2016.07.001. Review. PubMed PMID: 27493460; PubMed Central PMCID: PMC4963318.

India contributes significantly to the global burden of HCV. While the nucleoside NS5B inhibitor sofosbuvir became available in the Indian market in March 2015, the other directly acting agents (DAAs), Ledipasvir and Daclatasvir, have only recently become available in the India. The introduction of these DAA in India at a relatively affordable price has led to great optimism about prospects of cure for these patients as not only will they provide higher efficacy, but combination DAAs as all-oral regimen will result in lower side effects than were seen with pegylated interferon alfa and ribavirin therapy. Availability of these newer DAAs has necessitated revision of INASL guidelines for the treatment of HCV published in 2015. Current considerations for the treatment of HCV in India include the poorer response of genotype 3, nonavailability of many of the DAAs recommended by other guidelines and the cost of therapy. The availability of combination DAA therapy has simplified therapy of HCV with decreased reliance of evaluation for monitoring viral kinetics or drug related side effects.

DOI: 10.1016/j.jceh.2016.07.001
PMCID: PMC4963318 [Available on 2017-06-01]
PMID: 27493460 [PubMed]

95: Purkait S, Mallick S, Sharma V, Kumar A, Pathak P, Jha P, Biswas A, Julka PK, Gupta D, Suri A, Upadhyay AD, Suri V, Sharma MC, Sarkar C. A simplified approach for molecular classification of glioblastomas (GBMs): experience from a tertiary care center in India. Brain Tumor Pathol. 2016 Jul;33(3):183-90. doi: 10.1007/s10014-016-0251-y. PubMed PMID: 26865311.

This study aims to establish a simplified molecular classification of glioblastomas (GBMs) based on molecular genetic alterations. GBM cases (n-114) were evaluated for IDH-1 and TP53 mutation by Sanger sequencing, PDGFRA and EGFR amplification by FISH, NF1 and YKL40 expression by qRT-PCR. Subsequently they were classified into four subgroups: classical like (CL), proneural like (PN), mesenchymal like (MES) and neural like (NEU). CL subtype was most frequent (39 %), followed by PN (32 %) and MES (20 %) subtypes. PN subtype had significantly younger age at presentation and longest survival (median PFS-82.5 weeks; 1 and 2 years OS-90.6 and 71.3 %). Other three subgroups had equally poor prognosis and hence, clubbed together as non-proneural (Non-PN) (median PFS-39 weeks; 1 and 2 years OS-66 and 0 %). Hence, we recommended this relatively easy method of subclassifying GBMs into PN and Non-PN which are statistically different in prognosis (both OS and PFS on uni and multivariate analysis). Although evaluation of six molecular alterations for identifying these two subgroups is still cumbersome, we propose segregation of PN subtype alone based on assessment of IDH1, TP53 and PDGFRA status, which is relatively easy and may be amenable to routine practice.

DOI: 10.1007/s10014-016-0251-y
PMID: 26865311 [PubMed - in process]

96: Rampal R, Awasthi A, Ahuja V. Retinoic acid-primed human dendritic cells inhibit Th9 cells and induce Th1/Th17 cell differentiation. J Leukoc Biol. 2016 Jul;100(1):111-20. doi: 10.1189/jlb.3VMA1015-476R. PubMed PMID: 26980802.

All-trans-retinoic acid plays a central role in mucosal immunity, where it promotes its synthesis by up-regulating CD103 expression on dendritic cells, induces gut tropic (α4β7(+) and CCR9(+)) T cells, and inhibits Th1/Th17 differentiation. Recently, murine studies have highlighted the proinflammatory role of retinoic acid in maintaining inflammation under a variety of pathologic conditions. However, as a result of limited human data, we investigated the effect of retinoic acid on human dendritic cells and CD4(+) T cell responses in the presence of polarizing (Th1/Th9/Th17) and inflammatory (LPS-induced dendritic cells) conditions. We report a novel role of retinoic acid in an inflammatory setup, where retinoic acid-primed dendritic cells (retinoic acid-monocyte-derived dendritic cells) up-regulated CCR9(+)T cells, which were observed to express high levels of IFN-γ in the presence of Th1/Th17 conditions. Retinoic acid-monocyte-derived dendritic cells, under Th17 conditions, also favored the induction of IL-17(+) T cells. Furthermore, in the presence of TGF-β1 and IL-4, retinoic acid-monocyte-derived dendritic cells inhibited IL-9 and induced IFN-γ expression on T cells. Experiments with naïve CD4(+) T cells, activated in the presence of Th1/Th17 conditions and absence of DCs, indicated that retinoic acid inhibited IFN-γ and IL-17 expression on T cells. These data revealed that in the face of inflammatory conditions, retinoic acid, in contrast from its anti-inflammatory role, could maintain or aggravate the intestinal inflammation.

DOI: 10.1189/jlb.3VMA1015-476R
PMID: 26980802 [PubMed - in process]

97: Rastogi S, Bakhshi S. Trabectedin in Soft Tissue Sarcoma: Have We Hit the Bull's-eye? J Clin Oncol. 2016 Jul 25. pii: JCO657130. [Epub ahead of print] PubMed PMID: 27458287.

98: Rodin D, Grover S, Elmore SN, Knaul FM, Atun R, Caulley L, Herrera CA, Jones JA, Price AJ, Munshi A, Gandhi AK, Shah C, Gospodarowicz M. The power of integration: radiotherapy and global palliative care. Ann Palliat Med. 2016 Jul;5(3):209-17. doi: 10.21037/apm.2016.06.03. PubMed PMID: 27481320.

Radiotherapy (RT) is a powerful tool for the palliation of the symptoms of advanced cancer, although access to it is limited or absent in many low- and middle-income countries (LMICs). There are multiple factors contributing to this, including assumptions about the economic feasibility of RT in LMICs, the logical challenges of building capacity to deliver it in those regions, and the lack of political support to drive change of this kind. It is encouraging that the problem of RT access has begun to be included in the global discourse on cancer control and that palliative care and RT have been incorporated into national cancer control plans in some LMICs. Further, RT twinning programs involving high- and low-resource settings have been established to improve knowledge transfer and exchange. However, without large-scale action, the consequences of limited access to RT in LMICs will become dire. The number of new cancer cases around the world is expected to double by 2030, with twice as many deaths occurring in LMICs as in high-income countries (HICs). A sustained and coordinated effort involving research, education, and advocacy is required to engage global institutions, universities, health care providers, policymakers, and private industry in the urgent need to build RT capacity and delivery in LMICs.

DOI: 10.21037/apm.2016.06.03
PMID: 27481320 [PubMed - in process]

99: Rodriguez-Luna D, Coscojuela P, Rubiera M, Hill MD, Dowlatshahi D, Aviv RI, Silva Y, Dzialowski I, Lum C, Czlonkowska A, Boulanger JM, Kase CS, Gubitz G, Bhatia R, Padma V, Roy J, Tomasello A, Demchuk AM, Molina CA; PREDICT/Sunnybrook ICH CTA Study Group.. Ultraearly hematoma growth in active intracerebral hemorrhage. Neurology. 2016 Jul 26;87(4):357-64. doi: 10.1212/WNL.0000000000002897. PubMed PMID: 27343067; PubMed Central PMCID: PMC4977111.

OBJECTIVE: To determine the association of ultraearly hematoma growth (uHG) with the CT angiography (CTA) spot sign, hematoma expansion, and clinical outcomes in patients with acute intracerebral hemorrhage (ICH).
METHODS: We analyzed data from 231 patients enrolled in the multicenter Predicting Haematoma Growth and Outcome in Intracerebral Haemorrhage Using Contrast Bolus CT study. uHG was defined as baseline ICH volume/onset-to-CT time (mL/h). The spot sign was used as marker of active hemorrhage. Outcome parameters included significant hematoma expansion (>33% or >6 mL, primary outcome), rate of hematoma expansion, early neurologic deterioration, 90-day mortality, and poor outcome.
RESULTS: uHG was higher in spot sign patients ($p < 0.001$) and in patients scanned earlier ($p < 0.001$). Both uHG >4.7 mL/h ($p = 0.002$) and the CTA spot sign ($p = 0.030$) showed effects on rate of hematoma expansion but not its interaction (2-way analysis of variance, $p = 0.477$). uHG >4.7 mL/h improved the sensitivity of the spot sign in the prediction of significant hematoma expansion (73.9% vs 46.4%), early neurologic deterioration (67.6% vs 35.3%), 90-day mortality (81.6% vs 44.9%), and poor outcome (72.8% vs 29.8%), respectively. uHG was independently related to significant hematoma expansion (odds ratio 1.06, 95% confidence interval 1.03-1.10) and clinical outcomes.
CONCLUSIONS: uHG is a useful predictor of hematoma expansion and poor clinical outcomes in patients with acute ICH. The combination of high uHG and the spot sign is associated with a higher rate of hematoma expansion, highlighting the need for very fast treatment in ICH patients.

DOI: 10.1212/WNL.0000000000002897
PMCID: PMC4977111 [Available on 2017-07-26]
PMID: 27343067 [PubMed - in process]

100: Saha B, Jeeva Sankar M, Gupta S, Agarwal R, Gupta N, Deorari A, Paul VK. Iron Stores in Term and Late Preterm Small for Gestational Age and Appropriate for Gestational Age Neonates at Birth and in Early Infancy. Indian J Pediatr. 2016 Jul;83(7):622-7. doi: 10.1007/s12098-015-1960-7. PubMed PMID: 26666906.

OBJECTIVE: To compare body iron stores in late preterm and term small for gestational age (SGA) infants with gestation matched appropriate-for-gestational age (AGA) infants at birth and at 2 mo of age.
METHODS: In this prospective observational study, live births of 34-42 wk gestation and SGA (<10th centile for GA) were enrolled along with gestation matched AGA (10th-90th centile for GA) infants. Infants' blood samples were taken within 2 h of delivery, and repeated at 60 ± 7 d of life. Primary outcome was serum ferritin at birth and 60 d of age. Secondary outcomes were hematocrit at birth and 60 d and need for transfusion until 60 d of life.
RESULTS: A total of 37 SGA (gestation 37.2 ± 1.9 wk, birth weight 1861 ± 401 g) and 30 AGA infants (gestation 37.3 ± 1.9 wk, birth weight 2607 ± 405 g) were enrolled in the study. There was no difference in the serum ferritin between AGA and SGA infants at birth {median [IQR]: 254.0 [214.3-293.8] vs. 259.7 [217.8-301.5] µg/L; p = 0.85} or 60 d of life {147.2 [101.4-193.0] vs. 155.0 [106.6-203.6] µg/L; p = 0.81}. Mean hematocrit was 55.5 ± 9.6 vs. 52.4 ± 5.0 at birth (p = 0.10) and 32.1 ± 4.9 vs. 31.6 ± 3.8 at 60 d (p = 0.77) in SGA and AGA infants respectively. No infant required blood transfusion during the study period.
CONCLUSIONS: Iron stores of late preterm and term SGA infants are comparable to term AGA infants at birth and 2 mo of age. Recommendations on iron supplementation to these infants need to be formulated through appropriately designed randomized trials.

DOI: 10.1007/s12098-015-1960-7
PMID: 26666906 [PubMed - in process]

101: Saha S, Gantyala SP, Aggarwal S, Sreenivas V, Tandon R, Goswami R. Long-term outcome of cataract surgery in patients with idiopathic hypoparathyroidism and its relationship with their calcemic status. J Bone Miner Metab. 2016 Jul 27. [Epub ahead of print] PubMed PMID: 27465913.

Cataract is a cardinal manifestation of hypoparathyroidism. Although patients with hypoparathyroidism require cataract surgery at a younger age than individuals without hypoparathyroidism, there is limited information on the outcome of this surgery. We assessed long-term complications of cataract surgery in patients with idiopathic hypoparathyroidism (IH) and its relationship with their clinical and biochemical parameters. Twenty-seven patients with IH and 25 nonhypoparathyroid controls with a minimum follow-up of 2 years after cataract surgery were assessed for visual acuity, intraocular pressure, lens centricity, Nd:YAG laser capsulotomy, and the severity of posterior capsular opacification (PCO) and anterior capsular opacification. High-resolution optical slit-lamp images were analyzed by an ophthalmologist. Patients with IH had cataract surgery at a younger age than controls (34.0 ± 16.4 years vs 58.0 ± 11.2 years, P < 0.001). A higher proportion of IH patients had dense white PCO (75.0 % vs 39.4 %, P = 0.004), Nd:YAG laser capsulotomy (44.2 % vs 10.0 %, P = 0.001), anterior capsular opacification (97.7 % vs 84.2 %, P = 0.03), and a decentric lens (28.3% vs 2.6 %, P = 0.001) at a comparable time after surgery (8.6 ± 6.1 years vs 8.7 ± 6.8 years, P = 0.85). On regression analysis, the severity of PCO in IH correlated only with male sex and not with other factors, including serum total calcium and inorganic phosphorus levels at the baseline and during follow-up. To conclude, patients with IH are likelier than individuals without IH to develop PCO and to require Nd:YAG laser capsulotomy after cataract surgery. Proper precautions should be taken during surgery to minimize this

complication in IH.

DOI: 10.1007/s00774-016-0767-6
PMID: 27465913 [PubMed - as supplied by publisher]

102: Sahai P, Shukla NK, Arora S, Mohanti BK. Reply to Letter to the Editor regarding recurrent sebaceous carcinoma of the eyelid: Outcome after postoperative reirradiation. Head Neck. 2016 Nov;38(11):1729. doi: 10.1002/hed.24545. PubMed PMID: 27473551.

103: Sahu V, Gupta A, Kumar R, Gupta T, Mohan A, Dey S. Quantification of Rac1 and Rac1b in serum of non small cell lung cancer by label free real time assay. Clin Chim Acta. 2016 Sep 1;460:231-5. doi: 10.1016/j.cca.2016.07.009. PubMed PMID: 27425849.

BACKGROUND: Rac proteins play a major role in tumorogenesis. We quantified Rac1 and Rac1b in serum of non small cell lung cancer (NSCLC) patients.
METHODS: The blood of 77 NSCLC patients and 52 healthy controls were collected and quantified the concentration of Rac1 and Rac1b mainly by surface plasmon resonance and it was verify by Western blot analysis.
RESULTS: Rac1 and Rac1b were found to be significantly over expressed in serum of NSCLC patients compare to healthy controls. The level of Rac proteins were found to be increased in all stages of cancer. Despite the low survival rate, we managed to collect serum sample of the 18 follow up patients after the therapy, where 11 patients' of CR+PR group showed down regulation of the Rac protein after chemotherapy and unfortunately 80% patients died during the study period.
CONCLUSION: The high specificity and sensitivity obtained from ROC analysis for Rac1 and Rac1b envisaged it to be used as a serum diagnostic marker in the early stage of cancer.

DOI: 10.1016/j.cca.2016.07.009
PMID: 27425849 [PubMed - in process]

104: Saini I, Kalaivani M, Kabra SK. Calcinosis in juvenile dermatomyositis: frequency, risk factors and outcome. Rheumatol Int. 2016 Jul;36(7):961-5. doi: 10.1007/s00296-016-3467-6. PubMed PMID: 27007612.

The aim was to retrospectively estimate the prevalence of calcinosis in patients with juvenile dermatomyositis (JDM) and to identify risk factors associated with development of calcinosis in these patients. Retrospective chart review of 39 children diagnosed with JDM between 2004 and 2015 in a tertiary care hospital was done. Patients were divided into two groups, depending on the presence or absence of calcinosis, and the two groups were compared with respect to demographic, clinical, laboratory and therapeutic characteristics. Calcinosis developed in nine (23.1 %) patients. Delay in diagnosis and initiation of treatment, prolonged duration of disease, the presence of joint contractures and cardiac involvement were significantly associated with increased frequency of calcinosis. Six out of nine (66.7 %) patients with calcinosis received alendronate therapy, out of which four showed partial reduction in calcinosis. In one case, surgical removal of tumorous clumps was done. Calcinosis remains a common complication of JDM. We found an association between calcinosis and delay in diagnosis and initiation of treatment, prolonged duration of disease and cardiac involvement. Our study suggests that alendronate may be beneficial in management of calcinosis of JDM.

DOI: 10.1007/s00296-016-3467-6
PMID: 27007612 [PubMed - in process]

105: Sarangi SC, Kakkar AK, Kumar R, Gupta YK. Effect of lamotrigine,

levetiracetam & topiramate on neurobehavioural parameters & oxidative stress in comparison with valproate in rats. Indian J Med Res. 2016 Jul;144(1):104-111. doi: 10.4103/0971-5916.193296. PubMed PMID: 27834333; PubMed Central PMCID: PMC5116881.

BACKGROUND & OBJECTIVES: Though newer antiepileptic drugs are considered safer than conventional antiepileptics, the effects of lamotrigine, levetiracetam and topiramate on neurobehavioural functions are yet to be established. This study evaluated neurobehavioural parameters and oxidative stress markers in brain tissue of rats treated with lamotrigine, levetiracetam and topiramate compared to sodium valproate .
METHODS: Five groups of male Wistar rats were treated respectively with normal saline (control), sodium valproate (370 mg/kg), lamotrigine (50 mg/kg), levetiracetam (310 mg/kg) and topiramate (100 mg/kg) for 45 days. Neurobehavioural parameters were assessed using elevated plus maze (EPM), actophotometer, rotarod, passive avoidance and Morris water maze (MWM) at baseline and at the end of treatment. Oxidative stress parameters [malondialdehyde (MDA), reduced glutathione (GSH) and superoxide dismutase (SOD)] were estimated in rat brain at the end of treatment.
RESULTS: Valproate and lamotrigine showed no significant effect on learning and memory in passive avoidance and MWM tests. However, levetiracetam and topiramate reduced retention memory significantly as compared to control ($P<0.01$) and lamotrigine ($P<0.05$) groups. Performances on EPM, rotarod and actophotometer were not significantly different between the groups. In comparison to control group, MDA was higher in the levetiracetam and topiramate (360.9 and 345.9 nmol/g of homogenized brain tissue, respectively) groups. GSH and SOD activity were significantly reduced by valproate and levetiracetam treatment. Lamotrigine did not induce significant oxidative stress.
INTERPRETATION & CONCLUSIONS: Long-term and therapeutic dose treatment with levetiracetam and topiramate significantly impaired learning and memory, which was not seen with valproate and lamotrigine in rats. Levetiracetam, topiramate and valproate augmented oxidative stress, whereas lamotrigine has little effect on it. These antiepileptic drugs are used in clinical practice, hence pharmaco-vigilance studies are required to evaluate their safety profile.

DOI: 10.4103/0971-5916.193296
PMCID: PMC5116881
PMID: 27834333 [PubMed - in process]

106: Sarkar S, Sakey S, Mathan K, Bharadwaj B, Kattimani S, Rajkumar RP. Assessing catatonia using four different instruments: Inter-rater reliability and prevalence in inpatient clinical population. Asian J Psychiatr. 2016 Oct;23:27-31. doi: 10.1016/j.ajp.2016.07.003. PubMed PMID: 27969074.

BACKGROUND AND AIMS: The present study aimed to assess inter-rater reliability and prevalence of catatonia according to four diagnostic methods: Bush Francis Catatonia Rating Scale (BFCRS) both screening and complete scale, Braunig's Catatonia Rating Scale (CRS), ICD 10 and DSM5.
METHODS: For inter-rater reliability, different raters evaluated patients using the definitions provides by the four scales: BFCRS Screen and Total, CRS, ICD10 and DSM5. Kippendorff'α was used to compute the inter-rater reliability. Concordance between different systems was assessed using spearman correlation. Prevalence of catatonia was studied using the four definitions in a clinical sample of consecutive adult admissions in a psychiatry ward of a tertiary care hospital.
RESULTS: The inter-rater reliability was found to be good for BFCRS Total ($\alpha=0.779$), moderate for DSM5 and BFCRS screen ($\alpha=0.575$ and $\alpha=0.514$ respectively) and low for CRS and ICD10 ($\alpha=0.111$ and $\alpha=0.018$ respectively). BFCRS Total and DSM5 definitions of catatonia had highest concordance ($rs=0.892$ $p<0.001$). In the prevalence sample of consecutive hospital admissions, the prevalence was found to be highest with the definitions of BFCRS Screen and ICD 10 (10.3%, confidence intervals [CI] 3.9% to 16.7%), followed by BFCRS Total and DSM5 definitions 6.9%,

CI 1.6% to 12.2%) and while CRS yielded the lowest prevalence rate (3.4%, CI 0% to 7.2%).
CONCLUSION: Different methods used to determine catatonia in the clinical sample yield different prevalence of this condition.

DOI: 10.1016/j.ajp.2016.07.003
PMID: 27969074 [PubMed - in process]

107: Satapathy AK, Pai G, Shruthi M, Kumar A, Jana M, Gupta N, Kabra M. Caffey's Disease: Two Cases Presenting with Unexplained Fever. Indian J Pediatr. 2016 Nov;83(12-13):1499-1500. PubMed PMID: 27364822.

108: Sengupta T, Jaryal AK, Mallick HN. Effects of NMDA and non-NMDA ionotropic glutamate receptors in the medial preoptic area on body temperature in awake rats. J Therm Biol. 2016 Oct;61:1-7. doi: 10.1016/j.jtherbio.2016.07.020. PubMed PMID: 27712650.

Glutamate when microinjected at the medial preoptic area (mPOA) influences brain temperature (Tbr) and body temperature (Tb) in rats. Glutamate and its various receptors are present at the mPOA. The aim of this study was to identify the contribution of each of the ionotropic glutamatergic receptors at the mPOA on changes in Tbr and Tb in freely moving rats. Adult male Wistar rats (n=40) were implanted with bilateral guide cannula with indwelling styli above the mPOA. A telemetric transmitter was implanted at the peritoneum to record Tb and locomotor activity (LMA). A precalibrated thermocouple wire implanted near the hypothalamus was used to assess Tbr. Specific agonist for each ionotropic glutamate receptor was microinjected into the mPOA and its effects on temperature and LMA were measured in the rats. The rats were also microinjected with the respective ionotropic receptor antagonists, 15min prior to the microinjection of each agonist. Amongst amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA), N-methyl-d-aspartate (NMDA) and kainic acid, AMPA increased Tb and LMA when injected at the mPOA. Specific antagonists for AMPA receptors was able to attenuate this increase ($p<0.005$). Pharmacological blockade of NMDA was able to lower Tbr only. Microinjection of kainic acid and its antagonist had no effect on the variables. The finding of the study suggests that activation of the AMPA receptors at the mPOA, leads to the rise in body temperature.

DOI: 10.1016/j.jtherbio.2016.07.020
PMID: 27712650 [PubMed - in process]

109: Shah SK, Irshad M, Gupta N, Kabra SK, Lodha R. Hypophosphatemia in Critically Ill Children: Risk Factors, Outcome and Mechanism. Indian J Pediatr. 2016 Nov;83(12-13):1379-1385. PubMed PMID: 27392619.

OBJECTIVES: To determine the prevalence of hypophosphatemia in critically ill children and its association with clinical outcomes; to determine risk factors and mechanism of hypophosphatemia.
METHODS: Levels of serum phosphate, phosphate intake, renal phosphate handling indices and blood gases were measured on days 1, 3, 7 and 10 of pediatric intensive care unit (PICU) stay. Hypophosphatemia was defined as any serum phosphorus <3.8 mg/dl for children younger than 2 y and <3.5 mg/dl for children 2 y or older. Renal phosphate loss was assessed using the ratio of tubular maximum reabsorption of phosphate (TmP) to glomerular filtration rate (GFR) [TmP/GFR].
RESULTS: Prevalence of hypophosphatemia was 71.6 % (95 % CI: 64.6-78.6). On adjusted analysis, hypophosphatemia was associated with prolonged PICU length of stay (PICU LOS > 6 d) (adjusted OR: 3.0 [95 % CI: 1.4-6.7; p = 0.005]) but not

associated with increased mortality. Renal phosphate threshold was significantly lower on all the days in hypophosphatemic group compared to that of non-hypophosphatemic group. No statistically significant difference in the amount of phosphate intake was seen in both the groups.
CONCLUSIONS: Hypophosphatemia is highly prevalent in critically ill children and is associated with prolonged PICU LOS. Increased phosphate loss in urine is one of the mechanism responsible for hypophosphatemia in critically ill children.

DOI: 10.1007/s12098-016-2188-x
PMID: 27392619 [PubMed - in process]

110: Sharma A, Priya S, Jagia P. Persistent truncus arteriosus on dual source CT. Jpn J Radiol. 2016 Jul;34(7):486-93. doi: 10.1007/s11604-016-0559-x. PubMed PMID: 27262857.

Persistent truncus arteriosus is a rare congenital cardiac disease with variable presentation. The exact preoperative diagnosis and delineation of anatomy are very important because the optimal timing and procedure for truncus arteriosus repair are decided on the basis of the morphological characteristics. Moreover, the presence of associated anomalies influences the surgical outcome and mortality in these patients. Dual-source computed tomographic evaluation with three-dimensional post-processing is highly valuable for delineating its precise morphology and to identify and characterize the associated anomalies. Also depiction of the precise aortic arch morphology and simultaneous evaluation of the airway are very useful in treatment planning. This pictorial review provides an overview of the imaging spectrum of truncus arteriosus and various associated anomalies as seen on dual-source computed tomography.

DOI: 10.1007/s11604-016-0559-x
PMID: 27262857 [PubMed - in process]

111: Sharma C, Dinda AK, Potdar PD, Chou CF, Mishra NC. Fabrication and characterization of novel nano-biocomposite scaffold of chitosan-gelatin-alginate-hydroxyapatite for bone tissue engineering. Mater Sci Eng C Mater Biol Appl. 2016 Jul 1;64:416-27. doi: 10.1016/j.msec.2016.03.060. PubMed PMID: 27127072.

A novel nano-biocomposite scaffold was fabricated in bead form by applying simple foaming method, using a combination of natural polymers-chitosan, gelatin, alginate and a bioceramic-nano-hydroxyapatite (nHAp). This approach of combining nHAp with natural polymers to fabricate the composite scaffold, can provide good mechanical strength and biological property mimicking natural bone. Environmental scanning electron microscopy (ESEM) images of the nano-biocomposite scaffold revealed the presence of interconnected pores, mostly spread over the whole surface of the scaffold. The nHAp particulates have covered the surface of the composite matrix and made the surface of the scaffold rougher. The scaffold has a porosity of 82% with a mean pore size of 112±19.0μm. Swelling and degradation studies of the scaffold showed that the scaffold possesses excellent properties of hydrophilicity and biodegradability. Short term mechanical testing of the scaffold does not reveal any rupturing after agitation under physiological conditions, which is an indicative of good mechanical stability of the scaffold. In vitro cell culture studies by seeding osteoblast cells over the composite scaffold showed good cell viability, proliferation rate, adhesion and maintenance of osteoblastic phenotype as indicated by MTT assay, ESEM of cell-scaffold construct, histological staining and gene expression studies, respectively. Thus, it could be stated that the nano-biocomposite scaffold of chitosan-gelatin-alginate-nHAp has the paramount importance for applications in bone tissue-engineering in future regenerative therapies.

DOI: 10.1016/j.msec.2016.03.060
PMID: 27127072 [PubMed - in process]

112: Sharma VK, Singh A, Srivastava SK, Kumar V, Gardi NL, Nalwa A, Dinda AK, Chattopadhyay P, Yadav S. Increased expression of platelet-derived growth factor associated protein-1 is associated with PDGF-B mediated glioma progression. Int J Biochem Cell Biol. 2016 Sep;78:194-205. doi: 10.1016/j.biocel.2016.07.016. PubMed PMID: 27448842.

The current treatment therapies available for malignant gliomas are inadequate. There is an urgent need to develop more effective therapies by characterizing the molecular pathogenesis of the disease. Over expression of platelet-derived growth factor (PDGF) ligands and receptors have been reported in malignant gliomas. Platelet-derived growth factor associated protein-1 (PDAP-1) is reported to modulate the mitogenic activity of PDGF ligands, but to date, there is no information concerning its role in PDGF-mediated glioma cell proliferation. This study aimed to characterize the role of PDAP-1 in PDGF-mediated glioma proliferation. The expression of PDAP-1 was observed to be significantly increased ($p<0.05$) in grade IV glioma tissue and cell lines compared to grade III. siRNA-mediated knockdown of PDAP-1 reduced the expression of PDGF-B and its downstream genes (Akt1/Protein kinase B (PKB) and phosphoinositide-dependent kinase-1 (PDK1) by up to 50%. In PDAP-1 knockdown glioma cells, more than a twofold reduction was also observed in the level of phosphorylated Akt. Interestingly, knockdown of PDAP-1 in combination with PDGF-B antibody inhibited glioma cell proliferation through activation of Caspase 3/7 and 9. We also demonstrate that PDAP-1 co-localizes with PDGF-B in the cytoplasm of glioma cells, and an interaction between both of the proteins was established. Collectively, these findings suggest that the expression of PDAP-1 is associated with disease malignancy, and its inhibition reduced the proliferation of malignant glioma cells through down-regulation of PDGF-B/Akt/PDK1 signaling. Thus, this study establishes PDAP-1 as an effecter of PDGF signaling in glioma cells and suggests that it could also be a promising therapeutic target.

DOI: 10.1016/j.biocel.2016.07.016
PMID: 27448842 [PubMed - in process]

113: Shende T, Sood S, Singh R, Kapil A, Kar HK, Sharma VK. Comparison of E test and agar dilution for testing activity of ceftriaxone against Neisseria gonorrhoeae. J Med Microbiol. 2016 Jul;65(7):701-2. doi: 10.1099/jmm.0.000283. PubMed PMID: 27221395.

114: Sihota R, Angmo D, Sen S, Gupta V, Dada T, Pandey RM. The Long-term Outcome of Primary "Bleb-sparing, Epithelial Exchange" in Dysfunctional Filtering Blebs. J Glaucoma. 2016 Jul;25(7):571-8. doi: 10.1097/IJG.0000000000000322. PubMed PMID: 26465075.

OBJECTIVE: To evaluate the long-term outcome of epithelial peeling and conjunctival replacement as a primary procedure in dysfunctional filtering blebs, without excising the bleb.
MATERIALS AND METHODS: A prospective, observational case series involving 34 consecutive eyes, having prior operated trabeculectomy with a dysfunctional filtering bleb, that met the inclusion criteria and were reviewed for at least 12 months. The bleb epithelium was peeled off and replaced with the adjacent conjunctiva, without bleb excision. Patients were reviewed at 1 week, 1 and 3 months postoperatively, and thereafter every 6 months for best corrected visual acuity (BCVA), applanation tonometry, bleb morphology and leaks, the lens status, glaucoma medications, and any complications. ASOCT was performed preoperatively and at the last review. Complete success (primary outcome) was defined as an intraocular pressure (IOP) >6 and <18 mm Hg without any additional antiglaucoma medications at the last follow-up.
RESULTS: The average age of the patients was 36.6±20.7 years. The average time of

follow-up was 23.9±6.1 months (range, 13 to 40 mo). The mean preoperative IOP was 5.8±4.2 mm Hg. Postoperatively, the IOP at 24 months was 12.6±3.9 mm Hg (P<0.0001). The bleb characteristics were graded according to the Indiana Bleb Appearance Grading Scale (IBAGS), which showed significant results in terms of the height (H), the vascularity (V), and Seidel (S) (P<0.0001). The preoperative and the postoperative BCVAs in logMAR were 0.51±0.26 and 0.37±0.21 (P=0.0001), respectively. Complete success was noted in 31/34 eyes (91.18%) and qualified success was noted in 3 eyes (8.82%). One patient developed a mild ptosis after bleb revision.
CONCLUSIONS: Epithelial peeling of the bleb with replacement by advancement, without bleb excision, maintains bleb function and resolves bleb dysfunction in the long term.

DOI: 10.1097/IJG.0000000000000322
PMID: 26465075 [PubMed - in process]

115: Singh MB. 'Untreated epilepsy' - A conspiracy of silence? Epilepsy Behav. 2016 Jul;60:202-3. doi: 10.1016/j.yebeh.2016.04.032. PubMed PMID: 27232629.

116: Singh N, Pati HP, Tyagi S, Deka R, Sharma R, Saxena R. Proposed minimal panel of antibodies for cost-effectiveness and accuracy in acute leukemias immunophenotyping: Prospective study at a tertiary care center. Hematology. 2016 Jul;21(6):338-42. doi: 10.1080/10245332.2016.1139792. PubMed PMID: 26907095.

INTRODUCTION: Flowcytometry has an essential role in the diagnosis and classification of acute leukemias. However, there exists a great degree of inter-laboratory variability on issues like panel selection, antibody combinations, gating strategies, fluorochromes, and clonal selection.
AIM: The primary aim of this study was to derive a minimal panel of antibodies and evaluate its diagnostic usefulness in acute leukemias by flowcytometry by using the detailed immune-phenotype of different lineage-specific or non-specific markers.
MATERIALS AND METHODS: This prospective observational study involved 400 newly diagnosed cases of acute leukemias. Bone marrow aspirate samples were subjected to morphological evaluation, cytogenetics and flow cytometric immunophenotyping.
RESULTS: A minimal panel of eight antibodies comprising of CD45/CD34/CD19/MPO/cytoCD3/CD64/CD117/CD79a was derived by applying different permutations and combinations with a diagnostic yield of 97.5%. The minimal panel was further validated by testing in an independent cohort of patients with similar demographic characteristics, where it showed a high diagnostic yield of 98% in comparison with the screening panels proposed by other recently published studies.
CONCLUSION: It may be concluded that the diagnostic performance of the eight antibody panel is better than most other panels used across the different laboratories in terms of yield, number of antibodies used and the scientific approach used to derive and validate the results and so henceforth may be applied in any setting with limited resources for better diagnostic accuracy.

DOI: 10.1080/10245332.2016.1139792
PMID: 26907095 [PubMed - in process]

117: Sivakumar T. Comorbidity of Bipolar Disorder (BPD) and ADHD in Children and Adolescents: Studies Outside the United States, Methodological Issues Inflating Comorbidity, Role of Behavioural Sensitization, and Concept of Temper Dysregulation Disorder With Dysphoria Proposed by DSM-5 Work Group. J Atten Disord. 2016 Jul;20(7):571-2. doi: 10.1177/1087054712457990. PubMed PMID: 22956711.

118: Sonika U, Goswami P, Thakur B, Yadav R, Das P, Ahuja V, Saraya A. Mechanism of Increased Intestinal Permeability in Acute Pancreatitis: Alteration in Tight

Junction Proteins. J Clin Gastroenterol. 2016 Jul 25. [Epub ahead of print] PubMed PMID: 27466164.

BACKGROUND AND AIMS: Intestinal permeability (IP) has been shown to be increased in acute pancreatitis (AP) and is considered to be responsible for development of septic complications. However, the mechanism of increase in IP is not well studied. We studied whether alteration in tight junction proteins (TJP) has any role in altered IP in patients with AP.
MATERIALS AND METHODS: This is a prospective study conducted at a tertiary care referral center. Twenty consecutive moderate and severe AP patients fulfilling the study criteria were included along with 20 controls that underwent gastroduodenoscopy for dyspepsia. IP was measured with lactulose mannitol (LM) ratio and TJP were studied by measuring expression of claudin-2 and claudin-4 in duodenal biopsy samples. Statistical analysis was done with STATA 13.0.
RESULTS: IP as depicted by LM ratio was significantly higher in AP patients as compared with controls (4.659±10.4 vs. 0.101±0.297; P<0.001). Claudin-4 expression was reduced in duodenal biopsies in AP patients (P<0.001 for crypt intercellular junction and P=0.007 for crypt cytoplasm). However, LM ratio was not associated with either mortality (P=0.12) or development of infected pancreatic necrosis (P=0.3).
CONCLUSIONS: IP is increased in AP. Alteration in TJP in the form of reduced claudin-4 expressions could be the possible mechanism for increased IP.

DOI: 10.1097/MCG.0000000000000612
PMID: 27466164 [PubMed - as supplied by publisher]

119: Sudhaman S, Prasad K, Behari M, Muthane UB, Juyal RC, Thelma BK. Discovery of a frameshift mutation in podocalyxin-like (PODXL) gene, coding for a neural adhesion molecule, as causal for autosomal-recessive juvenile Parkinsonism. J Med Genet. 2016 Jul;53(7):450-6. doi: 10.1136/jmedgenet-2015-103459. PubMed PMID: 26864383.

BACKGROUND: Mutations in known genes for inherited forms of Parkinson's disease (PD) account for <30% of familial PD (FPD) implying that more causal gene(s) remain to be identified. We attempted to discover the putative causal variant in an Indian family with autosomal-recessive juvenile Parkinsonism (ARJP), tested negative for mutations in PARK2, PINK1 and DJ1.
METHODS: Whole exomes of two affected siblings were sequenced. Variants prioritised were screened for segregation with disease in the family by targeted sequencing. Gene thus identified was screened for index/additional exonic mutations, if any, in an independent PD cohort by PCR sequencing. Variants observed were functionally validated in differentiated PC12 cells.
RESULTS: A novel homozygous frameshift mutation, c.89_90insGTCGCCCC in exon 1 of podocalyxin-like gene (PODXL, 7q32-33), resulting in loss of protein, segregated with disease in the family. Mutant allele was absent in 186 healthy controls screened by PCR sequencing and in control exomes available in the laboratory and public databases. Screening of additional 212 sporadic and 68 FPD cases identified three novel heterozygous missense variants namely c.1285C>A, c.1118G>A and c.881G>A in three unrelated cases. Significant differences in neurite branching and length (p<0.0001) were observed in PC12 cells with wild-type and mutant constructs.
CONCLUSIONS: Based on the genetic and functional evidence in this study and literature support on the role of PODXL in neural development, a novel frameshift mutation in PODXL seems to be the likely cause of ARJP in this family. This is the first report suggesting the possible role of a neurodevelopmental pathway in PD aetiology.

DOI: 10.1136/jmedgenet-2015-103459
PMID: 26864383 [PubMed - in process]

120: Suresh Malapure S, Das KJ, Kumar R. PET/Computed Tomography in Breast Cancer: Can It Aid in Developing a Personalized Treatment Design? PET Clin. 2016 Jul;11(3):297-303. doi: 10.1016/j.cpet.2016.02.006. Review. PubMed PMID: 27321033.

PET with fluorodeoxyglucose (FDG-PET)/computed tomography (CT) imaging has significantly improved the management of breast cancer. FDG, however, is not tumor-specific and various image interpretation pitfalls may occur due to false-positive and false-negative causes of FDG uptake. PET/CT imaging with more specific radiopharmaceuticals may provide useful information about the pathophysiology in such cases. In the present article, we reviewed the use of whole-body FDG-PET/CT and (18)F-16α-17β-Fluoroestradiol PET/CT imaging to determine if these can be used to develop personalized treatment design for the better management of breast cancer.

DOI: 10.1016/j.cpet.2016.02.006
PMID: 27321033 [PubMed - in process]

121: Swain R, Behera C, Gupta SK. Fatal corrosive ingestion: A study from South and South-East Delhi, India (2005-2014). Med Sci Law. 2016 Jul 8. pii: 0025802416657762. [Epub ahead of print] PubMed PMID: 27400703.

The study presents a retrospective analysis of 64 cases of death resulting from ingestion of corrosive substances. The cases represented approximately 0.4% of all autopsies conducted and 13.6% of all fatal poisonings studied during the 10-year period from January 2005 to December 2014 at the Department of Forensic Medicine, All India Institute of Medical Sciences (AIIMS), New Delhi. The data was analyzed with regard to age, sex, nature and source of corrosive substance used, survival period, cause and manner of death. Males (64.06%) outnumbered females (35.94%), with a male-to-female ratio of 1.78:1. The most common age group involved was 21-30 years (35.94%). Sulfuric acid (68.75%) presented as the most common corrosive substance ingested. Household cleaning substances (39.06%) were identified as a common source of such type of corrosive substance, but the exact source could not be identified in 56.26% of cases. In the majority of cases (46.88%) death was due to perforation peritonitis. Most of the victims (54.69%) succumbed to their injuries within a day of ingestion. In 87.5% of cases, the corrosive substance was consumed for suicidal purposes. A strict regulatory framework is required for the production, distribution, storage and use of corrosive substances. Preventive guidelines and creating awareness among the masses will go a long way towards curbing such unfortunate incidents.

DOI: 10.1177/0025802416657762
PMID: 27400703 [PubMed - as supplied by publisher]

122: Talwar S, Kumar MV, Bhoje A, Choudhary SK, Kothari SS, Juneja R, Saxena A, Airan B. Atrial switch procedure in children more than 5 years of age: mid-term results. Interact Cardiovasc Thorac Surg. 2016 Nov;23(5):694-698. PubMed PMID: 27430553.

OBJECTIVES: In developing countries, where patients present late, the atrial switch operation is still a preferred palliation for d-transposition of great arteries (d-TGA). In this report, we present our experience in patients with d-TGA who were 5 years of age or older.
METHODS: Twenty-seven patients underwent an atrial switch procedure between January 2004 and December 2014. The standard technique consisted of a combination of the Senning and Mustard's repair with Schumacker's in situ modification for

construction of the pulmonary venous baffle.
RESULTS: The median age was 8 years (mean: 9.42 ± 4.9, range: 5-26 years). Anatomical variations were dextrocardia (n = 3), situs inversus (n = 3), juxtaposed atrial appendages (n = 4) and left superior vena cava (n = 6). Median aortic cross-clamp and bypass times were 63 and 105 min, respectively. The median ventilator support duration was 15 h (mean: 13.7 ± 4.3, range: 6-24 h). The median intensive care unit stay was 2 days (mean: 2.38 ± 0.69, range: 2-4 days). The median hospital stay was 6 days (mean: 6.3 ± 1.7, range: 4-12 days). There were no early or late deaths. The median follow-up duration was 46 months (mean: 55.15 ± 34.71, range: 1-124 months). There were no deaths or re-operations. One patient had mild systemic venous obstruction after 4 years; one underwent embolization of aortopulmonary collaterals after 5 years. The event-free survival rate at 124 months was 90.9 ± 6.13% (95% CI: 68.3-97.65).
CONCLUSIONS: The atrial switch operation using the described technique is low risk, carries acceptable results and is a valuable management option in older patients with d-TGA and a regressed LV.

DOI: 10.1093/icvts/ivw189
PMID: 27430553 [PubMed - in process]

123: Titiyal JS, Kaur M, Singh A, Arora T, Sharma N. Comparative evaluation of femtosecond laser-assisted cataract surgery and conventional phacoemulsification in white cataract. Clin Ophthalmol. 2016 Jul 22;10:1357-64. doi: 10.2147/OPTH.S108243. PubMed PMID: 27555743; PubMed Central PMCID: PMC4969042.

PURPOSE: To compare femtosecond laser-assisted capsulotomy with conventional manual capsulorhexis in cases of white cataract.
PATIENTS AND METHODS: The prospective comparative study enrolled 80 eyes (80 patients) with white cataract that underwent either femtosecond laser-assisted cataract surgery (Group I, n=40) or conventional manual phacoemulsification (Group II, n=40) at a tertiary care ophthalmic institution. The groups were divided based on the patient's choice and affordability of the procedure. Capsulotomy/capsulorhexis was evaluated in terms of size, circularity index (4Π [area/perimeter2]), intraocular lens coverage, and continuity. Each group was further subdivided based on the release of white milky fluid on initiation of the capsulotomy/capsulorhexis, and the "fluid" cases were compared with the "no-fluid" cases. The primary outcome measure was capsulotomy/capsulorhexis characteristics in the two groups. The secondary outcome measures were intraoperative phacoemulsification parameters, intraoperative complications, and postoperative visual acuity.
RESULTS: The size of the capsulotomy/capsulorhexis was 4.9±0.1 mm in Group I and 5.3±0.4 mm in Group II (P<0.001). Mean circularity index was 0.996±0.003 and 0.909±0.047 in Groups I and II, respectively (P<0.001). In Group I, free-floating circular capsulotomies were obtained in 52.5% (21/40) eyes; 37.5% (15/40) eyes had microadhesions; and 10% (4/40) eyes had incomplete capsulotomy in 1-2 clock hours. The incidence of residual adhesions was more in cases with release of white milky fluid (P=0.003). In Group II, a multistep capsulorhexis was performed in 70% (28/40) of the eyes. There was no difference in terms of visual outcomes and intraoperative complications.
CONCLUSION: Femtosecond laser-assisted cataract surgery has the advantage of creating a circular and optimally sized capsulotomy in cases of white cataract. The release of white milky fluid during femtosecond laser delivery is the most important factor affecting the creation of a free-floating capsulotomy.

DOI: 10.2147/OPTH.S108243
PMCID: PMC4969042
PMID: 27555743 [PubMed]

124: Titiyal JS, Kaur M, Sahu S, Sharma N, Sinha R. Real-time assessment of intraoperative vaulting in implantable collamer lens and correlation with postoperative vaulting. Eur J Ophthalmol. 2016 Jul 12:0. doi: 10.5301/ejo.5000818. [Epub ahead of print] PubMed PMID: 27405290.

PURPOSE: To assess the intraoperative vaulting in patients undergoing implantable collamer lens (ICL) implantation with microscope-integrated intraoperative optical coherence tomography (iOCT) and correlate it with the postoperative vaulting.
METHODS: Forty eyes of 22 consecutive patients undergoing ICL implantation were prospectively evaluated. Vaulting was measured intraoperatively using microscope-integrated iOCT. The ICL-lenticular relationship was dynamically assessed throughout the surgery. Postoperative vaulting was measured using anterior segment optical coherence tomography on the first postoperative day and after 1 month and compared with the intraoperative vaulting. Uncorrected and best-corrected Snellen visual acuity, intraocular pressure (IOP), and anterior and posterior segments were assessed in all cases.
RESULTS: The mean central vaulting noted intraoperatively was 558.4 ± 122.8 μm. Postoperative mean vaulting was 576.0 ± 131.2 μm on day 1 and 551.1 ± 122.5 μm on day 30. There was a significant correlation between the intraoperative and the postoperative day 1 vaulting (paired samples correlation: 0.969, p<0.001) and day 30 vaulting (paired samples correlation: 0.945, p<0.001). An ICL-lenticular touch was not noted at any time during the surgery. The postoperative course was uneventful and no patient developed raised IOP or lenticular changes by the last follow-up.
CONCLUSIONS: Intraoperative vaulting correlates well with postoperative vaulting and can aid in on-table detection of extremes of vaulting and decision-making. It enhances the safety of the surgical procedure by providing a real-time display of the intraoperative manipulations.

DOI: 10.5301/ejo.5000818
PMID: 27405290 [PubMed - as supplied by publisher]

125: Tomar S, Lodha R, Das B, Sood S, Kapil A. Risk Factors for Central line associated Bloodstream Infections. Indian Pediatr. 2016 Sep 8;53(9):790-792. PubMed PMID: 27484446.

OBJECTIVE: To carry out surveillance of central line associated bloodstream infections in a Pediatric intensive care unit (PICU) and determine associated risk factors.
METHODS: This prospective study was conducted over 1.5 years in the PICU. CDC definitions for these infections were followed and associated risk factors were identified.
RESULTS: Of 265 enrolled children with central line, 13 developed blood stream infections (incidence density 5.03/1000 central line days). Significant risk factors included changing the central-line, especially triple lumen, and frequently accessing the central line.
CONCLUSION: Central line associated bloodstream infections are preventable primary bacteremias and intervention strategies for prevention should be based on evidence generated to devise future protocols.

PMID: 27484446 [PubMed - in process]

126: Vallonthaiel AG, Jain D, Madan K, Arava S. Pulmonary adenocarcinoma with signet ring features: Detailed cytomorphologic analysis. Diagn Cytopathol. 2016 Jul;44(7):607-11. doi: 10.1002/dc.23492. PubMed PMID: 27095297.

BACKGROUND: Signet ring cell feature in lung adenocarcinoma is no longer considered a distinct subtype, but as a cytologic change that may occur in association with multiple histological patterns. Cases with signet ring cells show a strong association with Anaplastic Lymphoma Kinase (ALK) gene fusions and

solid pattern.
METHODS: The cytomorphological findings of pulmonary adenocarcinoma with signet ring features (PASRF) was studied. Cases of pulmonary adenocarcinoma which showed presence of signet ring cells either on cytology or histology were included in the study.
RESULTS: Out of 218 pulmonary adenocarcinomas diagnosed during the study period, 11 cases showed presence of signet ring cells (11/218). Out of the 11 cases, 7 had paired histology and cytology available, while the remaining 4 did not have a corresponding cytology sample. Majority of the cases (6/11) showed signet ring cells in more than 90% of the tumor area. All cases showed solid growth pattern. TTF-1 was positive in all the cases. Immunopositivity for ALK was seen in seven cases. The cytology smears showed single cells and clusters of signet ring cells, with either intracytoplasmic mucin vacuole and eccentric nucleus or histiocyte-like finely vacuolated cytoplasm with round nucleus and prominent nucleoli, the latter resembling alveolar macrophages.
CONCLUSION: PASRF is commonly associated with a solid histologic pattern. Cases with predominant histiocyte-like pattern may be misdiagnosed on cytology; hence a high index of suspicion is required for an accurate diagnosis. Diagn. Cytopathol. 2016;44:607-611. © 2016 Wiley Periodicals, Inc.

DOI: 10.1002/dc.23492
PMID: 27095297 [PubMed - in process]

127: Verma A, Chandra NC. Differential Expressions of p53, p53R2, hRRM2 and PBR in Chronic Lymphocytic Leukemia: A Correlation with Intracellular Cholesterol. Indian J Clin Biochem. 2016 Jul;31(3):336-41. doi: 10.1007/s12291-015-0539-4. PubMed PMID: 27382207; PubMed Central PMCID: PMC4910855.

Regulation of intracellular cholesterol homeostasis exists under balance between intracellular biosynthesis and uptake from extracellular origin by cell surface transport proteins. Expected role of cholesterol on either tumor suppressor gene and/or DNA synthesis has been aimed in the present study to explore intracellular cholesterol homeostasis in CLL subjects. Higher expressions of p53R2 (p53 dependent subunit of ribonucleotide reductase) and p53 were found in lymphocytes of chronic human lymphocytic leukemia as comparison to their normal counterparts. Inverse relation was found with p53 independent R2 subunit (in human hRRM2) of ribonucleotide reductase, which was found to be decreased from its control group. More expression of peripheral type benzodiazepine receptor, a cholesterol transporter, was noticed in isolated nuclear fraction with simultaneous increase of cholesterol concentration in cytoplasmic and nuclear compartments. A parallel increase of cholesterol in cell nucleus with increased p53R2 expression shows priority of the involvement of cholesterol in the process of cell replication.

DOI: 10.1007/s12291-015-0539-4
PMCID: PMC4910855 [Available on 2017-07-01]
PMID: 27382207 [PubMed]

128: Verma P, Dalal K, Chopra M. Pharmacophore development and screening for discovery of potential inhibitors of ADAMTS-4 for osteoarthritis therapy. J Mol Model. 2016 Aug;22(8):178. doi: 10.1007/s00894-016-3035-8. PubMed PMID: 27401455.

In the development of osteoarthritis, aggrecan degrades prior to cartilage destruction. Aggrecanase-1 (ADAMTS-4) is considered to be the major enzyme responsible for cleaving the Glu373-Ala374 bond in the interglobular domain of aggrecan in humans. Therefore, inhibitors of ADAMTS-4 have therapeutic potential in the treatment of osteoarthritis. In the present work, we developed a chemical feature based pharmacophore model of ADAMTS-4 inhibitors using the HipHop module within the Catalyst program package in order to elucidate the structure-activity relationship and to carry out in-silico screening. The Maybridge database was screened using Hypo1 as a 3D query, and the best-fit hits that followed

Lipinski's rule of five were subsequently screened to select the compounds. The hit compounds were then docked into the active site of ADAMTS-4, and interactions were visualized to determine the potential lead molecules. After subjecting all of the hits to various screening and filtering processes, 13 compounds were finally evaluated for their in vitro inhibitory activities. This study resulted in the identification of two lead compounds with potent inhibitory effects on ADAMTS-4 activity, with IC50 values of 0.042 μM and 0.028 μM, respectively. These results provide insight into the pharmacophoric requirements for the development of more potent ADAMTS-4 inhibitors. Graphical Abstract The aggrecan-degrading metalloprotease ADAMTS-4 has been identified as a novel therapeutic target for osteoarthritis. In this work, we used HipHop-based pharmacophore modeling and virtual screening of the Maybridge database to identify novel ADAMTS-4 inhibitors. These novel lead compounds act as potent and specific inhibitors for the ADAMTS-4 enzyme and could have therapeutic potential in the treatment of OA.

DOI: 10.1007/s00894-016-3035-8
PMID: 27401455 [PubMed - in process]

129: Verma S, Kumar VL. Attenuation of gastric mucosal damage by artesunate in rat: Modulation of oxidative stress and NFκB mediated signaling. Chem Biol Interact. 2016 Sep 25;257:46-53. doi: 10.1016/j.cbi.2016.07.027. PubMed PMID: 27474069.

A number of factors like alcohol consumption, stress, use of non steroidal anti-inflammatory drugs and acidity are well known to increase the risk of development of gastric ulcers. The present study was carried out to investigate the protective effect of artesunate against gastric injury induced in rats by oral administration of ethanol and by pylorus ligation in independent sets of experiments. The groups included in each set (n = 6 per group) were normal control, experimental control and drug treated groups: artesunate 50 and 150 mg/kg (ART 50 and ART 150) and famotidine 20 mg/kg (FAM 20). Artesunate and famotidine were given orally 1 h before induction of gastric ulceration and the macroscopic changes, median ulcer score, gastric juice parameters (volume, pH and acidity), markers of oxidative stress and inflammation (GSH, SOD, TBARS and MPO) and tissue histology were evaluated in both the models. The study was extended further for determination of tissue levels of TNF-α and expression of IL-1β, IL-6 and NFκB (p65) in ethanol induced gastric ulcer model. The results of the present study show that pretreatment with artesunate significantly decreased hemorrhagic lesions and mucosal damage with marked reduction in median ulcer score in both the models. The protective effect of artesunate was concomitant with dose-dependent normalization of gastric juice parameters, markers of oxidative stress and lipid peroxidation. The ameliorative effect of artesunate was also supported by restoration of histological architecture. Furthermore, artesunate pretreatment also alleviated the gastric mucosal inflammation as revealed by significant decrease in the tissue level of pro-inflammatory cytokine TNF-α ($p < 0.01$) and tissue expression of IL-1β, IL-6 and NFκB (p65). The protective effect of artesunate was found to be comparable to that of famotidine. Conclusively, artesunate afforded significant gastroprotection in rat due to its anti-oxidant and anti-inflammatory properties with transcription factor NFκB(p65) and its downstream inflammatory cascade as a plausible target for its action.

DOI: 10.1016/j.cbi.2016.07.027
PMID: 27474069 [PubMed - in process]

130: Verma SK, Singh PK, Agrawal D, Sinha S, Gupta D, Satyarthee GD, Sharma BS. O-arm with navigation versus C-arm: a review of screw placement over 3 years at a major trauma center. Br J Neurosurg. 2016 Dec;30(6):658-661. PubMed PMID: 27454157.

INTRODUCTION: There is a relatively high incidence of screw misplacement during

spinal instrumentation due to distortion of normal anatomy following spinal trauma. The O-arm is the next-generation spinal navigation tool that provides intraoperative 3-D imaging and navigation for spine surgeries.
AIMS AND OBJECTIVES: To evaluate and compare the use of O-arm as compared to C-arm for spinal trauma in a Level I trauma center in India.
MATERIALS AND METHODS: In this retrospective study over 3 years (July 2010-April 2013), All patients of spinal injury who underwent spinal instrumentation were divided into O-arm group and C-arm group. Accuracy of screw placement was assessed during each surgery in both groups.
RESULTS: A total of 587 patients were evaluated during the study period. There were 278 patients in O-arm group and 309 patients in C-arm group. Both groups were well matched in mean age (27.7 vs. 28.9 years), ASIA grades, and level of injury. The number of screws placed was significantly higher in the C-arm group as compared to the O-arm group (2173 vs. 1720). However, the O-arm group had significantly less screw malplacement rate of 0.93% (n=16) as compared to malplacement rate in C-arm group of 8.79% (n=191, $p<0.05$).
CONCLUSION: Use of O-arm imaging system ensures accurate screw placement and dramatically decreases screw malplacement rate, thus providing better patient safety. Its use is especially beneficial in academic and teaching centers where novice surgeons can attain results equivalent to that of experts in spinal instrumentation.

DOI: 10.1080/02688697.2016.1206179
PMID: 27454157 [PubMed - in process]

131: Yadav MP, Singla S, Thakral P, Ballal S, Bal C. Dosimetric analysis of 177Lu-DOTA-rituximab in patients with relapsed/refractory non-Hodgkin's lymphoma. Nucl Med Commun. 2016 Jul;37(7):735-42. doi: 10.1097/MNM.0000000000000501. PubMed PMID: 26974315.

OBJECTIVE: Radioimmunotherapy targeting CD20 receptors in lymphoma using radiolabeled chimeric antibodies may lead to better therapeutic responses than cold anti-CD20 antibodies. This study aimed to assess the biodistribution and present reasonable estimates of normal organ doses, including red marrow using Lu-DOTA-rituximab.
MATERIALS AND METHODS: Patients with relapsed/refractory CD20+ B-cell non-Hodgkin's lymphoma were recruited into this prospective study. In-house labeling of Lu-DOTA-rituximab was performed and administered after quality assurance. Rituximab (375 mg/m), followed by 50 mCi (1850 MBq) of Lu-DOTA-rituximab was administered as a slow intravenous infusion and emission images were acquired. Regions of interest were drawn for kidney, liver, heart, bladder, spleen, and tumor lesions on both anterior and posterior images. Internal dose estimation was performed using OLINDA v1.0 software.
RESULTS: The mean age of the 10 patients (eight men and two women) was 52±13 years. The uptake of radiolabeled antibody was visualized within 30 min of administration in the liver, kidneys, heart, spleen, and bladder. The coefficient of determination (R) was greater than 0.95 for organs and the whole body in all patients. The effective half-life of radioimmunoconjugate was 100±28 h (42-126 h). The critical organ in our study was the red marrow. The average total body dose, effective dose, and effective dose equivalent calculated in all 10 patients were 0.13±0.02, 0.15±0.03, and 0.22±0.04 mGy/MBq, respectively.
CONCLUSION: There may be considerable interindividual differences in absorbed doses of organs and generalization or extrapolation of doses in the clinical setting at present is not feasible with Lu-DOTA-rituximab in non-Hodgkin's lymphoma patients. Patient-specific dosimetry is thus recommended to eliminate the variations and reduce the possibility of dose-limiting toxicity.

DOI: 10.1097/MNM.0000000000000501
PMID: 26974315 [PubMed - in process]

132: Yousuf SD, Rashid F, Mattoo T, Shekhar C, Mudassar S, Zargar MA, Ganie MA. Does the Oral Contraceptive Pill Increase Plasma Intercellular Adhesion Molecule-1, Monocyte Chemoattractant Protein-1, and Tumor Necrosis Factor-α Levels in Women with Polycystic Ovary Syndrome: A Pilot Study. J Pediatr Adolesc Gynecol. 2017 Feb;30(1):58-62. doi: 10.1016/j.jpag.2016.06.010. PubMed PMID: 27381237.

STUDY OBJECTIVE: Polycystic ovary syndrome (PCOS), the most common endocrinopathy of women, is a state of chronic low-grade inflammation and is closely linked to type 2 diabetes mellitus and cardiovascular disease. Oral contraceptive pills (OCPs), is the usual first choice of treatment in women with PCOS. Because OCP use has been linked to the risk of venous thrombosis and there are limited data on the effect of OCP use on the inflammatory state of women with PCOS, our objective was to compare the levels of intercellular adhesion molecule (ICAM)-1, tumor necrosis factor (TNF)-α, and monocyte chemoattractant protein (MCP)-1 between drug-naive and OCP-treated women with PCOS. DESIGN, SETTING, PARTICIPANTS, INTERVENTIONS, AND MAIN OUTCOME MEASURES: Consequent to women diagnosed with PCOS on the basis of Rotterdam 2003 criteria, either treated with OCPs (ethinylestradiol 0.03 mg, levonogestrel-0.15 mg) for a period of 6 months (n = 50) or drug-naive (n = 51) were enrolled in this cross-sectional study. RESULTS: The mean ages of patients and control participants were comparable (21.99 ± 4.78 vs 21.92 ± 5.83 years; P = .947) as was body mass index (24.47 ± 3.92 vs 23.66 ± 3.43; P = .271). Clinical and androgen excess symptoms were significantly better in the OCP group compared with the drug-naive group (P = .01, P = .04). Total cholesterol and low-density lipoprotein cholesterol levels were significantly higher in the OCP group (P = .01). Plasma ICAM-1 levels, TNF-α levels, and MCP-1 levels showed a higher trend in patients but reached statistical significance only in cases of ICAM-1 and TNF-α (P = .01). CONCLUSION: OCP treatment of 6 months increases plasma ICAM-1, MCP-1, and TNF-α levels among women with PCOS, although OCPs significantly help in ameliorating features of hyperandrogenism and regularizing menstrual cycles. These cytokines correlate positively with many metabolic parameters including plasma glucose, lipids, and homeostatic model assessment-insulin resistance. Further investigation with well designed, randomized, longitudinal studies might help to ascertain the effect of OCPs on proinflammatory profiles among women with PCOS.

DOI: 10.1016/j.jpag.2016.06.010
PMID: 27381237 [PubMed - in process]