

# CHRISTIAN MEDICAL COLLEGE, VELLORE



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# Research Digest

## Editor's Message:

Dear Friends,

The Annual Research Digest for the term Jul - Dec 2014 a compilation of the Indexed publications of the institution is provided herewith. Though this is meant to include all publications that were generated by our scientists students and faculty during this time period-there are certainly likely to be lacunae. Do browse through the document and let us know if there are more of your publications which need to be added. We would like to thank Dodd Memorial Library, the staff at the research office and Dr. Sandip for assistant in compiling the current issue.

Dr. Nihal Thomas

MD MNAMS DNB (Endo) FRACP (Endo) FRCP (Edin) FRCP (Glasg)

Addl. Vice-Principal (Research)

The logo for 'Research Digest' features the word 'Research' in a black, gothic-style serif font. The 'R' is highly decorative with large, swirling flourishes. The word 'Digest' is in a similar gothic font, with the 'D' being particularly large and ornate, also featuring significant flourishes. The entire logo is rendered in a dark green color.

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## **Nihal Thomas**

**MBBS MD MNAMS DNB (Endo) FRACP (Endo) FRCP (Edin) FRCP (Glasg)**

**ADDL. VICE - PRINCIPAL (RESEARCH)**

# Research Digest

**Anandan, S.,** Peter, R., Aramugam, R., Ismail, N., Veeraraghavan, B. and Kang, G.

Group A rotavirus gastroenteritis in older children and adults at a hospital in southern India

Vaccine; 2014, 32 Suppl 1 A33-5

**Address:** Department of Clinical Microbiology, Christian Medical College, Vellore, India. Electronic **Address:** [shalinianandan@cmcvellore.ac.in](mailto:shalinianandan@cmcvellore.ac.in)

Division of Gastrointestinal Sciences, Christian Medical College, Vellore, India. Department of Clinical Microbiology, Christian Medical College, Vellore, India.

There is limited data on the spectrum and prevalence of rotavirus genotypes in older children and adults in Asia. This pilot study conducted between November 2012 and April 2013 tested for rotavirus in older children (>12 years of age), and adults with gastroenteritis from southern India. Stool samples from patients who were hospitalized or attended out-patient units with diarrhea were screened for rotavirus using Premier Rotaclone((R)). Confirmatory testing was by another antigen detection sandwich, in-house ELISA, based on capture by a polyclonal serum and VP6 PCR. Genotyping for VP7 and VP4 was done using hemi-nested PCRs for G- and P-types circulating in India. A total of 626 stool samples from older children and adults were screened and 52 (8.4%) were initially positive for rotavirus by antigen detection. A high proportion of samples (27/51) were found to be false positives on confirmatory testing. Of the 23 samples for which genotyping results were obtained, G1P[8] was the most common genotype. There was one each of G1P[6], G1P[4] and two strains of G9P[4] while one sample showed mixed genotypes of G2 and G9P[4]. This study shows that group A rotavirus is found in 3.8% of diarrheal specimens in older children and adults with gastroenteritis in southern India and that common genotypes circulate in children and adults.

**INTL**

**PMID:** 25091677 **PMCID:**

**BS**

**Babji, S.,** Arumugam, R., Sarvanabhavan, A., Gentsch, J. R. and Kang, G.

Approach to molecular characterization of partially and completely untyped samples in an Indian rotavirus surveillance program

Vaccine; 2014, 32 Suppl 1 A84-8

**Address:** Division of Gastrointestinal Sciences, Christian Medical College, Vellore, India. Electronic **Address:** [sudhirbabji79@cmcvellore.ac.in](mailto:sudhirbabji79@cmcvellore.ac.in)

Division of Gastrointestinal Sciences, Christian Medical College, Vellore, India. Centers for Disease Control and Prevention, 1600 Clifton Road NE, Atlanta, GA 30333, USA.

Surveillance networks for rotavirus document the burden of the disease using the proportion of children hospitalized with gastroenteritis positive for rotavirus by enzyme immunoassay. They also describe genotypes of circulating viruses by polymerase chain reaction for the VP7 and VP4 genes, which determine G and P types, respectively. A proportion of samples cannot be genotyped based on initial testing and laboratories need to assess further testing strategies based on resources and feasibility. To 365 samples obtained from an Indian rotavirus strain surveillance program, we applied an approach to determine the G and P types in antigen positive samples that failed to type initially with the standard laboratory protocol. Fifty-eight samples (19%) were negative for the VP6 gene, indicating that the antigen test was likely to have been false positive. Alternative extraction and priming approaches resulted in the identification of G and P types for 264 strains. The identity of one strain was determined by sequencing the first-round amplicons. Thirty-five strains were partially typed and seven strains could not be typed at all. The distribution of G and P types among strains that had initially failed to type, except one strain,

did not differ from that in strains that were typed using the standard laboratory protocol.

**INTL****PMID:** 25091686 **PMCID:****BS**

**Baskaran, K.,** Pugazhendhi, S. and Ramakrishna, B. S.

Association of IRGM gene mutations with inflammatory bowel disease in the Indian population

PLoS ONE; 2014, 9 (9): e106863

**Address:** Wellcome Trust Research Laboratory, Christian Medical College, Vellore, India.

Wellcome Trust Research Laboratory, Christian Medical College, Vellore, India; SRM Institutes for Medical Science, Vadapalani, Chennai, India.

**BACKGROUND:** Mutations in the IRGM gene have been associated with Crohn's disease in several populations but have not been explored in Indian patients with this disease. This study examined the association of IRGM mutations with ulcerative colitis and Crohn's disease in Indian patients with inflammatory bowel disease. **METHODS:** The IRGM gene was amplified in four segments and Sanger-sequenced in 101 participants (42 Crohn's disease, 39 ulcerative colitis, and 20 healthy controls). Ten single nucleotide polymorphisms (SNP) were genotyped in 1200 participants (352 Crohn's disease, 400 ulcerative colitis, and 448 healthy controls) using Sequenom MassARRAY iPLEX. Disease associations were evaluated for each of the ten SNPs. **RESULTS:** Thirty one mutations were identified in the IRGM gene, of which two had not hitherto been reported (150226250-ss947429272 & 150227858-ss947429273). Ten SNPs (6 from the above and 4 from the literature) were evaluated. Significant associations with Crohn's disease were noted with the T allele of rs1000113 (OR 1.46, 95% CI 1.12-1.90), T allele of rs9637876 (OR

1.25, 95% CI 1.005-1.561) and C allele of rs 13361189 (OR 1.33, 95% CI 1.07-1.669). Two SNPs--rs11747270 and rs180802994--did not exhibit Hardy-Weinberg equilibrium but were associated with both Crohn's disease and ulcerative colitis in this population. The remaining SNPs did not show significant associations with either Crohn's disease or ulcerative colitis. **CONCLUSIONS:** Association of IRGM gene SNPs with Crohn's disease is reported for the first time in Indian patients. We also report, for the first time, an association of rs 9637876 in the IRGM gene with Crohn's disease.

**INTL****PMID:** 25191865 **PMCID:** 4156415**BS**

**Baskaran, K.,** Pugazhendhi, S. and Ramakrishna, B. S.

Protective Association of Tumor Necrosis Factor Superfamily 15 (TNFSF15) Polymorphic Haplotype with Ulcerative Colitis and Crohn's Disease in an Indian Population

PLoS ONE; 2014, 9 (12): e114665

**Address:** Wellcome Trust Research Laboratory, Christian Medical College, Vellore 632 004, India.

Wellcome Trust Research Laboratory, Christian Medical College, Vellore 632 004, India; SRM Institutes for Medical Science, 1 Jawaharlal Nehru Road, Vadapalani, Chennai 600 026, India.

**BACKGROUND:** Tumor necrosis factor superfamily (TNFSF) proteins are involved in the genesis of inflammatory bowel disease (IBD). We examined the association of seven single nucleotide polymorphisms (SNP) in the TNFSF15 gene with Crohn's disease (CD) and ulcerative colitis (UC) in the Indian population. **METHODS:** Seven SNPs in the TNFSF15 gene (rs10114470, rs3810936, rs6478108, rs4263839, rs6478109, rs7848647 and rs7869487) were genotyped in 309 CD patients, 330 UC patients and 437 healthy controls

using the Sequenom iPLEX MassArray platform. Disease associations were evaluated for allelotypes and for genotypes. RESULTS: The minor T alleles and the TT genotypes of rs10114470 and rs3810936 were significantly protectively associated with both CD and UC. The CC genotype of rs6478108, AA genotype of rs4263839, the AA genotype of rs6478109, the TT genotype of rs7848647 and the CC genotype of rs7869487 were all protectively associated with CD but not with UC. Two haplotype blocks could be discerned, one where SNPs rs10114470 and rs3810936 were in tight LD ( $D' = 0.8$ ) and the other where rs6478108, rs4263839, rs6478109, rs7848647 and rs7869487 were in tight LD ( $D' 0.92-1.00$ ). The second block of haplotypes were not associated with CD or with UC. The first block of haplotypes was very significantly associated with both CD and UC. CONCLUSIONS: Strong associations exist between TNFSF15 gene polymorphisms and IBD (both CD and UC) in the Indian population.

**INTL****PMID:** 25501099 **PMCID:**4264777**BS**

**Chapla, A.**, Mruthyunjaya, M. D., Asha, H. S., Varghese, D., Varshney, M., Vasan, S. K., Venkatesan, P., Nair, V., Mathai, S., Paul, T. V. and Thomas, N. Maturity onset diabetes of the young in India - a distinctive mutation pattern identified through targeted next-generation sequencing Clin Endocrinol (Oxf); 2014,

**Address:**Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, India.

**OBJECTIVE:** To establish and utilize a Next-Generation Sequencing (NGS)-based strategy to screen for maturity onset diabetes of the young (MODY) gene mutations in subjects with early-onset diabetes. **PATIENTS AND METHODS:** Maturity onset diabetes of

the young (MODY) genetic testing was carried out in 80 subjects of Asian Indian origin with young onset diabetes to identify mutations in a comprehensive panel of ten MODY genes. A novel multiplex polymerase chain reaction (PCR)-based target enrichment was established, followed by NGS on the Ion Torrent Personal Genome Machine (PGM). All the mutations and rare variants were confirmed by Sanger sequencing. RESULTS: We identified mutations in 11 (19%) of the 56 clinically diagnosed MODY subjects and seven of these mutations were novel. The identified mutations include p.H241Q, p.E59Q, c.-162G>A 5' UTR in NEUROD1, p.V169I cosegregating with c.493-4G>A and c.493-20C>T, p.E271K in HNF4A, p.A501S in HNF1A, p.E440X in GCK, p.V177M in PDX1, p.L92F in HNF1B and p.R31L in PAX4 genes. Interestingly, two patients with NEUROD1 mutation were also positive for the p.E224K mutation in PDX1 gene. These patients with coexisting NEUROD1-PDX1 mutations showed a marked reduction in glucose-induced insulin secretion. All 24 subjects who had not met the clinical criteria of MODY were negative for the mutations. To the best of our knowledge, this is the first report of PDX1, HNF1B, NEUROD1 and PAX4 mutations from India. CONCLUSIONS: Multiplex PCR coupled with NGS provides a rapid, cost-effective and accurate method for comprehensive parallelized genetic testing of MODY. When compared to earlier reports, we have identified a higher frequency and a novel digenic mutation pattern involving NEUROD1 and PDX1 genes.

**INTL****PMID:** 25041077 **PMCID:****BS**

**Dharmalingam, S. K.** and Sahajanandan, R. Intraoperative transesophageal echocardiography assessment of right

atrial myxoma resulting in a change of the surgical plan

Ann Card Anaesth; 2014, 17 (4): 306-8

**Address:** Department of Anaesthesia, Christian Medical College, Vellore, Tamil Nadu, India.

Transesophageal echocardiography (TEE) is an important diagnostic tool. It provides structural and functional assessment of cardiac structures which can improve the overall outcome of the patient. We present a case with right atrial myxoma in which TEE helped to find the attachment of the mass so that overall surgical plan was changed.

**INTL**

**PMID:** 25281631 **PMCID:**

**BS**

**Finny, P.,** Stephen, C., Jacob, R., Tharyan, P. and Seshadri, M. S.

Jasmine flower extract lowers prolactin Trop Doct; 2014,

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Lecturer, Department of Biochemistry, Christian Medical College, Vellore, India.

Lecturer, Department of Psychiatry, Christian Medical College, Vellore, India.

Professor, Department of Psychiatry, Christian Medical College, Vellore, India.

Professor, Department of Endocrinology, Christian Medical College, Vellore, India.

**BACKGROUND:** Antipsychotic drugs frequently cause amenorrhoea and galactorrhoea. Jasmine flowers used topically were as effective as oral Bromocriptine in suppressing puerperal lactation. This study aims to evaluate the efficacy and safety of intranasal jasmine flower extract (JFE) to reduce prolactin levels of patients on stable doses of antipsychotic drugs. **METHOD:** This is a randomized, double blind, crossover clinical trial. An aqueous-ethanol extract of jasmine flowers was prepared and used as nasal drops. A decrease in serum prolactin of  $\geq 25$  ng/mL was considered a significant response. **RESULTS:** Ten out of 35 women had a significant drop in the serum prolactin while on the JFE. The

non-responders to JFE were on higher doses of antipsychotic drugs. The main side effect was a transient and mild burning sensation in the nose. A cost analysis favoured JFE over dopamine agonists. **CONCLUSION:** JFE contains a prolactin-lowering substance which needs further characterisation.

**INTL**

**PMID:** 25505191 **PMCID:**

**BS**

**Giri, S.** and Kindo, A. J.

Evaluation of antifungal susceptibility testing in Candida isolates by Candifast and disk-diffusion method

Indian J Pathol Microbiol; 2014, 57 (4): 595-7

**Address:** Wellcome Trust Research Laboratory, Department of Gastrointestinal Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

With the increase in invasive fungal infections due to Candida species and resistance to antifungal therapy, in vitro antifungal susceptibility testing is becoming an important part of clinical microbiology laboratories. Along with broth microdilution and disk diffusion method, various commercial methods are being increasingly used for antifungal susceptibility testing, especially in the developed world. In our study, we compared the antifungal susceptibility patterns of 39 isolates of Candida to three antifungal drugs (fluconazole, amphotericin B, ketoconazole) by Candifast and disk diffusion method. The following resistance pattern was found by Candifast: Fluconazole (30.8%), ketoconazole (12.8%), amphotericin B (0%). The results obtained by disk diffusion method were in complete agreement with Candifast results

**NAT**

**PMID:** 25308014 **PMCID:**

**BS**

**Gupta, V.,** Kumar, N., Jana, A. K. and Thomas, N.

A modified technique for umbilical arterial catheterization

Indian Pediatr; 2014, 51 (8): 672

**Address:** Department of Neonatology, CMC, Vellore, Tamil Nadu, India. niranjan@cmcvellore.ac.in.

A modified technique for umbilical artery catheterization was assessed in babies in whom conventional method failed or if the cord was dry. Success rate attained with the modified technique was 90% (19/21). This modified technique could provide an easier and faster method for successful umbilical arterial catheterization.

**NAT**

**PMID:** 25129010 **PMCID:**

**BS**

**Hepzibah, J., Shanthly, N. and Oommen, R.**

Diagnostic Utility of PET CT in Thymic Tumours with Emphasis on 68Ga-DOTATATE PET CT in Thymic Neuroendocrine Tumour - Experience at a Tertiary Level Hospital in India  
J Clin Diagn Res; 2014, 8 (9): QC01-3

**Address:** Associate Professor, Department of Nuclear Medicine, Christian Medical College, Christian Medical College, Vellore, Ida Scudder Road, Vellore, India .

Professor, Department of Nuclear Medicine, Christian Medical College, Christian Medical College, Vellore, Ida Scudder Road, Vellore, India .

**INTRODUCTION:** 18 Fluorine-fluoro-2-deoxyglucose positron emission tomography/computed tomography (18F-FDG-PET/CT) is of importance in assessing high-risk thymoma and thymic carcinomas. Detection of advanced thymoma versus thymic carcinoma by routine cross sectional anatomical imaging such as computed tomography (CT), magnetic resonance imaging (MRI) often poses a diagnostic dilemma. In this case series we observed the utility of FDG uptake to predict advanced thymoma and distinguish thymoma from thymic cancer. **MATERIALS AND METHODS:** We reviewed 18F-FDG-PET/CT scans of 12 patients (8 males, 4 females); age 24-60yrs with thymic epithelial malignancy from January 2011 to May 2013. FDG activity in lesions was

quantified using maximum standardised uptake value (SUVmax) and correlated with Masaoka staging and WHO classification. All patients fasted 4 hr prior to 18F-FDG PET/CT. Images from vertex to mid-thigh were acquired 60min post injection of 3.7 -4.7 MBq/kg (Mega Becquerel)/kilogram of 18F-FDG and SUV max of each tumour was measured. One patient underwent DOTATATE scan, received 138MBq of 68Gallium (68Ga)-DOTATATE injection IV and imaging was done after 60 min. **RESULTS:** Higher FDG uptake of SUVmax 7.35 was seen in type B3 thymoma. FDG uptake was higher in thymic carcinoma (20.45 in primary and 17.46 in the node) or neuroendocrine differentiation (NED) than in patients with thymomas (ranged 7.35 - 3.02). No significant association was observed between higher focal FDG uptake and advanced-stage disease in thymoma. In NED 68Ga - DOTATATE imaging identified more lesions than in FDG. **CONCLUSION:** PET CT is a valuable diagnostic tool in evaluation of thymic tumours, to assess in initial workup, for treatment response and for prognostication. 68Ga-DOTATATE PET/CT is beneficial in assessing neuroendocrine thymic tumours. Focal FDG uptake cannot predict advanced thymoma but is helpful in distinguishing thymoma from thymic carcinoma, or the more aggressive thymoma B3

**INTL**

**PMID:** 25386498 **PMCID:**4225950

**BS**

**Ismail, A. M., Sachithanandham, J., Eapen, C. E., Kannangai, R. and Abraham, P.**

Performance of LigAmp Assay for Sensitive Detection of Drug-Resistant Hepatitis B Virus Minor Variants in Comparison with Standard Nucleotide Sequencing

Mol Diagn Ther; 2014, 18 (6): 655-63

**Address:** Departments of Clinical Virology, Christian Medical College, Vellore, 632004, Tamil Nadu, India.

**BACKGROUND AND OBJECTIVES:** A virus population often exists as a complex mixture of genetic populations. Antiviral-resistant mutants could be circulating as

minority variants in the mixed virus population that are not detected by standard sequencing methods. The role of minor drug-resistant variants and clinical outcome is slowly evolving and there is a need to employ sensitive methods for detection of minority variants that emerge as dominant species and subsequently affect the antiviral efficacy. This study was intended to develop a technique called the ligation amplification assay (LigAmp) to identify minor drug-resistant variants of hepatitis B virus (HBV). **METHODS:** A LigAmp HBV assay was developed and clinical samples were tested from chronic hepatitis B subjects on antiviral treatment. Nucleotide sequencing of HBV reverse transcriptase (rt) region was performed and the results were compared with LigAmp assay. The performance of LigAmp assay was validated by clonal sequencing. Virological response was measured using HBV DNA levels and the results were correlated with antiviral-resistant mutations detected by sequencing and LigAmp assays. **RESULTS:** A total of 80 reactions of LigAmp assay were performed for rtM204V and rtM204I (ATT) mutant detection. Samples were obtained from 40 chronic hepatitis B subjects. Among these subjects, rtM204V and rtM204I (ATT) mutations were identified by standard sequencing in 10 (25 %) and 12 (30 %) subjects, respectively. LigAmp detected both rtM204V and rtM204I (ATT) mutations in 13 (32.5 %) subjects, rtM204I mutation in 12 (30 %) subjects and rtM204V mutation in 1 (2.5 %) subject, respectively. LigAmp detected primary resistant mutants in 69.4 % of lamivudine non-responders while sequencing detected resistant mutations in only 55.6 % subjects ( $p < 0.001$ ). **CONCLUSIONS:** This data shows significantly higher sensitivity of LigAmp for detection of minority rtM204V and rtM204I (ATT) mutations over standard sequencing. Therefore, LigAmp has potential clinical utility for appropriate monitoring and tailoring of HBV therapy.

**INTL****PMID:** 25208639 **PMCID:****BS****Janardhanan, J.**, Trowbridge, P. and Varghese, G. M.

Diagnosis of scrub typhus

Expert Rev Anti Infect Ther; 2014, 12 (12): 1533-40

**Address:**Medicine Unit I and Infectious Diseases, Christian Medical College, Vellore, Tamil Nadu, India.

Scrub typhus is an acute febrile illness that, if untreated, can result in considerable morbidity and mortality. One of the primary reasons for delays in the treatment of this potentially fatal infection is the difficulty in diagnosing the condition. Diagnosis is often complicated because of the combination of non-specific symptoms that overlap with other infections commonly found in endemic areas and the poor available diagnostics. In the majority of the endemic settings, diagnosis still relies on the Weil-Felix test, which is neither sensitive nor specific. Other methods of testing have become available, but at this time, these remain insufficient to provide the rapid point-of-care diagnostics that would be necessary to significantly change the management of this infection by providers in endemic areas. This article reviews the currently available diagnostic tools for scrub typhus and their utility in the clinical setting.

**INTL****PMID:** 25359599 **PMCID:****BS****Jeremiah, S. S.**, Balaji, V., Anandan, S. and Sahni, R. D.

A possible alternative to the error prone modified Hodge test to correctly identify the carbapenemase producing Gram-negative bacteria

Indian J Med Microbiol; 2014, 32 (4): 414-8

**Address:**Department of Microbiology, Christian Medical College, Vellore, Tamil Nadu, India.

**CONTEXT:** The modified Hodge test (MHT) is widely used as a screening test for the detection of carbapenemases in Gram-negative bacteria. This test has several pitfalls in terms of validity and

interpretation. Also the test has a very low sensitivity in detecting the New Delhi metallo-beta-lactamase (NDM). Considering the degree of dissemination of the NDM and the growing pandemic of carbapenem resistance, a more accurate alternative test is needed at the earliest. AIMS: The study intends to compare the performance of the MHT with the commercially available Neo-Sensitabs - Carbapenemases/Metallo-beta-Lactamase (MBL) Confirmative Identification pack to find out whether the latter could be an efficient alternative to the former. SETTINGS AND DESIGN: A total of 105 isolates of *Klebsiella pneumoniae* resistant to imipenem and meropenem, collected prospectively over a period of 2 years were included in the study. SUBJECTS AND METHODS: The study isolates were tested with the MHT, the Neo-Sensitabs - Carbapenemases/MBL Confirmative Identification pack and polymerase chain reaction (PCR) for detecting the blaNDM-1 gene. RESULTS: Among the 105 isolates, the MHT identified 100 isolates as carbapenemase producers. In the five isolates negative for the MHT, four were found to produce MBLs by the Neo-Sensitabs. The Neo-Sensitabs did not have any false negatives when compared against the PCR. CONCLUSIONS: The MHT can give false negative results, which lead to failure in detecting the carbapenemase producers. Also considering the other pitfalls of the MHT, the Neo-Sensitabs--Carbapenemases/MBL Confirmative Identification pack could be a more efficient alternative for detection of carbapenemase production in Gram-negative bacteria

#### NAT

**PMID:** 25297027 **PMCID:**  
**BS**

**Kazi, A. I.** and Oommen, A.

Chronic noise stress-induced alterations of glutamate and gamma-aminobutyric acid and their metabolism in the rat brain

Noise Health; 2014, 16 (73): 343-9

**Address:** Neurochemistry Laboratory, Department of Neurological Sciences, Christian Medical College, Vellore, India.

Chronic stress induces neurochemical changes that include neurotransmitter imbalance in the brain. Noise is an environmental factor inducing stress. Chronic noise stress affects monoamine neurotransmitter systems in the central nervous system. The effect on other excitatory and inhibitory neurotransmitter systems is not known. The aim was to study the role of chronic noise stress on the glutamatergic and gamma-aminobutyric acid (GABA)ergic systems of the brain. Female Wistar rats (155 +/- 5 g) were unintentionally exposed to noise due to construction (75-95 db, 3-4 hours/day, 5 days a week for 7-8 weeks) in the vicinity of the animal care facility. Glutamate/GABA levels and their metabolic enzymes were evaluated in different rat brain regions (cortex, hippocampus, striatum, and cerebellum) and compared with age and gender matched nonexposed rats. Chronic noise stress decreased glutamate levels and glutaminase activity 27% and 33% in the cortex, 15% and 24% in the cerebellum. Glutamate levels increased 10% in the hippocampus, 28% in striatum and glutaminase activity 15% in striatum. Glutamine synthetase activity increased significantly in all brain regions studied, that is, cortex, hippocampus, striatum, and cerebellum ( $P < 0.05$ ). Noise stress-increased GABA levels and glutamate alpha decarboxylase activity 20% and 45% in the cortex, 13% and 28% in the hippocampus respectively. GABA levels and glutamate alpha decarboxylase activity decreased 15% and 14%, respectively in the striatum. GABA transaminase activity was significantly reduced in the cortex (55%), hippocampus (17%), and cerebellum (33%). Chronic noise stress differentially affected glutamatergic and GABAergic neurotransmitter systems in the rat brain, which may alter glutamate and GABA neurotransmission.

#### INTL

**PMID:** 25387529 **PMCID:**  
**BS**

**Kolli, V. K.,** Natarajan, K., Isaac, B., Selvakumar, D. and Abraham, P.

Mitochondrial dysfunction and respiratory chain defects in a rodent model of methotrexate-induced enteritis *Hum Exp Toxicol*; 2014, 33 (10): 1051-65

**Address:** Department of Biochemistry, Christian Medical College, Bagayam, Vellore, Tamil Nadu, India.

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The efficacy of methotrexate (MTX), a widely used chemotherapeutic drug, is limited by its gastrointestinal toxicity and the mechanism of which is not clear. The present study investigates the possible role of mitochondrial damage in MTX-induced enteritis. Small intestinal injury was induced in Wistar rats by the administration of 7 mg kg<sup>-1</sup> body wt. MTX intraperitoneally for 3 consecutive days. MTX administration resulted in severe small intestinal injury and extensive damage to enterocyte mitochondria. Respiratory control ratio, the single most useful and reliable test of mitochondrial function, and 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide reduction, a measure of cell viability were significantly reduced in all the fractions of MTX-treated rat enterocytes. A massive decrease (nearly 70%) in the activities of complexes II and IV was also observed. The results of the present study suggest that MTX-induced damage to enterocyte mitochondria may play a critical role in enteritis. MTX-induced alteration in mitochondrial structure may cause its dysfunction and decreases the activities of the electron chain complexes. MTX-induced mitochondrial damage can result in reduced adenosine triphosphate synthesis, thereby interfering with nutrient absorption and enterocyte renewal. This derangement may contribute to malabsorption of nutrients, diarrhea, and weight loss seen in patients on MTX chemotherapy.

**INTL**

**PMID:** 24347301 **PMCID:** BS

**Kompithra, R. Z.**, Paul, A., Manoharan, D., Babji, S., Sarkar, R., Mathew, L. G. and Kang, G.

Immunogenicity of a three dose and five dose oral human rotavirus vaccine (RIX4414) schedule in south Indian infants

*Vaccine*; 2014, 32 Suppl 1 A129-33

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**AIM:** This study was undertaken to compare the immunogenicity of a three dose and five dose schedule of an oral live-attenuated human rotavirus vaccine, Rotarix in south Indian infants. **METHOD:** Healthy infants (N=90), six to seven weeks of age were enrolled to receive three doses (n=45) or five doses of Rotarix vaccine (n=45) along with other scheduled vaccines, each dose separated by a four week interval. Blood samples were taken before vaccination and one month post-dose three in the Rotarix three dose group and one month post-dose five in the Rotarix five dose group; all were tested for anti-rotavirus IgA by an antibody sandwich enzyme immunoassay. **RESULTS:** At baseline, >50% of infants had >20 units of anti-rotavirus IgA. The seroconversion rates after three and five doses were low and not significantly different in the two groups. However, among vaccine responders, children seropositive at baseline showed a much greater absolute increase in IgA antibody levels than children seronegative at baseline. **CONCLUSIONS:** Rotarix vaccine showed low immunogenicity in south Indian children and increasing the number of doses did not increase the proportion of infants seroconverting after vaccination

**INTL**

**PMID:**25091666 **PMCID:**

**BS**

**Kumar, A. S.**, Sharma, S. D. and Ravindran, B. P.

Characteristics of mobile MOSFET dosimetry system for megavoltage photon beams

J Med Phys; 2014, 39 (3): 142-9

**Address:**Department of Radiotherapy, Christian Medical College, Vellore, Tamil Nadu, India.

Radiological Physics and Advisory Division, Bhabha Atomic Research Centre, CTCRS Building, Anushaktinagar, Mumbai, India.

The characteristics of a mobile metal oxide semiconductor field effect transistor (mobile MOSFET) detector for standard bias were investigated for megavoltage photon beams. This study was performed with a brass alloy build-up cap for three energies namely Co-60, 6 and 15 MV photon beams. The MOSFETs were calibrated and the performance characteristics were analyzed with respect to dose rate dependence, energy dependence, field size dependence, linearity, build-up factor, and angular dependence for all the three energies. A linear dose-response curve was noted for Co-60, 6 MV, and 15 MV photons. The calibration factors were found to be 1.03, 1, and 0.79 cGy/mV for Co-60, 6 MV, and 15 MV photon energies, respectively. The calibration graph has been obtained to the dose up to 600 cGy, and the dose-response curve was found to be linear. The MOSFETs were found to be energy independent both for measurements performed at depth as well as on the surface

with build-up. However, field size dependence was also analyzed for variable field sizes and found to be field size independent. Angular dependence was analyzed by keeping the MOSFET dosimeter in parallel and perpendicular orientation to the angle of incidence of the radiation with and without build-up on the surface of the phantom. The maximum variation for the three energies was found to be within +/- 2% for the gantry angles 90 degrees and 270 degrees, the deviations without the

build-up for the same gantry angles were found to be 6%, 25%, and 60%, respectively. The MOSFET response was found to be independent of dose rate for all three energies. The dosimetric characteristics of the MOSFET detector make it a suitable in vivo dosimeter for megavoltage photon beams.

**INTL**

**PMID:**25190992 **PMCID:**4154181

**BS**

**Mariappan, R.**, Venkatraghavan, L., Vertanian, A., Agnihotri, S., Cynthia, S., Reyhani, S., Tung, T., Khan, O. H. and Zadeh, G.

Serum lactate as a potential biomarker of malignancy in primary adult brain tumours

J Clin Neurosci; 2015, 22 (1): 144-8

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Lactate, a by-product of glycolysis, is an indicator of poor tissue perfusion and is a useful biomarker with prognostic value in risk-stratifying patients in several diseases. Furthermore, elevated lactate production is observed in tumour glycolysis, also known as the Warburg effect, and is essential in promoting tumour cell invasion, metastasis, and immune system evasion, promoting resistance to cell death. However, there are no studies of elevated serum lactate in brain tumour patients as a potential biomarker, to our knowledge. The aim of this study is to determine possible correlations between the malignancy of tumours and pre- and intraoperative serum lactate elevation in patients

undergoing craniotomy for tumour resection. We provide initial evidence that a rise in serum lactate can be used as a non-invasive biomarker that correlates with brain tumour grade. The results from this study and future prospective studies may allow for determination of tumour progression and response to therapy using serum lactate as a biomarker

**INTL**

**PMID:**25172017 **PMCID:**

**BS**

**Mathew, A. J.**, Crues, J. V., 3rd and Danda, D.

Office e-MRI: viewing joints from the inside

Int J Rheum Dis; 2014, 17 (6): 706-9

**Address:**Department of Clinical Immunology & Rheumatology, Christian Medical College, Vellore, India.

**INTL**

**PMID:**25346153 **PMCID:**

**BS**

**Moses, V.**, Keshava, S. N., Mammen, S., Ahmed, M., Eapen, C. E. and Ramakrishna, B.

Trans-caval trans-jugular liver biopsy--a technical modification of trans-jugular liver biopsy

Br J Radiol; 2014, 87 (1043): 20140327

**Address:**1 Department of Radiology, Christian Medical College, Vellore, Tamil Nadu, India.

**OBJECTIVE:** To (a) describe the technical modification of trans-caval TJLB and (b) review our series of nine cases. **METHODS:** We performed a retrospective review of all trans-caval TJLBs performed; we assessed indications for the procedure, technical success, complications, adequacy of specimen and histological positivity. **RESULTS:** The technical success rate of the procedure was 9/9 (100%); the minor complication rate was 1/9 (11%), adequate specimen was obtained in all cases and a histological diagnosis was achieved in 8/9 (89%) cases. **CONCLUSION:** This preliminary report suggests that trans-caval modification of

TJLB is a relatively safe procedure that may be useful in cases where conventional TJLB is infeasible.

**ADVANCES IN KNOWLEDGE:** (a) We describe the technique of trans-caval TJLBs and report our findings in the largest series of published cases. (b) Trans-caval TJLB is relatively safe and can be used to increase the success rates of conventional TJLB.

**INTL**

**PMID:**25248931 **PMCID:**4207161

**BS**

**Nagappan, A. S.**, Varghese, J., Pranesh, G. T., Jeyaseelan, V. and Jacob, M.

Indomethacin inhibits activation of endothelial nitric oxide synthase in the rat kidney: Possible role of this effect in the pathogenesis of indomethacin-induced renal damage

Chem Biol Interact; 2014, 221 77-87

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The clinical use of non-steroidal anti-inflammatory drugs (NSAIDs) is often associated with adverse effects in the kidney. Indomethacin, an NSAID that has been shown to induce oxidative stress in the kidney, was used to study the pathogenesis of renal damage induced by the drug in a rat model. Experimental animals were given indomethacin (20mg/kg) by oral gavage, sacrificed 1, 12 or 24h (h) later and the kidneys studied. Evidence of glomerular

and tubular damage in the kidney was found in response to the drug. Renal tissue nitrite levels, a surrogate marker of nitric oxide (NO) synthesis, were significantly decreased at 12 and 24h. Indomethacin did not affect protein and mRNA levels of endothelial nitric oxide synthase (eNOS) or inducible NOS (iNOS). However, it significantly reduced the ratio of dimeric (active) to monomeric (inactive) eNOS in the kidney, 12 and 24h after drug administration. This was associated with reductions in heme content, both in renal tissue and in NOS. Heme oxygenase 1 (HO-1) mRNA (at 1 and 12h), protein (at 12 and 24h) and activity (at 1, 12 and 24h) were elevated in response to indomethacin. Nuclear translocation of Nrf2 (at 12h) and p38 MAPK signaling (at 12h and 24h), both of which are known to induce HO-1, also occurred in response to the drug. In summary, our results show that indomethacin reduced levels of activated eNOS in the kidney. This effect is possibly mediated by heme depletion, secondary to HO-1 induction that occurred downstream of Nrf2 and p38 MAPK signaling. We postulate that reduced renal eNOS activity may result in decreased NO levels, and hence reduced renal perfusion, leading to glomerular and tubular injury with subsequent renal damage.

**INTL**

**PMID:**25110317 **PMCID:**  
**BS**

**Palaniappan, P.**, Lionel, A. P., Agarwal, I., Mathai, S., Mathew, L., Agarwal, S., Keni, P., Khubchandani, R. and Kumar, S.

Cryosupernatant and Immunosuppression as Effective Alternative Therapies for TTP in Three Pediatric SLE Patients

Indian J Hematol Blood Transfus; 2014, 30 (Suppl 1): 232-6

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Jaslok Hospital & Research Centre, 15 - Dr. Deshmukh Marg, Pedder Road, Mumbai, 400 026 India.

Thrombotic thrombocytopenic purpura (TTP) and systemic lupus erythematosus (SLE) very rarely present simultaneously and pose a diagnostic and therapeutic dilemma to the physician. Prompt diagnosis and management with plasma exchange and immunosuppression is life-saving. To describe the effectiveness of cryosupernatant and steroids in pediatric SLE with TTP. We describe three children aged 12-14 years with SLE who were diagnosed with TTP based on fever, CNS manifestations, ANA, anti-dsDNA, anti-sm positivity, hypocomplementemia, and microangiopathic anemia with thrombocytopenia. All three children were managed with cryosupernatant and steroids without plasmapheresis. All children improved with cryosupernatant and steroids. All attained remission within 10 days. They were doing well at last follow up without relapse or flare. Cryosupernatant and steroids may be an effective therapy for Thrombotic thrombocytopenic purpura with systemic lupus erythematosus.

**NAT**

**PMID:**25332586 **PMCID:**4192230  
**BS**

**Peter, J. V.**, Griffith, M. F., Prakash, J. A., Chrispal, A., Pichamuthu, K. and Varghese, G. M.

Anti-nuclear antibody expression in severe scrub typhus infection: preliminary observations

J Glob Infect Dis; 2014, 6 (4): 195-6

**Address:**Department of Critical Care, Medical Intensive Care Unit, Christian Medical College, Vellore, India.

Department of Medicine, University of Colorado School of Medicine, Aurora, CO, USA.

Department of Microbiology, Christian Medical College, Vellore, India.

Department of Medicine, Christian Medical College, Vellore, India.

**INTL**

**PMID:**25538461 **PMCID:**4265838  
**BS**

**Phukan, C.**, Prabhu, S. and Venkatramani, V.

Incidental detection of retroperitoneal lymphangioliomyomatosis (LAM) - CT

and MRI findings with relevance to the urologist

Int Braz J Urol; 2014, 40 (4): 574-5

**Address:**Department of Urology, Christian Medical College, Vellore, India.

**INTL**

**PMID:**25251963 **PMCID:**

**BS**

**Prakash, D.,** Prabhu, S. M. and Irodi, A. Seronegative spondyloarthropathy-related sacroiliitis: CT, MRI features and differentials

Indian J Radiol Imaging; 2014, 24 (3): 271-8

**Address:**Department of Radiology, Christian Medical College, Vellore, Tamil Nadu, India.

Seronegative spondyloarthropathy is a group of chronic inflammatory rheumatic diseases that predominantly affect the axial skeleton. Involvement of sacroiliac joint is considered a hallmark for diagnosis of seronegative spondyloarthropathy and is usually the first manifestation of this condition. It is essential for the radiologist to know the computed tomography (CT) and magnetic resonance imaging (MRI) features of spondyloarthropathy-related sacroiliitis as imaging plays an important role in diagnosis and evaluation of response to treatment. We present a pictorial essay of CT and MRI imaging findings in seronegative spondyloarthropathy-related sacroiliitis in various stages and highlight common differentials that need to be considered.

**NAT**

**PMID:**25114391 **PMCID:**4126143

**BS**

**Rabi, S.,** Jacob, T. M., Lionel, J. and Indrasingh, I.

Different subsets of Langerhans cells in human uterine tubes and uterus

J Obstet Gynaecol Res; 2014, 40 (7): 1833-9

**Address:**Department of Anatomy, Christian Medical College Vellore, Vellore, India.

AIM: Langerhans cells (LC) are antigen-presenting cells present in tissues with

high antigenic exposure. Their role in the upper female reproductive tract is not fully understood. This study aims to determine the distribution and morphology of LC in the normal and post-partum human uterine tubes and uterus by staining with the specific LC markers, CD1a and zinc iodide-osmium (ZIO), and to determine their association with helper and cytotoxic T cells. MATERIAL AND METHODS: Normal and post-partum uterine tube and uterine specimens were stained with CD1a and ZIO and their morphology and distribution noted. Double immune staining with CD1a-CD4 and CD1a-CD8 in post-partum uterine tube were also done. RESULTS: It was noted that CD1a-positive cells were significantly fewer and smaller in diameter than ZIO-positive cells in the uterine tube and both types of cells were significantly more prevalent in post-partum tubes. Perivascular clusters of ZIO-positive cells were seen in the post-partum tubes. Close association of CD1a-positive cells with CD4- and CD8-positive T cells was noted in the post-partum uterine tube. In the uterus, scanty CD1a-positive cells were present in the surface and glandular epithelium and endometrial stroma. ZIO-positive cells were absent. CONCLUSION: This study suggests that CD1a-positive and ZIO-positive cells may be different subsets of LC that are needed for presentation of antigen to immunocompetent cells. Their respective functions are yet to be determined.

**INTL**

**PMID:**25056459 **PMCID:**

**BS**

**Raghupathy, V.,** Goel, A., Thangaraj, K. R., Eapen, C. E., Balasubramanian, K. A., Regi, A., Jose, R., Benjamin, S. J. and Ramachandran, A.

Absence of G1528C mutation in long-chain 3-hydroxyacyl-CoA dehydrogenase in four Indian patients with pregnancy-related liver disease

Indian J Gastroenterol; 2014, 33 (4): 387-9

**Address:**The Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, Christian Medical College, Vellore, 632 004, India.

**NAT****PMID:**24105666 **PMCID:****BS****Rajendran, P.** and Kang, G.

Molecular epidemiology of rotavirus in children and animals and characterization of an unusual G10P[15] strain associated with bovine diarrhea in south India

Vaccine; 2014, 32 Suppl 1 A89-94

**Address:**The Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, Christian Medical College, Vellore, TN, India.

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Rotaviruses are enteric pathogens causing acute, watery, dehydrating diarrhea in various host species, including birds and mammals. This study collected data on the disease burden and strain prevalence of Group A rotavirus in animals and humans in Vellore and investigated interspecies transmission by comparison of circulating genotypes. Stool samples from children aged less than 5 years, admitted to the hospital between January 2003 and May 2006 for diarrhea and diarrheal samples from animals that were collected from a veterinary clinic and several dairy farms near Vellore between February 2007 and May 2008 were processed and subjected to RNA extraction and reverse-transcription PCR for genotyping of VP7 and VP4. Of 394 children with diarrhea, 158 (40%) were positive for rotavirus and the common G types identified were G1 (47, 29.7%), G2 (43, 27.2%), G9 (22, 13.9%), G10 (2, 1.2%), G12 (1, 0.6%) and mixed infections (27, 17.8%). The common P types were P[4] accounting for 57 (36%) samples, P[8] 57 (36%), P[11] 3 (1.8%) and P[6] 2 (1.2%). Of 627 animals, 35 (1 bullock, 2 goats, 32 cows) were found to be infected with rotavirus (5.5%). The common G types identified in order of frequency were G6 (17, 48.5%), G2 (10, 28%), G10 (4, 11%), G8 (2, 5.7%) and mixed infections (2, 5.7%). The common

P types were P[6] accounting for 16 (46%) samples, P[4] 7 (20%), P[1] 3 (8.5%) and P[8] 3 (8.5%). An unusual P type P[15] was seen in one sample in combination with G10. The finding of G2 infections which are rarely identified in animals implies anthroponotic transmission since this genotype is predominantly associated with infection in humans.

**INTL****PMID:**25091687 **PMCID:****BS****Rose, W.**, Kitai, I., Kakkar, F., Read, S. E., Behr, M. A. and Bitnun, A.

Quantiferon Gold-in-tube assay for TB screening in HIV infected children: influence of quantitative values  
BMC Infect Dis; 2014, 14 516

**Address:**Department of Pediatrics, Christian Medical College, Vellore 632004, India.

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**BACKGROUND:** HIV infected children are at increased risk of TB disease and require annual TB screening. Data on use of IGRA for TB screening in them are limited. We retrospectively evaluated the usefulness of Quantiferon Gold-in-tube test (QFT), an IGRA in screening for LTBI in relatively healthy, immunologically stable HIV infected children. **METHODS:** HIV infected children with no prior history of TB were screened for latent TB as part of routine care. They underwent risk of TB assessment, TST and QFT. QFT was repeated twice or three times depending on the quantitative values. Independent test validation was also performed. **RESULTS:** Eighty one children had 109 QFT tests. All had adequate mitogen responses. The initial QFT was positive in 15 (18.5%) children; quantitative IGRA responses were 0.35-1.0 IU/mL in 9 (60%), 1.0-10 IU/mL in 5 (33.3%) and >10 IU/mL in 1 (6.7%). None that tested positive had documented TB exposure or TB disease. Baseline characteristics in the QFT positive and negative groups were similar. Repeat testing within 17 weeks demonstrated reversion to negative in 79% of cases. Repeat blinded independent testing of all QFT positive results and a random

selection of initial negative tests demonstrated concordance in 96% of cases. Seven children (QFT > 1.0 IU/mL or positive TST) were offered INH preventive therapy. In no case has TB disease developed in 2 years of close follow-up. **CONCLUSIONS:** QFT is a valid method for LTBI screening relatively healthy, immunologically stable HIV infected children. However, reversion to negative on repeat testing and lack of correlation with TST results and risk of TB exposure makes interpretation difficult.

**INTL**

**PMID:**25248406 **PMCID:**4181619

**BS**

**Rose, W.,** Veeraraghavan, B., Pragasam, A. K. and Verghese, V. P. Antimicrobial susceptibility profile of isolates from pediatric blood stream infections  
Indian Pediatr; 2014, 51 (9): 752-3

**Address:**Departments of Pediatrics and \*Microbiology, Christian Medical College, Vellore, India.  
winsleyrose@cmcvellore.ac.in.

We describe the pathogens and their antimicrobial profile causing blood stream infections in children over a 4-year period. The commonest pathogens were: non-fermenting Gram negative bacilli other than *Pseudomonas*, *Salmonella* species, *Escherichia coli*, *Staphylococcus aureus* and *Klebsiella* species. High rates of drug-resistance were observed

**NAT**

**PMID:** 25228617 **PMCID:**

**BS**

**Sarkar, S.,** Chacko, A. G. and Chacko, G. An analysis of granulation patterns, MIB-1 proliferation indices and p53 expression in 101 patients with acromegaly  
Acta Neurochir (Wien); 2014, 156 (12): 2221-30; discussion 2230

**Address:**Section of Neurosurgery, Department of Neurological Sciences, Christian Medical College, Vellore, India.

**BACKGROUND:** Despite the wide spectrum of adenoma behavior in patients with acromegaly, the ability of most pathological markers to predict clinical and radiological behavior remains controversial. The authors sought to comprehensively examine clinical and radiological correlates of growth hormone (GH)-secreting pituitary adenomas with regard to several commonly used immunocytochemical techniques in patients undergoing transsphenoidal surgery for acromegaly. **METHOD:** We performed a retrospective review of histopathological findings in 101 surgically resected GH adenomas. Tumors were assessed radiologically for different patterns of extension. Each tumor specimen was subject to immunocytochemical analysis, including assessments of granulation patterns, MIB-1 labeling indices, prolactin cosecretion, p53 expression and mitotic activity. Endocrinological outcome was assessed in 93 patients, with remission defined by the 2010 consensus criteria. **RESULTS:** Most tumors were macroadenomas and almost half were invasive. When compared to densely granulated tumors, sparsely granulated adenomas were associated with a younger age at presentation, higher preoperative IGF-1 levels, elevated MIB-1 index and pure GH immunostaining, but did not differ significantly in terms of extrasellar invasion or outcome. Increased mitotic activity and p53 expression were also associated with higher proliferation indices and a younger age at presentation. Mixed GH/prolactin tumors demonstrated significantly higher remission rates, independent of variations in extrasellar growth. MIB-1 indices did not correlate with the preoperative GH/IGF-1 levels, adenoma size or Knosp grade. **CONCLUSION:** The pathobiology of acromegaly is complex, and the clinicoradiological significance of subtyping on the basis of the markers employed in this study is debatable. Further investigation of newer molecular markers is warranted.

**INTL**

**PMID:**25238988 **PMCID:**

**BS**

**Turel, M. K.** and Rajshekhar, V.  
Magnetic resonance imaging localization with cod liver oil capsules for the minimally invasive approach to small intradural extramedullary tumors of the thoracolumbar spine  
J Neurosurg Spine; 2014, 21 (6): 882-5

**Address:** Department of Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

**Object** Accurate intraoperative localization of small intradural extramedullary thoracolumbar (T-1 to L-3 level) spinal cord tumors is vital when minimally invasive techniques, such as hemilaminectomy, are used to excise these lesions. In this study, the authors describe a simple and effective method of preoperative MRI localization of small intradural extramedullary tumors using cod liver oil capsules. **Methods** Thirty-five patients with intradural tumors underwent preoperative MRI localization the evening prior to surgery. Patients were positioned prone in the MRI gantry, mimicking the intraoperative position. Nine capsules were placed in 3 rows to cover the lesion. This localization was used to guide the level for a minimally invasive approach using a hemilaminectomy to excise these tumors. **Results** The mean patient age was 51.5 +/- 14.3 years, and the mean body mass index was 24.1 +/- 3.5 kg/m<sup>2</sup>. Twenty-two tumors involved the thoracic spine, and 13 involved the upper lumbar spine from L-1 to L-3. The mean tumor size was 2.2 +/- 1.0 cm. Localization was accurate in 34 patients (97.1%). **Conclusions** Accurate localization with the described method is quick, safe, cost-effective, and noninvasive with no exposure to radiation. It also reduces operating time by eliminating the need for intraoperative fluoroscop

**INTL**

**PMID:**25325173 **PMCID:**

**BS**

**Abraham AP,** Vidyasagar A, Lakshmanan J, Nair S, Joseph M(1). Phenytoin toxicity in patients with traumatic brain injury. Neurol India. 2014 May-Jun;62(3):285-9. doi: 10.4103/0028-3886.136929.

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**BACKGROUND:** We observed that in patients with traumatic brain injury (TBI) who did not improve as expected, serum levels of phenytoin were in the toxic range and that their sensorium improved with modification of the dose. This led us to study the usage of phenytoin in patients with TBI. **AIMS:** To determine the prevalence of phenytoin toxicity in TBI patients and to study the suitability of using ideal body weight (IBW) to guide phenytoin dosing. **SETTING AND DESIGN:** Neurotrauma unit of a tertiary care centre in India. Prospective data collection from an already established protocol of drug level monitoring. **MATERIALS AND METHODS:** The study cohort included 100 consecutive adult patients with mild or moderate TBI who were administered phenytoin based on IBW. Trough serum phenytoin and albumin levels were measured on day 4 after administration of the loading dose and actual body weight obtained when it was possible. **STATISTICAL ANALYSIS:** Chi-square was used for comparing categorical variables, student's t-test for continuous variables and multivariate regression analysis to obtain independent risk factors. **RESULTS:** Clinical toxicity was observed in 15% of patients and biochemical toxicity in 36%, with a significant association between the two ( $P < 0.01$ ). Using multivariate analysis, abdominal girth  $\leq 75$  cm ( $P = 0.07$ ), neck circumference  $\leq 34$  cm ( $P = 0.025$ ) and IV dose proportion  $\geq 80\%$  ( $P = 0.003$ ) were independent risk factors for biochemical toxicity. The plot between actual weight and IBW showed that toxicity occurred when IBW was higher than actual weight. **CONCLUSION:** The prevalence of biochemical phenytoin toxicity was high, with independent risk factors being a higher proportion of IV administration and overestimation of weight by IBW. Clinical suspicion of phenytoin toxicity was a good predictor of biochemical toxicity.

**NAT**

**PMID:** 25033851 [PubMed - indexed for MEDLINE]

**CO**

**Abrol, N.,** Panda, A. and Kekre, N. S. Painful varicoceles: Role of varicocelectomy  
Indian J Urol; 2014, 30 (4): 369-73

**Address:**Department of Urology, Christian Medical College, Vellore, Tamil Nadu, India.

The incidence of varicocele in the general population is up to 15%. It is estimated that the prevalence of pain with varicoceles is around 2-10%. Till the year 2000, only two studies evaluated efficacy of varicocelectomy in painful varicoceles with conflicting results. Over the past decade many other studies have addressed this issue and reported on the treatment outcome and predictors of success. We critically appraised studies published from March 2000 to May 2013 evaluating surgical management in painful varicoceles to provide an evidence based review of effectiveness of varicocelectomy in relieving pain in patients with symptomatic painful varicoceles. The association between varicoceles and pain is not clearly established. Conservative treatment is warranted as the first line of treatment in men with painful clinical varicoceles. In carefully selected men with clinically palpable varicoceles and associated characteristic chronic dull ache, dragging or throbbing pain who do not respond to conservative therapy, varicocelectomy is warranted and is associated with approximately 80% success. However, surgical success does not always translate into resolution of pain and pain might persist even when no varicoceles are detected postoperatively.

**NAT**

**PMID:**25378815 **PMCID:**4220373

**CO**

**Albert, S.,** Jayashankar, V. and Gouse, M.  
A paradoxical triad: scapulothoracic dissociation with clavicle and humeral shaft fractures  
Case Rep Emerg Med; 2014, 2014 689157

**Address:** Department of Orthopaedics, Christian Medical College, Unit 1, Vellore 632004, India.

Scapulothoracic dissociation involves varying degree of discontinuity of the upper extremity from its truncl attachment. An eighteen-year-old male presented to the accident and emergency department following a motor vehicle accident where he was hit by a four wheeler while riding a two wheeler. He had tenderness and deformity over the left clavicle and the left humerus. He was unable to perform active wrist and finger dorsiflexion. A CT subsequently revealed a grade 2 splenic laceration. The splenic laceration was treated conservatively. As his general condition improved, he was gradually weaned off the ventilator and his left upper limb neurology was reassessed. He had isolated radial nerve palsy with an otherwise intact brachial plexus. He underwent internal fixation of the clavicle and the humerus. At 4 months after injury the EMG/NCV report showed signs of renervation of the radial nerve, and the fracture progressed to an uneventful union. This prior unreported triad of scapulothoracic dissociation with ipsilateral clavicular and humeral fractures may represent a parody. An apparent increase in the severity of skeletal injury was associated with a paradoxical decrease in the severity of neurovascular injury. We report this case to create awareness among orthopedic surgeons and emergency physicians about the clinical presentation of such injuries

**INTL**

**PMID:**25140262 **PMCID:**4129962

**CO**

**Arora, R.**, John, N. T. and Kumar, S. Vesicourethral fistula after retrograde primary endoscopic realignment in posterior urethral injury  
Urology; 2015, 85 (1): e1-2

**Address:** Department of Urology, Christian Medical College, Vellore, Tamil Nadu, India. **Address:** [Rajat.cmcv@gmail.com](mailto:Rajat.cmcv@gmail.com).

Department of Urology, Christian Medical College, Vellore, Tamil Nadu, India.

A 22-year-old male patient presented with iatrogenic vesicourethral fistula after immediate retrograde endoscopic realignment of urethra after a posterior urethral injury associated with pelvic fracture.

**INTL**

**PMID:** 25440761 **PMCID:**

**CO**

**Bal, H. S.**, Jehangir, S. and Kurian, J. J. A giant lymphangioma of the body wall in a child: a heavy companion  
BMJ Case Rep; 2014, 2014

**Address:** Department of Paediatric Surgery, Christian Medical College, Vellore, Tamil Nadu, India.

**INTL**

**PMID:**25427931 **PMCID:**

**CO**

**Banerji, J. S.** and George, A. J. Total ureterectomy and ileal ureteric replacement for TCC ureter in a solitary kidney  
Can Urol Assoc J; 2014, 8 (11-12): E938-40

**Address:** Christian Medical College, Vellore, India; ; Virginia Mason Medical Center, Seattle, Washington. Christian Medical College, Vellore, India;

Traditional treatment of upper tract transitional cell carcinoma (TCC) is nephroureterectomy with a bladder cuff. This is in keeping with the nature of the disease, in that TCC is a panurothelial disease. However, there are a few rare occasions when this would mean making a subject anephric, as in a TCC in a solitary kidney or bilateral synchronous/metachronous disease. We present a case of a patient with a dysplastic, poorly functioning left kidney and with a TCC of the ureter on the right side.

**INTL**

**PMID:**25553174 **PMCID:**

**CO**

**Banerji, J. S.**, Devasia, A., Kekre, N. S. and Chacko, N.

Early urinary diversion with ileal conduit and vesicovaginostomy in the treatment of radiation cystitis due to carcinoma cervix: a study from a tertiary care hospital in South India

ANZ J Surg; 2014,

**Address:** Department of Urology, Christian Medical College, Vellore, India.

**BACKGROUND:** To study the magnitude of radiation cystitis following radiation therapy for carcinoma cervix, and propose an algorithm to decide on early diversion, with or without vesicovaginostomy. **METHODS:** Women who developed radiation cystitis following radiotherapy for carcinoma cervix from January 1998 to December 2011 were included in this retrospective study. Electronic hospital records were analysed to document the presence of radiation cystitis. All women who developed evidence of radiation-induced cystitis, according to the common toxicity and Radiation Therapy Oncology Group criteria, were included in the study. We looked at transfusion requirements, number of hospital admissions, quality of life and cost involved. Chi-square tests were done where applicable. SPSS version 16 was used for analysis. **RESULTS:** Of the 902 patients who received radiation for carcinoma cervix in the 13-year period, 62 (6.87%) developed grade 3/4 cystitis. Twenty-eight of them underwent ileal conduit diversion, with 18 undergoing concomitant vesicovaginostomy. When compared with the patients who did not have diversion, the transfusion requirements, number of hospital admissions and quality of life had a statistically significant difference. Cost analysis of early diversion too showed a marginal benefit with early diversion. The limitation of the study was that it was retrospective in nature. **CONCLUSION:** In radiation cystitis, multiple hospital admissions and consequential increase in cost is the norm. In severe disease, early diversion is a prudent, cost-effective approach with good quality of life and early return to normal activity

**INTL**

**PMID:** 25366250 **PMCID:**

**CO**

**Bhatt, A. A.**, Mathews, S. S., Kumari, A. and Paul, T. V.

Tumour-induced osteomalacia

Hong Kong Med J; 2014, 20 (4): 350 e1-2

**Address:** Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore 632 004, India.

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**INTL**

**PMID:** 25104013 **PMCID:**

**CO**

**Bhatt, A. D.**, Joel, A. and Chacko, R.

Lesser known evil of a commonly used devil-bleomycin induced flagellate dermatitis

Indian Dermatol Online J; 2014, 5 (4): 517

**Address:** Department of Medical Oncology, Christian Medical College, Vellore, Tamil Nadu, India.

**NAT**

**PMID:** 25396145 **PMCID:**4228657

**CO**

**Banerji, J. S.**, Devasia, A., Kekre, N. S. and Chacko, N.

Early urinary diversion with ileal conduit and vesicovaginostomy in the treatment of radiation cystitis due to carcinoma cervix: a study from a tertiary care hospital in South India

ANZ J Surg; 2014,

**Address:** Department of Urology, Christian Medical College, Vellore, India.

**BACKGROUND:** To study the magnitude of radiation cystitis following radiation therapy for carcinoma cervix, and propose an algorithm to decide on early diversion, with or without vesicovaginostomy. **METHODS:** Women who developed radiation cystitis following radiotherapy for carcinoma

cervix from January 1998 to December 2011 were included in this retrospective study. Electronic hospital records were analysed to document the presence of radiation cystitis. All women who developed evidence of radiation-induced cystitis, according to the common toxicity and Radiation Therapy Oncology Group criteria, were included in the study. We looked at transfusion requirements, number of hospital admissions, quality of life and cost involved. Chi-square tests were done where applicable. SPSS version 16 was used for analysis. RESULTS: Of the 902 patients who received radiation for carcinoma cervix in the 13-year period, 62 (6.87%) developed grade 3/4 cystitis. Twenty-eight of them underwent ileal conduit diversion, with 18 undergoing concomitant vesicovaginostomy. When compared with the patients who did not have diversion, the transfusion requirements, number of hospital admissions and quality of life had a statistically significant difference. Cost analysis of early diversion too showed a marginal benefit with early diversion. The limitation of the study was that it was retrospective in nature. CONCLUSION: In radiation cystitis, multiple hospital admissions and consequential increase in cost is the norm. In severe disease, early diversion is a prudent, cost-effective approach with good quality of life and early return to normal activity

**INTL****PMID:**25366250 **PMCID:****CO**

**Bhatt, A. A.**, Mathews, S. S., Kumari, A. and Paul, T. V.

Tumour-induced osteomalacia  
Hong Kong Med J; 2014, 20 (4): 350 e1-2

**Address:**Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore 632 004, India.

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Department of General Pathology, Christian Medical College, Vellore 632 004, India

**INTL****PMID:**25104013 **PMCID:****CO**

**Bhatt, A. D.**, Joel, A. and Chacko, R.  
Lesser known evil of a commonly used devil-bleomycin induced flagellate dermatitis

Indian Dermatol Online J; 2014, 5 (4): 517

**Address:**Department of Medical Oncology, Christian Medical College, Vellore, Tamil Nadu, India.

**NAT****PMID:**25396145 **PMCID:**4228657**CO**

**Bhide, R. P.**, Solomons, C., Devsahayam, S. and Tharion, G.

Exercise and gait training in persons with paraplegia and its effect on muscle properties

J Back Musculoskelet Rehabil; 2014,

**Address:**Clinical Fellow, Division of Physiatry, Department of Medicine, University of Toronto, Toronto, ON, Canada.

Department of Bioengineering, Christian Medical College, Vellore, Tamil Nadu, India.

Department of Physical Medicine and Rehabilitation, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND:** Upper extremity strengthening and gait training with orthoses form a major part of inpatient rehabilitation of paraplegic patients in developing countries. This helps to overcome architectural barriers and limited wheelchair accessible environment in the community. **OBJECTIVES:** To evaluate the changes in physiological properties of the Triceps Brachii muscle following exercise training in individuals with paraplegia. The authors also explored the correlation between muscle property changes and gait parameters using orthoses in paraplegic persons. **METHODS:** Twelve subjects with complete paraplegia and neurological level of injury (NLI) from T9 to L1, underwent exercise training for a mean 64.1 +/- 4.1 days. Triceps brachii was chosen as the sample muscle. Variables like arm circumference, time to fatigue and mean power frequency (MF)

(surface EMG parameter), were recorded at the beginning and the end of training, during a voluntary sub-maximal isometric elbow extension. Non-parametric tests were used to assess statistical significance between the two recordings. Additionally, gait parameters like walking speed and distance (with the help of orthoses) were obtained and compared with the above variables, to determine impact of upper extremity strengthening on gait improvements in such patients. RESULTS: Statistically significant changes were noted in bilateral arm circumferences ( $p=0.003$  bilaterally) and MF drop, expressed as percentage (right  $p=0.04$ , left  $p=0.01$ ), indicative of better muscle resilience and adaptation. Significant positive correlation was observed between 'time to fatigue' and the orthoses-aided total walking distance (right  $\rho=0.65$ , left  $\rho=0.69$ ). CONCLUSIONS: Exercise training induces noticeable changes in the muscles of upper extremities favoring better muscle adaptation. Furthermore, positive correlation between 'time to fatigue' and (orthotic) aided walking distance highlights the positive impact of strengthening program on gait parameters in paraplegic patients. These findings are important and relevant in developing countries with environmental barriers. Upper extremity strengthening should be included in the rehabilitation of paraplegic patients who are being trained for ambulation with orthoses.

**INTL****PMID:**25547234 **PMCID:****CO**

**Boddu, D.**, George, R., Nair, S., Bindra, M. and L, G. Mathew  
Hydroa Vacciniforme-Like Lymphoma: A Case Report From India  
J Pediatr Hematol Oncol; 2014,

**Address:**Department of \*Pediatrics  
daggerDermatology double  
daggerPathology, Christian Medical  
College, Vellore, India.

We report a 14-year-old Indian boy who presented with a history of weight loss, fever, facial edema, and a relapsing papulovesicular eruption on the face and

limbs for 1 year. Histopathology of the skin showed dense lymphoid infiltrate from dermis to subcutaneous fat. Immunohistochemistry of this lymphoid infiltrate was CD3, CD8, CD56, CD57, Granzyme B, TIA, and Epstein Barr virus LMP1. The histopathology and immunohistochemistry were consistent with the diagnosis of hydroa vacciniforme-like T-cell lymphoma. The child responded remarkably to oral steroids but relapsed on tapering doses. CHOP (Cyclophosphamide, Adriamycin, Vincristine, and Prednisolone) chemotherapy was initiated in view of systemic involvement to which he showed some response, however, the disease relapsed again. He then had a rapidly progressive disease and ultimately succumbed to his illness. This is the first case of hydroa vacciniforme-like T-cell lymphoma being reported from this subcontinent.

**INTL****PMID:**25072366 **PMCID:****CO**

**Chaturvedi, S.**, Lipszyc, D. H., Licht, C., Craig, J. C. and Parekh, R.  
Pharmacological interventions for hypertension in children  
Evid Based Child Health; 2014, 9 (3):  
498-580

**Address:**Department of Paediatrics,  
Christian Medical College, Vellore, India.  
[swasti.chaturvedi@gmail.com](mailto:swasti.chaturvedi@gmail.com).

**BACKGROUND:** Hypertension is a major risk factor for stroke, coronary artery disease and kidney damage in adults. There is a paucity of data on the long-term sequelae of persistent hypertension in children, but it is known that children with hypertension have evidence of end organ damage and are at risk of hypertension into adulthood. The prevalence of hypertension in children is rising, most likely due to a concurrent rise in obesity rates. In children with hypertension, non-pharmacological measures are often recommended as first-line therapy, but a significant proportion of children will eventually require pharmacological treatment to reduce blood pressure, especially those with evidence of end organ damage at

presentation or during follow-up. A systematic review of the effects of antihypertensive agents in children has not previously been conducted. **OBJECTIVES:** To determine the dose-related effects of different classes of antihypertensive medications, as monotherapy compared to placebo; as combination therapy compared to placebo or a single medication; or in comparisons of various doses within the same class, on systolic or diastolic blood pressure (or both) in children with hypertension. **SEARCH METHODS:** We searched the Cochrane Hypertension Group Specialised Register, the Cochrane Central Register of Controlled Trials (CENTRAL) (2013, Issue 9), Ovid MEDLINE (1946 to October 2013), Ovid EMBASE (1974 to October 2013) and bibliographic citations. **SELECTION CRITERIA:** The selection criteria were deliberately broad due to there being few clinical trials in children. We included randomised controlled trials (RCTs) of at least two weeks duration comparing antihypertensive agents either as monotherapy or combination therapy with either placebo or another medication, or comparing different doses of the same medication, in children with hypertension. Hypertension was defined as an average (over a minimum of three readings) systolic or diastolic blood pressure (or both) on the 95(th) percentile or above for age, height and gender. **DATA COLLECTION AND ANALYSIS:** Two authors independently selected relevant studies, extracted data and assessed risk of bias. We summarised data, where possible, using a random-effects model. Formal assessment of heterogeneity was not possible because of insufficient data. **MAIN RESULTS:** A total of 21 trials evaluated antihypertensive medications of various drug classes in 3454 hypertensive children with periods of follow-up ranging from three to 24 weeks. There were five RCTs comparing an antihypertensive drug directly with placebo, 12 dose-finding trials, two trials comparing calcium channel blockers with angiotensin receptor blockers, one trial comparing a centrally acting alpha blocker with a diuretic and one trial comparing an angiotensin-converting

enzyme inhibitor with an angiotensin receptor blocker. No randomised trial was identified that evaluated the effectiveness of antihypertensive medications on target end organ damage. The trials were of variable quality and most were funded by pharmaceutical companies. Among the angiotensin receptor blockers, candesartan (one trial, n = 240), when compared to placebo, reduced systolic blood pressure by 6.50 mmHg (95% confidence interval (CI) -9.44 to -3.56) and diastolic blood pressure by 5.50 mmHg (95% CI -9.62 to -1.38) (low-quality evidence). High dose telmisartan (one trial, n = 76), when compared to placebo, reduced systolic blood pressure by -8.50 (95% CI -13.79 to -3.21) but not diastolic blood pressure (-4.80, 95% CI -9.50 to 0.10) (low-quality evidence). Beta blocker (metoprolol, one trial, n = 140), when compared with placebo, significantly reduced systolic blood pressure by 4.20 mmHg (95% CI -8.12 to -0.28) but not diastolic blood pressure (-3.20 mmHg 95% CI -7.12 to 0.72) (low-quality evidence). Beta blocker/diuretic combination (Bisoprolol/hydrochlorothiazide, one trial, n = 94) when compared with placebo, did not result in a significant reduction in systolic blood pressure (-4.0 mmHg, 95% CI -8.99 to -0.19) but did have an effect on diastolic blood pressure (-4.50 mmHg, 95% CI -8.26 to -0.74) (low-quality evidence). Calcium channel blocker (extended-release felodipine, one trial, n = 133) was not effective in reducing systolic blood pressure (-0.62 mmHg, 95% CI -2.97 to 1.73) or diastolic blood pressure (-1.86 mmHg, 95% CI -5.23 to 1.51) when compared with placebo. Further, there was no consistent dose response observed among any of the drug classes. The adverse events associated with the antihypertensive agents were mostly minor and included headaches, dizziness and upper respiratory infections. **AUTHORS' CONCLUSIONS:** Overall, there are sparse data informing the use of antihypertensive agents in children, with outcomes reported limited to blood pressure and not end organ damage. The most data are available for candesartan, for which there is low-

quality evidence of a modest lowering effect on blood pressure. We did not find evidence of a consistent dose response relationship for escalating doses of angiotensin receptor blockers, calcium channel blockers or angiotensin-converting enzyme inhibitors. All agents appear safe, at least in the short term.

**INTL**

**PMID:25236305 PMCID:**

**CO**

**Chiramel, G. K.**, Keshava, S. N., Moses, V., Mammen, S., David, S. and Sen, S. Percutaneous Sclerotherapy of Congenital Slow-Flow Vascular Malformations of the Orbit Cardiovasc Intervent Radiol; 2014, **Address:**Department of Radiology, Christian Medical College, Vellore, 632004, Tamil Nadu, India, gkchiramel@gmail.com.

**PURPOSE:** This manuscript describes the clinical features, imaging findings, treatment details, and short-term outcomes of a series of congenital slow-flow vascular malformations. **METHODS:** This was a prospective study of congenital slow-flow vascular malformations involving the orbital region treated at a single institution with percutaneous sclerotherapy. **RESULTS:** Ten patients presented during the study period, comprising eight venous malformations, one lymphatic malformation, and one veno-lymphatic malformation. Nine patients underwent percutaneous sclerotherapy under digital subtraction angiography guidance, of which three developed marked rise in intraocular pressure requiring lateral canthotomy. The treatments were performed in the presence of an ophthalmologist who measured the intraorbital pressure during and after the procedure. On follow-up, some of the patients required repeat sessions of sclerotherapy. All patients had improvement of symptoms on follow up after the procedure. **CONCLUSION:** Congenital slow-flow vascular malformations of the orbital region are rare lesions that should be treated using a multidisciplinary approach. Monitoring of the intraorbital pressure is required both during and after the procedure to

decide about the need for lateral canthotomy to reduce the transiently increased intraorbital pressure.

**INTL**

**PMID:25148921 PMCID:**

**CO**

**Chowdhury, S. D.**, Masih, D., Chawla, G., Pal, S., Kurien, R. T. and Augustine, J.

Metastasis of renal cell carcinoma to the duodenal papilla

Indian J Gastroenterol; 2014, 33 (5): 493-4

**Address:**Department of Gastroenterology, Christian Medical College, Vellore, 632 004, India, [sudipto.d.c@gmail.com](mailto:sudipto.d.c@gmail.com)

**NAT**

**PMID:24122316 PMCID:**

**CO**

**Christopher, R. H.**, David, K. V. and Pricilla, R. A.

Primary hypoparathyroidism presenting with new adult onset seizures in family practice

J Family Med Prim Care; 2014, 3 (3): 266-8

**Address:**Department of Family Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

Low Cost Effective Care Unit, Christian Medical College, Vellore, Tamil Nadu, India.

Hypoparathyroidism commonly presents with paresthesias, fatigue, anxiety, muscle cramps and infrequently with seizures due to hypocalcaemia. Here, we present a case of 27-year-old adult female presenting with new onset convulsions who was subsequently diagnosed to have primary (congenital) hypoparathyroidism.

**INTL**

**PMID:25374867 PMCID:4209685**

**CO**

**Dangi, A. D.**, Kumar, R. and Kekre, N. S.

Renal arteriovenous malformation with inferior vena caval extension mimicking renal cell carcinoma

Indian J Urol; 2014, 30 (3): 357-9

**Address:**Department of Urology, Christian Medical College, Vellore, Tamil Nadu, India.

Department of Pathology, Christian Medical College, Vellore, Tamil Nadu, India.

A young lady presented with complaints of right flank pain and a palpable mass. On contrast-enhanced tomography (CECT), a renal mass with extension into the inferior vena cava (IVC) - suggestive of renal cell carcinoma - was diagnosed and she underwent radical nephrectomy with en bloc excision of the IVC thrombus. Histopathology revealed a benign arteriovenous malformation that had extended into the IVC. Arteriovenous malformation should therefore be kept in the list of differentials for a renal mass with IVC extension.

**NAT**

**PMID:**25097329 **PMCID:**4120230

**CO**

**Dasgupta, R.**, Shetty, S., Keshava, S. N., Gupta, M., Paul, M. J. and Thomas, N.

Metastatic parathyroid carcinoma treated with radiofrequency ablation: A novel therapeutic modality

Australas Med J; 2014, 7 (9): 372-5

**Address:**Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, India.

Department of Radiology, Christian Medical College, Vellore, India.

Department of Pathology, Christian Medical College, Vellore, India.

Department of Endocrine Surgery, Christian Medical College, Vellore, India.

Parathyroid carcinoma (PCA), accounting for less than one per cent of all endocrine malignancies, is a rare cause of primary hyperparathyroidism. A diagnosis of parathyroid carcinoma may be challenging in the presence of localised disease and involves a histological diagnosis based on capsular, vascular, or perineural invasion or the presence of metastasis. Distant metastasis remains a rare presentation, with the lung being the most common

site. Surgery remains the treatment of choice as radiotherapy and chemotherapy have proved to be of limited benefit in metastatic disease. This case reports suggests that radiofrequency ablation has the potential to be a novel and effective treatment option in these patients.

**INTL**

**PMID:**25324902 **PMCID:**4185329

**CO**

**David VG**(1), Yadav B(2), Jeyaseelan L(2), Deborah MN(1), Jacob S(1), Alexander S(1), Varughese S(1), John GT(3).

Prospective blood pressure measurement in renal transplant recipients.

Indian J Nephrol. 2014 May;24(3):154-60. doi: 10.4103/0971-4065.132006.

Author information:

(1)Department of Nephrology, Christian Medical College/Hospital, Vellore, Tamil Nadu, India. (2)Department of Biostatistics, Christian Medical College/Hospital, Vellore, Tamil Nadu, India. (3)Department of Renal Unit, Royal Brisbane and Women's Hospital, QLD, Australia.

Blood pressure (BP) control at home is difficult when managed only with office blood pressure monitoring (OBPM). In this prospective study, the reliability of BP measurements in renal transplant patients with OBPM and home blood pressure monitoring (HBPM) was compared with ambulatory blood pressure monitoring (ABPM) as the gold standard. Adult patients who had living-related renal transplantation from March 2007 to February 2008 had BP measured by two methods; OBPM and ABPM at pretransplantation, 2(nd), 4(th), 6(th), and 9(th) months and all the three methods: OBPM, ABPM, and HBPM at 6 months after transplantation. A total of 49 patients, age  $35 \pm 11$  years, on prednisolone, tacrolimus, and mycophenolate were evaluated. A total of 39 were males (79.6%). Systolic BP (SBP) and diastolic BP (DBP) measured by OBPM were higher than HBPM when compared with ABPM. When assessed

using OBPM and awake ABPM, both SBP and DBP were significantly overestimated by OBPM with mean difference of 3-12 mm Hg by office SBP and 6-8 mm Hg for office DBP. When HBPM was compared with mean ABPM at 6 months both the SBP and DBP were overestimated by and 7 mm Hg respectively. At 6 months post transplantation, when compared with ABPM, OBPM was more specific than HBPM in diagnosing hypertension (98% specificity, Kappa: 0.88 vs. 89% specificity, Kappa: 0.71). HBPM was superior to OBPM in identifying patients achieving goal BP (89% specificity, Kappa: 0.71 vs. 50% specificity Kappa: 0.54). In the absence of a gold standard for comparison the latent class model analysis still showed that ABPM was the best tool for diagnosing hypertension and monitoring patients reaching targeted control. OBPM remains an important tool for the diagnosis and management of hypertension in renal transplant recipients. HBPM and ABPM could be used to achieve BP control.

**NAT**

**PMCID:** PMC4127834 **PMID:** 25120292 [PubMed]

**CO**

**Desai, L.,** Kurien, R. T., Simon, E. G., Dutta, A. K., Joseph, A. J. and Chowdhury, S. D.

Hypogammaglobulinemia-associated gastrointestinal disease-A case series Indian J Gastroenterol; 2014,

**Address:**Department of Gastrointestinal Sciences, Christian Medical College, Vellore, 632 004, India.

Hypogammaglobulinemia, a form of primary immunodeficiency, is an uncommon condition. Gastrointestinal (GI) symptoms may be the only presentation. A series of 22 patients who presented with GI symptoms and were diagnosed with hypogammaglobulinemia is presented. Chronic diarrhea was the presentation in majority (90.9 %) of patients. Malabsorption was identified in 87.5 % of patients followed by weight loss (59.0 %), abdominal pain (27.2 %), and oral ulcers (4.5 %). The median duration of symptoms prior to diagnosis

was 4 years, range being 6 months to 23 years. Evaluation revealed opportunistic infections including Giardia lamblia in 31.8 % and Cryptosporidium parvum, Isospora belli, Cytomegalovirus and Aeromonas in 4.5 % each. Serum globulins were low in all patients. Duodenal biopsy showed paucity of plasma cells in 45 %, villous atrophy in 35 % and nodular lymphoid hyperplasia in 30 % patients. Though uncommon, hypogammaglobulinemia is associated with GI disease. The possibility of a primary immunodeficiency should be considered in patients presenting with GI symptoms and low serum globulin.

**NAT**

**PMID:**25352181 **PMCID:**

**CO**

**Desai, L.,** Kurien, R. T., Simon, E. G., Dutta, A. K., Joseph, A. J. and Chowdhury, S. D.

Hypogammaglobulinemia-associated gastrointestinal disease-A case series Indian J Gastroenterol; 2014,

**Address:**Department of Gastrointestinal Sciences, Christian Medical College, Vellore, 632 004, India.

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with GI disease. The possibility of a primary immunodeficiency should be considered in patients presenting with GI symptoms and low serum globulin.

**NAT****PMID:**25352181 **PMCID:****CO**

**D'sa S, R.,** Victor, P., Jagannati, M., Sudarsan, T. I., Carey, R. A. and Peter, J. V.

Severe methemoglobinemia due to ingestion of toxicants

Clin Toxicol (Phila); 2014, 52 (8): 897-900

**Address:**Department of Critical Care, Christian Medical College and Hospital, Vellore, India.

**BACKGROUND:** Toxin-induced methemoglobinemia is seen in poisoning with oxidizing agents. We report the clinical features and outcome of patients admitted with severe methemoglobinemia due to intentional ingestion of toxicants. **METHODS:** In this observational case series, patients admitted with toxin-induced methemoglobinemia between September 2011 and January 2014 were identified from the institutional poisoning database. Clinical profile and outcome of patients with methemoglobin concentration greater than or equal to 49% is reported. **RESULTS:** Of the 824 patients admitted with poisoning, 5 patients with methemoglobin concentration greater than or equal to 49% were included. The implicated compounds were nitrobenzene, benzoylphenylurea, flubendamide and Rishab(TM). One patient refused to name the compound. All patients were managed in the intensive care unit. Altered sensorium [Glasgow coma scale (GCS) < 10] was common (80%); 2 patients presented with a GCS greater than 4. All patients manifested cyanosis, low oxygen saturation and chocolate-brown-colored blood despite supplemental oxygen therapy. The median methemoglobin concentration was 64.7% (range 49.8-91.6%); 2 patients had methemoglobin concentration greater than 70%. One patient needed inotropes. Four patients

required mechanical ventilation for 4-14 days. All patients were treated with methylene blue; 4 received more than one dose. Three patients also received intravenous ascorbic acid 500 mg, once daily, for 3 days. Following treatment, there was evidence of haemolysis in all patients; 2 required blood transfusion. All patients survived. **CONCLUSION:** Patients with severe toxin-induced methemoglobinemia present with altered sensorium and cyanosis and may require ventilatory support and inotropes. Though methemoglobin concentrations greater than 70% are considered fatal, aggressive management with methylene blue and supportive therapy can lead to survival.

**INTL****PMID:**25116418 **PMCID:****CO**

**Ganapule, A. P.,** Gupta, M., Kokil, G. and Viswabandya, A.

Histiocytic sarcoma with acute lymphoblastic leukemia a rare association: case report and literature review

Indian J Hematol Blood Transfus; 2014, 30 (Suppl 1): 305-8

**Address:**Department of Haematology, Christian Medical College and Hospital, Ida Scudder Road, Vellore, 632004 Tamil Nadu India.

Department of Pathology, Christian Medical College and Hospital, Ida Scudder Road, Vellore, 632004 Tamil Nadu India.

Definition and diagnostic criteria for histiocytic sarcoma (HS) have changed over last two decades due to available new immunohistochemical markers, as well as better understanding of the biology of disease. We report here a case of 4 years old boy diagnosed as acute lymphoblastic leukemia (ALL), who later developed HS of pleura, when he was on maintenance phase of ALL protocol. HS constitutes less than 1 % of the haematolymphoid neoplasm, even more rare is association of HS with ALL. Thus reporting here a rare association of HS with ALL, will help in knowing the actual incidence of HS as well as association with ALL

**NAT****PMID:**25332605 **PMCID:**4192204**CO**

**Ganapule, A. P.**, Tavaavaava, V. S., Kumar, R. M., T, J. N. and Viswabandya, A.

Synchronous presentation of chronic myeloid leukemia with carcinoma penis: a rare presentation

J Clin Diagn Res; 2014, 8 (9): QD01-2

**Address:** Assistant Professor, Department of Haematology, Christian Medical College, Vellore, India .

Professor, Head Cytogenetics, Department of Pathology, Christian Medical College, Vellore, India .

Associate Professor, Department of Pathology, Christian Medical College, Vellore, India .

Associate Professor, Department of Urology, Christian Medical College, Vellore, India .

Professor, Department of Haematology, Christian Medical College, Vellore, India

We report here a case of 52-year-old male presenting with penile ulcer. On evaluation, he was diagnosed to have Carcinoma penis with concurrent CML in chronic phase. Clinical examination showed pallor, bilateral inguinal lymphadenopathy, bilateral pitting pedal oedema and hepatosplenomegaly. He was diagnosed to have chronic myeloid leukemia based on peripheral smear examination showing raised counts with shift to left and fluorescence in situ hybridisation (FISH) showing t (9:22). The ilio-inguinal block dissection specimen showed inguinal metastasis of squamous cell carcinoma (SCC). This case is being presented here in view of the rarity in combination of CML with another malignancy.

**INTL****PMID:**25386499 **PMCID:**4225951**CO**

**Ganapule, A. P.**, Viswabandya, A., Jasper, A., Patel, P. and Kokil, G.

Granulocytic sarcoma with compressive myelopathy: a rare presentation of chronic myelogenous leukemia

J Clin Diagn Res; 2014, 8 (7): QD03-4

**Address:** Assistant Professor, Department of Haematology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India .

Professor, Department of Haematology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India .

Assistant Professor, Department of Radiology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India .

Assistant Professor, Department of Pathology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India .

Fellow In Haematopathology, Department of Pathology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India .

Granulocytic sarcoma occurs most commonly in acute myelogenous leukemia. The appearance of granulocytic sarcoma in chronic myelogenous leukemia signals accelerated phase/ blast transformation. This is a rare case of undiagnosed chronic myelogenous leukemia with granulocytic sarcoma causing cord compression, which went into tumour lysis syndrome requiring dialysis after starting of steroids and radiotherapy. A 43-year-old male presented in emergency department with acute onset of flaccid paralysis. On clinical examination, there was hepatosplenomegaly and lower motor neuron paralysis in the lower limbs. The peripheral smear was consistent with chronic myelogenous leukemia in chronic phase. The MRI spine revealed paraspinal and epidural masses causing cord compression and the biopsy from the paraspinal mass was consistent with granulocytic sarcoma.

**INTL****PMID:**25177619 **PMCID:**4149125**CO**

**Gangadharan, S.**, Rathinam, B. and Madhuri, V.

Radial nerve safety in Dorgan's lateral cross-pinning of the supracondylar humeral fracture in children: a case report and cadaveric study

J Pediatr Orthop B; 2014, 23 (6): 579-83

**Address:** Paediatric Orthopaedics Unit, Department of Orthopaedics, Christian Medical College, Vellore, Tamil Nadu, India.

We encountered an iatrogenic radial nerve injury following Dorgan's lateral cross-pinning in a 5-year-old girl with a supracondylar fracture of the humerus. This prompted a cadaveric study to define a safe entry point for the proximal lateral Kirschner -wire. A child's cadaveric humerus was pinned laterally in three coronal planes, simulating the proximal entry pin. The radial nerve lay farthest from the wire in the posterolateral plane, 1 and 2 cm proximal to the lateral epicondyle. We report the first incidence of radial nerve injury with lateral cross-pinning and suggest that the wire should be placed posterolaterally within 2 cm from the lateral epicondyle.

**INTL**

**PMID:**25238330 **PMCID:**  
**CO**

**George, L., Mathews, V., George, B., Thomas, M. and Pulimood, S. A.**  
Generalized pustular psoriasis following allogeneic stem cell transplantation  
Clin Exp Dermatol; 2014,

**Address:** Department of Dermatology, Christian Medical College, Vellore, Tamil Nadu, India.

Development of psoriasis following allogeneic stem cell transplantation (SCT) is rare, and has been described once previously, following SCT from a sibling donor with psoriasis. This condition should be differentiated from psoriasiform graft-versus-host disease (GvHD) by histopathology. We describe a 9-year-old boy who developed generalized pustular psoriasis 2 months after allogeneic SCT from an HLA-identical sibling donor with no history of psoriasis. Diagnosis was confirmed by clinical features and multiple skin

biopsies, which helped to exclude GvHD. The skin lesions responded well to treatment with acitretin. Psoriasis should be considered in the differential diagnosis of skin rash following SCT.

**INTL**

**PMID:**25472781 **PMCID:**  
**CO**

**Gopalakrishnan, R., Thangadurai, P., Kuruvilla, A. and Jacob, K. S.**

Situational psychogenic anejaculation: a case study

Indian J Psychol Med; 2014, 36 (3): 329-31

**Address:** Department of Psychiatry, Christian Medical College, Vellore, Tamil Nadu, India.

Anejaculation is an uncommon clinical entity that may result from a variety of causes, both organic and psychological. Psychogenic anejaculation is influenced by relationship, behavioral, and psychological factors. We present a clinical case of situational anejaculation, which was managed with a combination of techniques that addressed these factors including changes in masturbatory technique, improved marital communication and quality, and reduction of anxiety using cognitive behavioral techniques. It is suggested that the standard techniques of sex therapy be modified and tailored to manage the specific problems of the individual patient

**NAT**

**PMID:**25035564 **PMCID:**4100426  
**CO**

**Gouse, M., Jayasankar, V. and Alexander, M.**

An unusual presentation of primary lymphoma of the ilium

Case Rep Med; 2014, 2014 509837

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Department of Pathology, Christian Medical College, Vellore, India.

Primary bone lymphoma involving the pelvic bone is a rare entity. It does not

have distinct clinical features or radiological features that are diagnostic. Biopsy is the gold standard investigation. We present a case of primary pelvic lymphoma with initial histopathological features of chronic osteomyelitis. Upon further clinical follow-up, repeat biopsy of the lesion revealed features of B-cell Non-Hodgkin's lymphoma, thus emphasizing the need for a high index of suspicion and close clinical follow-up. This case is presented for the diagnostic dilemma and the unique feature of lymphomatous lesion mimicking chronic osteomyelitis in its early stages.

**INTL****PMID:**25276142 **PMCID:**4170923**CO**

**Griffith, M.,** Peter, J. V., Karthik, G., Ramakrishna, K., Prakash, J. A., Kalki, R. C., Varghese, G. M., Chrispal, A., Pichamuthu, K., Iyyadurai, R. and Abraham, O. C.

Profile of organ dysfunction and predictors of mortality in severe scrub typhus infection requiring intensive care admission

Indian J Crit Care Med; 2014, 18 (8): 497-502

**Address:**Department of Internal Medicine, University of Colorado, Colorado, USA.

Department of Critical Care, Associate Professor, Medical Intensive Care Unit, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

Department of Critical Care, Registrar, Medical Intensive Care Unit, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

Department of Microbiology, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

Department of Medicine, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

**BACKGROUND AND AIMS:** Scrub typhus, a zoonotic rickettsial infection, is an important reason for intensive care unit (ICU) admission in the Indian

subcontinent. We describe the clinical profile, organ dysfunction, and predictors of mortality of severe scrub typhus infection. **MATERIALS AND METHODS:** Retrospective study of patients admitted with scrub typhus infection to a tertiary care university affiliated teaching hospital in India during a 21-month period. **RESULTS:** The cohort (n = 116) aged 40.0 +/- 15.2 years (mean +/- SD), presented 8.5 +/- 4.4 days after symptom onset. Common symptoms included fever (100%), breathlessness (68.5%), and altered mental status (25.5%). Forty-seven (41.6%) patients had an eschar. Admission APACHE-II score was 19.6 +/- 8.2. Ninety-one (85.2%) patients had dysfunction of 3 or more organ systems. Respiratory (96.6%) and hematological (86.2%) dysfunction were frequent. Mechanical ventilation was required in 102 (87.9%) patients, of whom 14 (12.1%) were solely managed with non-invasive ventilation. Thirteen patients (11.2%) required dialysis. Duration of hospital stay was 10.7 +/- 9.7 days. Actual hospital mortality (24.1%) was less than predicted APACHE-II mortality (36%; 95% Confidence interval 32-41). APACHE-II score and duration of fever were independently associated with mortality on logistic regression analysis. **CONCLUSIONS:** In this cohort of severe scrub typhus infection with multi-organ dysfunction, survival was good despite high severity of illness scores. APACHE-II score and duration of fever independently predicted mortality

**NAT****PMID:**25136187 **PMCID:**4134622**CO**

**Hooda, A.,** Pati, P. K., John, B., George, P. V. and Michael, J. S.

Disseminated Mycobacterium chelonae infection causing pacemaker lead endocarditis in an immunocompetent host

BMJ Case Rep; 2014, 2014

**Address:**Department of Cardiology, Christian Medical College Hospital, Vellore, Tamil Nadu, India.  
Department of Microbiology, Christian Medical College, Vellore, Tamil Nadu, India.

Pacemaker infection with *Mycobacterium chelonae* has not been reported previously. We report the first case of pacemaker lead endocarditis due to *M. chelonae*, which was successfully treated with multidrug regimen. *M. chelonae* is regarded as an environmental bacterium and its pathogenicity has been recognised recently. The present case illustrates its ability as a primary invader should not be underestimated, especially in an immunocompetent patient with indwelling devices. Epidemiology and management of this rare cause of culture-negative endocarditis is discussed.

**INTL**

**PMID:**25535221 **PMCID:**

**CO**

**Jacob Philip George, A.,** Mukha, R. P. and Kekre, N. S.  
Gossypiboma mimicking a retroperitoneal tumor  
*Urology*; 2014, 84 (4): e13-4

**Address:**Department of Urology Unit 1, Christian Medical College and Hospital Vellore, Vellore Town, Tamil Nadu, India.  
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Department of Urology Unit 2, Christian Medical College and Hospital Vellore, Vellore Town, Tamil Nadu, India.

"Gossypiboma" denotes a mass of cotton that is retained in the body after surgery. An image is presented of a retroperitoneal mass in a lady who had a right nephrectomy 8 years earlier for a nonfunctioning kidney. Clinical examination and plain abdominal radiography were not contributory. Contrast-enhanced abdominal computed tomography revealed a well-defined, heterogeneous, spherical, soft-tissue mass, 13 x 9 x 9 cm in size, in the retroperitoneum, with a dense enhanced wall, abutting the right psoas and posterior abdominal wall. Exploration

revealed an abdominal sponge surrounded by foreign body granuloma adherent to surrounding structures. Gossypiboma can mimic a tumor and is a diagnostic challenge.

**INTL**

**PMID:**25123428 **PMCID:**

**CO**

**Jasper, A.** and Keshava, S. N.  
Aortic coarctation associated with an absent segment of the proximal right subclavian artery  
*J Postgrad Med*; 2014, 60 (4): 397-9

**Address:**Department of Radiology, Christian Medical College, Vellore, Tamil Nadu, India.

Coarctation of the aorta is a congenital anomaly of the thoracic aorta with many known associations. We describe the case of a young man referred for management of subarachnoid hemorrhage, in whom subsequent work-up revealed the previously undescribed combination of severe postductal aortic coarctation and an absent segment of the proximal right subclavian artery

**NAT**

**PMID:**25370550 **PMCID:**

**CO**

**Jehangir, S.,** John, J., Rajkumar, S., Mani, B., Srinivasan, R. and Kang, G.  
Intussusception in southern India: comparison of retrospective analysis and active surveillance  
*Vaccine*; 2014, 32 Suppl 1 A99-103

**Address:**Department of Pediatric Surgery, Christian Medical College, Vellore, India.

Department of Community Health, Christian Medical College, Vellore, India.  
Division of Gastrointestinal Sciences, Christian Medical College, Vellore, India.  
Department of Radiology, Christian Medical College, Vellore, India.

Division of Gastrointestinal Sciences, Christian Medical College, Vellore, India.  
Electronic **Address:**

[gkang@cmcvellore.ac.in](mailto:gkang@cmcvellore.ac.in).

Surveillance for intussusception is a post marketing requirement for rotavirus

vaccines following observation of a small increased risk of intussusception after rotavirus vaccination in some global settings. This study presents the clinical presentation and outcomes of children who presented with intussusception at a large tertiary care facility directly (non-surveillance) as retrospective analysis of a period where rotavirus vaccine was not in routine use, or as part of active surveillance in a phase III oral rotavirus vaccine trial. Hospital records of children under 2 years of age treated for intussusception between 1 January 2010 and 31 August 2013 at the Christian Medical College Hospital, Vellore, India, were reviewed. Sixty-one cases of intussusception in children under two years of age presented at the hospital. An additional 16 cases of ultrasound diagnosed intussusception were identified through the active surveillance of a cohort of 1500 children participating in a rotavirus phase III trial in the same period. In the nonsurveillance group, median age at presentation was 214 days (IQR 153-321) with 52 events (85.3%) occurring in the first year of life. Cases were seen year-round with no definitive evidence of seasonality. Thirty-one (50.8%) intussusceptions required surgical reduction, 26 (42.6%) had pneumatic reduction and 2 (3.3%) barium enema reduction. Two intussusceptions (3.3%) resolved spontaneously. There were no deaths, all children were discharged after recovery. Active surveillance identified 16 children with a median age at event of 375 days (IQR 248-574). Nine (56%) children had small bowel or transient intussusception that resolved spontaneously. Seven intussusceptions were reduced radiologically; none required surgery. In summary, there were significant differences between presentation and outcomes in cases of intussusception identified by passive and active surveillance, likely related to enhanced and early detection of intussusception through active monitoring in the trial. The WHO recommendation of sentinel hospital based surveillance for post-marketing surveillance after rotavirus vaccine introduction is likely to a better approach than active surveillance.

**INTL****PMID:**25091689 **PMCID:****CO**

**Jena SS**(1), Mathew A, Sanjith A, Ajith S, Nair BR, Prakash J.

Cerebral venous sinus thrombosis presentation in severe scrub typhus infection: a rare entity.

Neurol India. 2014 May-Jun;62(3):308-10. doi: 10.4103/0028-3886.136991.

Author information:(1)Department of Neurological Sciences, Christian Medical College, Vellore, TamilNadu, India.

**NAT**

**PMID:**25033856 [PubMed - indexed for MEDLINE]

**CO**

**Jha, A.,** Abhilash, K. P., Bandhyopadhyay, R. and Victor, P. J. Hypoglycemia - A rare complication of carbamazepine overdose Indian J Pharmacol; 2014, 46 (6): 651-2

**Address:**Medical Intensive Care Unit, Christian Medical College, Vellore, Tamil Nadu, India.

Department of General Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

Carbamazepine overdose usually presents with neurological manifestations such as ataxia, seizures and altered sensorium or cardiac manifestations that include tachycardia, hypotension and ventricular extrasystoles. We report a patient with carbamazepine overdose who manifested recurrent hypoglycemia on the third and fourth day following ingestion that resolved with supportive therapy.

**NAT**

**PMID:**25538340 **PMCID:**4264084

**CO**

**John RR**(1), Lionel AP(1), Sitaram V(2), Mathew LG(1).

Liver metastasis in an adolescent treated for third ventricle germ cell tumor.

Indian J Med Paediatr Oncol. 2014 Apr; 35(2):181-3. doi: 10.4103/0971-5851.138999.

**Author information:**

(1)Pediatric Hematology-Oncology, Pediatrics I, Division of Child Health, Vellore, Tamil Nadu, India.  
(2)Department of Hepatic Pancreatic and Biliary Surgery, Christian Medical College, Vellore, Tamil Nadu, India.

Systemic dissemination of intracranial germ cell tumors (GCTs) occur only in 3% of cases and the common sites are bone, lungs, and lymph nodes. Metastasis to the liver is rare. As far as we could find, only six cases of liver metastasis of intracranial GCTs have been reported so far. We report an adolescent girl who presented with hepatic relapse 2½ years after successful completion of treatment of intracranial GCT. She was treated with chemotherapy and right hepatectomy and is doing well 30 months after treatment for the metastatic disease.

**NAT**

**PMCID:** PMC4152639 **PMID:** 25197184 [PubMed]

**CO**

**John, R. R.**, Boddu, D., Chaudhary, N., Yadav, V. K. and Mathew, L. G. Steroid-responsive Anemia in Patients of Ghosal Hematodiaphyseal Dysplasia: Simple to Diagnose and Easy to Treat J Pediatr Hematol Oncol; 2014,

**Address:**Departments of \*Child Health daggerRadiology, Christian Medical College, Vellore, Tamil Nadu, India.

Ghosal hematodiaphyseal dysplasia (GHDD) is a recently recognized cause of steroid-responsive anemia. We would like to report 3 cases of GHDD who presented in early childhood with moderate to severe anemia, splenomegaly, and a hypocellular marrow with increased reticulin. They were easily diagnosed with long-bone x-rays showing diaphyseal and

metaphyseal widening and loss of diaphyseal constriction. All cases dramatically responded to oral steroid and no longer needed blood transfusion. They required steroid at low doses for long term (up to 5 y). GHDD is easy to diagnose with long-bone radiography and consistently responds to steroid. It should therefore be considered as a differential diagnosis of unusual anemia in early childhood, especially in children from the Middle East or the Indian subcontinent.

**INTL**

**PMID:**25374284 **PMCID:** CO

**Johnson, S.**, Sathyaseelan, M., Charles, H., Jeyaseelan, V. and Jacob, K. S. Predictors of insight in first-episode schizophrenia: a 5-year cohort study from India Int J Soc Psychiatry; 2014, 60 (6): 566-74

**Address:**Department of Psychiatric Nursing College of Nursing, Christian Medical College, Vellore, India. Department of Biostatistics, Psychiatry, Christian Medical College, Vellore, India.

Department of Psychiatry, Christian Medical College, Vellore, India ksJacob@cmcvellore.ac.in.

**BACKGROUND AND AIMS:** There is a dearth of data on the predictors of insight in schizophrenia. This study attempted to assess the predictors of insight in a cohort of first-episode schizophrenia followed up over 5 years. **METHODS:** Patients diagnosed to have Diagnostic and statistical manual of mental disorders (4th ed.; DSM-IV) schizophrenia (n = 131) were assessed prospectively for insight, psychopathology and explanatory models of illness over a 5-year period using standard instruments. Multiple linear regression and generalized estimating equations (GEE) were employed to assess predictors of insight. **RESULTS:** We could follow up 95 (72.5%) patients, 5 years after recruitment. A total of 65 of these patients interviewed at 60 months

(68.4%) achieved remission. Cross-sectional evaluations suggest a relationship between insight, psychosis rating and explanatory models of illness with good insight and medical models associated with good outcome. However, baseline and early illness data do not predict insight scores at 5 years. Serial longitudinal assessment of insight is negatively associated with Brief Psychiatric Rating Scale (BPRS) scores and positively associated with the number of nonmedical explanatory models of illness held by patients. **CONCLUSION:** These findings argue that insight and explanatory models of illness are secondary to psychopathology, course and outcome. They are dependent on the trajectory of the person's illness, are not independent of the condition and call for multifaceted understanding of the issues.

**INTL**

**PMID:**24097842 **PMCID:**

**CO**

**Joseph, G.** and Mathew, A.

Corkscrew intravascular channels within chronic common carotid artery occlusions in takayasu arteritis that disappear after angioplasty

JACC Cardiovasc Interv; 2014, 7 (12): e193-5

**Address:**Department of Cardiology, Christian Medical College, Vellore, India. Electronic **Address:** joseph59@gmail.com.

Department of Cardiology, Christian Medical College, Vellore, India.

**INTL**

**PMID:**25457054 **PMCID:**

**CO**

**Kamath, M. S.**, Mascarenhas, M., B, K., Vasani, N. N., Joshi, A., K, M. and George, K.

Uterine flushing with supernatant embryo culture medium in vitrified warmed blastocyst transfer cycles: a randomized controlled trial

J Assist Reprod Genet; 2014,

**Address:**Reproductive Medicine Unit, Christian Medical College Hospital, Vellore, Tamil Nadu, 632004, India.

**PURPOSE:** Does transfer of supernatant embryo culture fluid (stimulation of endometrial embryo transfer - SEET) prior to vitrified warmed blastocyst transfer result in better clinical pregnancy and live birth rates than direct vitrified warmed blastocyst transfer? **METHODS:** This randomized controlled trial compared SEET group and direct transfer group (control) in 60 women undergoing vitrified warmed blastocyst transfers. The duration of the study was 3 years. The patients were undergoing vitrified warmed blastocyst transfer at university level infertility centre. Sixty women were randomized to SEET (n = 30) or control (n = 30). **RESULTS:** Data was available for analysis from all the 30 women in the SEET group and 30 women in the control group. There were no drop outs in the trial. The implantation rate was significantly lower in the SEET group compared to the control group (27 vs. 44 %, P = 0.018). The clinical pregnancy rates were similar in both the groups (47 vs. 53 %) but the live birth rate was also significantly lower in SEET group (23 vs. 50 %, P = 0.03). **LIMITATIONS:** The sample size based on clinical pregnancy rates was small and hence not adequately powered to detect differences in live birth rates. Lack of blinding leading to possible bias cannot be ruled out. **CONCLUSION:** There was no evidence of an improvement in clinical pregnancy rate following SEET in vitrified warmed blastocyst transfer compared to direct transfer.

**INTL**

**PMID:**25428435 **PMCID:**

**CO**

**Kang, G.**

Cryptosporidiosis with and without HIV infection in India

Trop Parasitol; 2014, 4 (2): 76

**Address:**Division of Gastrointestinal Sciences, Christian Medical College,

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[gkang@cmcvellore.ac.in](mailto:gkang@cmcvellore.ac.in).

**INTL**

**PMID:**25250225 **PMCID:**4166806

**CO**

**Kapoor, N.**, Shetty, S., Thomas, N. and Paul, T. V.

Wilson's disease: An endocrine revelation

Indian J Endocrinol Metab; 2014, 18 (6): 855-7

**Address:**Department of Endocrinology, Diabetes and Metabolism, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

Wilson's disease is an inherited disorder of copper metabolism. The affected patients, who otherwise have a near normal life span, may often suffer from some potentially treatable and under recognized endocrine disorders that may hinder their quality of life. We explored previously published literature on the various endocrine aspects of this disease with their probable underlying mechanisms, highlighting the universal need of research in this area.

**NAT**

**PMID:**25364683 **PMCID:**4192994

**CO**

**Kapoor, N.**, Shetty, S., Thomas, N. and Paul, T. V.

Lingual thyroid associated with hypothyroidism as a cause for short stature

BMJ Case Rep; 2014, 2014

**Address:**Department of Endocrinology, Christian Medical College, Vellore, Tamil Nadu, India.

**INTL**

**PMID:**25398918 **PMCID:**

**CO**

**Keusch, G. T.**, Denno, D. M., Black, R. E., Duggan, C., Guerrant, R. L., Lavery, J. V., Nataro, J. P., Rosenberg, I. H., Ryan, E. T., Tarr, P. I., Ward, H., Bhutta, Z. A., Coovadia, H., Lima, A., Ramakrishna, B., Zaidi, A. K., Hay Burgess, D. C. and Brewer, T.

Environmental enteric dysfunction: pathogenesis, diagnosis, and clinical consequences

Clin Infect Dis; 2014, 59 Suppl 4 S207-12

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Aga Khan University, Karachi, Pakistan. University of the Witwatersrand, Johannesburg, South Africa. Federal University of Ceara, Fortaleza, Brazil. Christian Medical College, Vellore, India. Aga Khan University, Karachi, Pakistan. Bill & Melinda Gates Foundation, Seattle, Washington. Bill & Melinda Gates Foundation, Seattle, Washington.

Stunting is common in young children in developing countries, and is associated with increased morbidity, developmental delays, and mortality. Its complex pathogenesis likely involves poor intrauterine and postnatal nutrition, exposure to microbes, and the metabolic consequences of repeated infections. Acquired enteropathy affecting both gut structure and function likely plays a significant role in this outcome, especially in the first few months of life, and serve as a precursor to later interactions of infection and malnutrition. However, the lack of validated clinical diagnostic criteria has limited the ability to study its role, identify causative factors, and determine cost-effective interventions. This review addresses these issues through a historical approach, and provides recommendations to define and validate a working clinical diagnosis and to guide critical research in this area to effectively proceed. Prevention of early gut functional changes and inflammation may preclude or mitigate the later adverse vicious cycle of malnutrition and infection.

**INTL**

**PMID:**25305288 **PMCID:**

**CO****Korula M**

Placebo analgesia: Does it have a role in pain management?

Indian Journal of Pain. 2014 September-December; 28(3):125-8

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**NON INDEXED****CO**

**Koshy, G.**, Varghese, R. T., Naik, D., Asha, H. S., Thomas, N., Seshadri, M. S., Alexander, M., Thomas, M., Aaron, S. and Paul, T. V.

Derangements in bone mineral parameters and bone mineral density in south Indian subjects on antiepileptic medications

Ann Indian Acad Neurol; 2014, 17 (3): 272-6

**Address:** Department of Endocrinology, Diabetes and Metabolism, Unit-III, Christian Medical College, Vellore, Tamil Nadu, India.

Department of Neurological Science, Unit-III, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND:** Although there are reports describing the association of alternations of bone and mineral metabolism in epileptic patients with long-term anticonvulsant therapy, there are only limited Indian studies which have looked at this aspect. **OBJECTIVES:** This study was done to compare the prevalence of changes in bone mineral parameters and bone mineral density (BMD) in ambulant individuals on long-term anticonvulsant therapy with age- and body mass index (BMI)-matched healthy controls. **MATERIALS AND METHODS:** There were 55 men (on medications for more than 6 months) and age- and BMI-matched 53 controls. Drug history, dietary calcium intake (DCI), and duration of sunlight exposure were recorded. Bone mineral parameters

and BMD were measured. **RESULTS:** The control group had a significantly higher daily DCI with mean +/- SD of 396 +/- 91 mg versus 326 +/- 101 mg (P = 0.007) and more sunlight exposure of 234 +/- 81 vs 167 +/- 69 min (P = 0.05). BMD at the femoral neck was significantly lower in cases (0.783 +/- 0.105 g/cm<sup>2</sup>) when compared to controls (0.819 +/- 0.114 g/cm<sup>2</sup>). Majority of the patients (61%) had low femoral neck BMD (P = 0.04). There was no significant difference in the proportion of subjects with vitamin D deficiency (<20 ng/mL) between cases (n = 32) and controls (n = 37) (P = 0.234). **CONCLUSIONS:** Vitamin D deficiency was seen in both the groups in equal proportions, highlighting the existence of a high prevalence of this problem in India. Low femoral neck BMD found in cases may stress the need for supplementing calcium and treating vitamin D deficiency in this specific group. However, the benefit of such intervention has to be studied in a larger proportion of epileptic patients.

**NAT**

**PMID:**25221394**PMCID:**4162011

**CO**

**Kumar N(1)**, Gupta V, Thomas N.

Brownie-nose: hyperpigmentation in neonatal chikungunya.

Indian Pediatr. 2014 May;51(5):419.

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**NAT**

**PMID:** 24953593 [PubMed - in process]

**CO**

**Kurian, J. J.**, Kishore, R., John, T. J. and Parmer, H.

A rare case of kaposiform hemangioendothelioma presenting as intussusception in a 4-month-old child without Kasabach-Merritt syndrome: A case report

J Indian Assoc Pediatr Surg; 2014, 19 (4): 233-5

**Address:** Department of Paediatric Surgery, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

We report the identification of Kaposiform hemangioendothelioma of the cecum presenting as colocolic intussusception in a 4-month-old boy without Kasabach-Merrit syndrome. To our knowledge this is the first reported case in the literature of such a presentation

**INTL**

**PMID:25336808 PMCID:4204251**

**CO**

**Kuruvilla, S.,** Peter, J., David, S., Premkumar, P. S., Ramakrishna, K., Thomas, L., Vedakumar, M. and Peter, J. V.

Incidence and risk factor evaluation of exposure keratopathy in critically ill patients: A cohort study

J Crit Care; 2014,

**Address:**Department of Ophthalmology, Schell hospital, Christian Medical College, Vellore, India. Department of Biostatistics, Christian Medical College, Vellore, India. Medical Intensive Care Unit, Christian Medical College, Vellore, India. Medical Intensive Care Unit, Christian Medical College, Vellore, India. Electronic **Address:** [peterjohnvictor@yahoo.com.au](mailto:peterjohnvictor@yahoo.com.au).

**PURPOSE:** Recent emphasis on eye care in intensive care unit (ICU) patients has translated to eye assessment being part of routine care. In this setting, we determined the incidence, risk factors, and resolution time of exposure keratopathy. **METHODS:** In this prospective cohort study, 301 patients were examined within 24 hours of ICU admission and subsequently daily by an ophthalmologist till death or discharge. Eyelid position, conjunctival and corneal changes, treatment, and outcome data were collected. **RESULTS:** Admission diagnoses included febrile illnesses (35.2%) and respiratory failure (32.6%); 84.1% were ventilated. Forty-nine patients had exposure keratopathy (bilateral = 35, unilateral = 14) at admission; 35 patients developed new onset keratopathy (incidence 13.2%) 4.6 +/- 2.6days after ICU admission. In 67 patients, keratopathy was mild (punctate epithelial erosions).

Macroepithelial defects (n = 9), stromal whitening with epithelial defect (n = 3), and stromal scar (n = 3) were infrequent. None developed microbial keratitis. On multivariate logistic regression analysis, eyelid position (odds ratio, 2.93; 95% confidence interval, 1.37-6.25), and ventilation duration (odds ratio, 1.11; 95% confidence interval, 1.04-1.19) were strongly associated with the development of keratopathy after ICU admission. Keratopathy resolved in 3.6 +/- 4.5days. **CONCLUSIONS:** Severe exposure keratopathy is infrequent in a protocolized ICU setting. Eyelid position and duration of ventilation are associated with exposure keratopathy.

**INTL**

**PMID:25468364 PMCID:**

**CO**

**Lepcha, A.,** Amalanathan, S., Augustine, A. M., Tyagi, A. K. and Balraj, A.

Flunarizine in the prophylaxis of migrainous vertigo: a randomized controlled trial

Eur Arch Otorhinolaryngol; 2014, 271 (11): 2931-6

**Address:**Department of ENT, Unit IV, Christian Medical College and Hospital, Vellore, 632004, Tamilnadu, India, [anjalilepcha@yahoo.com](mailto:anjalilepcha@yahoo.com).

Migrainous vertigo is a common cause of dizziness presenting to an otorhinolaryngology/otoneurology clinic. Although it causes a substantial burden to the individual and society there are no randomized controlled trials on prophylactic medication for this condition. Flunarizine, a calcium channel blocker has been used effectively in both migraine and vestibular conditions. This randomized control trial was undertaken in a tertiary academic referral center to evaluate the efficacy of flunarizine in patients with migrainous vertigo when compared to non-specific vestibular treatment of betahistine and vestibular exercises. The effect of flunarizine on two particularly disabling symptoms of vertigo and headache was studied. A total of 48 patients who were diagnosed with definitive migrainous vertigo

completed the study of 12 weeks duration. Patients in arm A received 10-mg flunarizine daily along with betahistine 16 mg and paracetamol 1 gm during episodes, and arm B received only betahistine and paracetamol during episodes. Symptom scores were noted at the start of the study and at the end of 12 weeks. Analysis of the frequency of vertiginous episodes showed a significant difference between arm A and arm B ( $p = 0.010$ ) and improvement in severity of vertigo between the two groups ( $p = 0.046$ ). Headache frequency and severity did not improve to a significant degree in arm A as compared to arm B. The main side effects were weight gain and somnolence and this was not significantly different between the two groups. Flunarizine (10 mg) is effective in patients with migrainous vertigo who suffer from considerable vestibular symptoms.

**INTL****PMID:**24166742 **PMCID:****CO**

**Lionel, A. P.**, Chinnaswamy, G., John, R. R. and Mathai, S.  
Ifosfamide induced renal rickets  
Indian J Pediatr; 2014, 81 (9): 943-5

**Address:**Department of Pediatrics, Pediatric Endocrinology & Pediatric 1, Christian Medical College Hospital, Vellore, Tamil Nadu, 632004, India.

Ifosfamide is commonly used as a chemotherapeutic agent in children. The authors report a 4-y-old boy who developed proximal renal tubulopathy with florid rickets a year after completion of ifosfamide therapy for Ewing's sarcoma. After initiation of treatment, there was complete healing of rickets and he did not need supplements beyond 18 mo. Growth monitoring and musculoskeletal system examination is important in all children who have received ifosfamide therapy. Routine monitoring for nephrotoxicity during and after ifosfamide therapy helps in early identification and intervention.

**NAT****PMID:**23912821 **PMCID:****CO**

**Madhuri, V.**, Dutt, V., Gahukamble, A. D. and Tharyan, P.

Interventions for treating femoral shaft fractures in children and adolescents  
Evid Based Child Health; 2014, 9 (4): 753-826

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**BACKGROUND:** Fractures of the femoral shaft in children are relatively uncommon but serious injuries that disrupt the lives of children and their carers and can result in significant long-term disability. Treatment involves either surgical fixation, such as intramedullary nailing or external fixation, or conservative treatment involving prolonged immobilisation, often in hospital. **OBJECTIVES:** To assess the effects (benefits and harms) of interventions for treating femoral shaft fractures in children and adolescents. **SEARCH METHODS:** We searched the Cochrane Bone, Joint and Muscle Trauma Group Specialised Register (accessed 16 August 2013), the Cochrane Central Register of Controlled Trials (The Cochrane Library 2013 Issue 7), MEDLINE (1946 to August Week 1 2013), EMBASE (1980 to 2012 week 9), CINAHL (16 August 2013), clinical trials registries, conference proceedings and reference lists; and contacted trial authors and experts in the field. **SELECTION CRITERIA:** Randomised and quasi-randomised controlled trials comparing conservative and surgical interventions for diaphyseal fractures of the femur in children under 18 years of age. Our primary outcomes were functional outcome measures, unacceptable malunion, and serious adverse events. **DATA COLLECTION AND ANALYSIS:** Two authors independently screened and selected trials, assessed risk of bias and extracted data. We assessed the overall quality of the evidence for each outcome for each comparison using the GRADE approach. We pooled data using a fixed-effect model. **MAIN RESULTS:** We included 10 trials (six randomised and four quasi-

randomised) involving a total of 527 children (531 fractures). All trials were at some risk of bias, including performance bias as care provider blinding was not practical, but to a differing extent. Just one trial was at low risk of selection bias. Reflecting both the risk of bias and the imprecision of findings, we judged the quality of evidence to be 'low' for most outcomes, meaning that we are unsure about the estimates of effect. Most trials failed to report on self-assessed function or when children resumed their usual activities. The trials evaluated 10 different comparisons, belonging to three main categories. Surgical versus conservative treatment Four trials presenting data for 264 children aged 4 to 12 years made this comparison. Low quality evidence (one trial, 101 children) showed children had very similar function assessed using the RAND health status score at two years after surgery (external fixation) compared with conservative treatment (spica cast): mean 69 versus 68. The other three trials did not report on function. There was moderate quality evidence (four trials, 264 children, aged 4 to 12 years, followed up 3 to 24 months) that surgery reduced the risk of malunion (risk ratio (RR) 0.29, 95% confidence interval (CI) 0.15 to 0.59, 4 trials). Assuming an illustrative baseline risk of 115 malunions per 1000 in children treated conservatively, these data equate to 81 fewer (95% CI 47 to 97 fewer) malunions per 1000 in surgically-treated children. Conversely, low quality evidence indicated that there were more serious adverse events such as infections after surgery (RR 2.39, 95% CI 1.10 to 5.17, 4 trials). Assuming an illustrative baseline risk of 40 serious adverse events per 1000 for conservative treatment, these data equate to 56 more (95% CI 4 to 167 more) serious adverse events per 1000 children treated surgically. There was low quality evidence (one trial, 101 children) of similar satisfaction levels in children and parents with surgery involving external fixation and plaster cast only. However, there was low quality evidence (one trial, 46 children) that more parents were satisfied with intramedullary nailing than with traction

followed by a cast, and that surgery reduced the time taken off from school. Comparisons of different methods of conservative treatment The three trials in this category made three different comparisons. We are very unsure if unacceptable malunion rates differ between immediate hip spica versus skeletal traction followed by spica in children aged 3 to 10 years followed up for six to eight weeks (RR 4.0, 95% CI 0.5 to 32.9; one trial, 42 children; very low quality evidence). Malunion rates at 5 to 10 years may not differ between traction followed by functional orthosis versus traction followed by spica cast in children aged 5 to 13 years (RR 0.98, 95% CI 0.46 to 2.12; one trial, 43 children; low quality evidence). We are very unsure (very low quality evidence) if either function or serious adverse events (zero events reported) differ between single-leg versus double-leg spica casts (one trial, 52 young children aged two to seven years). Low quality evidence on the same comparison indicates that single-leg casts are less awkward to manage by parents, more comfortable for the child and may require less time off work by the caregiver. Comparisons of different methods of surgical treatment The three trials in this category made three different comparisons. Very low quality evidence means that we are very unsure if the rates of malunion, serious adverse events, time to return to school or parental satisfaction actually differ in children whose fractures were fixed using elastic stable intramedullary nailing or external fixation (one trial, 19 children). The same applies to the rates of serious adverse events and time to resume full weight-bearing in children treated with dynamic versus static external fixation (one trial, 52 children). Very low quality evidence (one trial, 47 children) means that we do not know if malunion, serious adverse events and time to resume weight-bearing actually differ between intramedullary nailing versus submuscular plating. However, there could be more difficulties in plate removal subsequently. AUTHORS' CONCLUSIONS: There is insufficient evidence to determine if long-term function differs between surgical and

conservative treatment. Surgery results in lower rates of malunion in children aged 4 to 12 years, but may increase the risk of serious adverse events. Elastic stable intramedullary nailing may reduce recovery time. There is insufficient evidence from comparisons of different methods of conservative treatment or of different methods of surgical treatment to draw conclusions on the relative effects of the treatments compared in the included trials.

**PLAIN LANGUAGE SUMMARY:** Different methods of treating fractures of the shaft of the thigh bone in children and adolescents Although uncommon, fractures of the femoral shaft (thigh bone) in children may require prolonged treatment in hospital and sometimes surgery. This can cause significant discomfort and can disrupt the lives of the children and their families. This review compared different methods of treating these fractures. Surgical treatment comprises different methods of fixing the broken bones, such as internally-placed nails, or pins incorporated into an external frame (external fixation). Non-surgical or conservative treatment usually involves different types of plaster casts with or without traction (where a pulling force is applied to the leg). We searched for studies in the medical literature until August 2013. The review includes 10 randomised or quasi-randomised controlled trials that recruited 527 children. Four trials compared different surgical versus non-surgical treatments; three compared different methods of non-surgical treatment and three compared different methods of surgical treatment. Generally we are unsure about the results of these trials because some were at risk of bias, some results were contradictory and usually there was too little evidence to rule out chance findings. Most trials failed to report on self-assessed function or when children resumed their usual activities. Comparing surgical versus non-surgical treatment Low quality evidence (one trial, 101 children) showed children had similar function at two years after having surgery, involving external fixation, compared with those treated with a plaster cast. The other three trials

did not report this outcome. There was moderate quality evidence (four trials, 264 children, aged 4 to 12 years, followed up for 3 to 24 months) that surgery reduced the risk of malunion (the leg is deformed) compared with non-surgical treatment. However, low quality evidence (four trials) indicated that there were more serious adverse events such as infections after surgery. There was low quality evidence (one trial, 101 children) of similar satisfaction levels in children and parents with surgery involving external fixation and plaster cast only. However, there was low quality evidence (one trial, 46 children) that more parents were satisfied with surgery involving an internal nail than with traction followed by a cast and that surgery reduced the time taken off from school. Comparing various non-surgical treatments Very low quality evidence means that we are very unsure if the rates of malunion differ or not between children treated with immediate plaster casts versus with traction followed by plaster cast (one trial, 42 children), or between children treated with traction followed by either a functional orthosis (a brace or cast that allows some movement) or a cast (one trial, 43 children). We are very unsure if either function or serious adverse events differ between young children (aged two to seven years) immobilised in single-leg versus double-leg casts (one trial, 52 children). However, single-leg casts appear to be easier to manage by parents and more comfortable for the child. Comparing various surgical treatments Very low quality evidence means that we are very unsure if the rates of malunion, serious adverse events, time to return to school or parental satisfaction actually differ in children whose fractures were fixed using internal nails or external fixation (one trial, 19 children). (ABSTRACT TRUNCATED)

**INTL**

**PMID:**25504970 **PMCID:**

**CO**

**Mahesh, D. M.**, Nehru, A. G., Seshadri, M. S., Thomas, N., Nair, A., Pai, R. and Rajaratnam, S.

RET mutations in a large indian family with medullary thyroid carcinoma  
 Indian J Endocrinol Metab; 2014, 18 (4): 516-20

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**BACKGROUND:** Medullary thyroid carcinoma (MTC) is a tumor arising from the para follicular (C) cells of the thyroid gland and can occur either sporadically or as part of an inherited syndrome. A proportion of these cases carry an autosomal dominant mutation in the RET (REarranged during Transfection) proto-oncogene. Screening for these mutations in the affected patients and the carriers "at risk" which includes the first-degree relatives is of utmost importance for early detection and prompt treatment including prophylactic thyroidectomy in cases that harbor these mutations. **RESULTS:** This report presents details of screening and subsequent follow-up of a large Indian family, where the index case was found to carry p. Cys634Ser mutation involving exon 11 of the RET gene. These data are of value considering the paucity of information within the region in context of screening large families affected by these mutations

**NAT**

**PMID:**25143909 **PMCID:**4138908

**CO**

**Maiwall, R.,** Goel, A., Pulimood, A. B., Babji, S., Sophia, J., Prasad, C., Balasubramanian, K. A., Ramakrishna, B., Kurian, S., Fletcher, G. J., Abraham, P., Kang, G., Ramakrishna, B. S., Elias, E. and Eapen, C. E.

Investigation into celiac disease in Indian patients with portal hypertension  
 Indian J Gastroenterol; 2014,

**Address:**Department of Gastrointestinal Sciences, Christian Medical College, Vellore, 632 004, India.

**BACKGROUND:** There is limited data on celiac disease in patients with cryptogenic cirrhosis or idiopathic noncirrhotic intrahepatic portal hypertension (NCIPH). Our objective was to evaluate for celiac disease in patients with portal hypertension in India. **METHODS:** Consecutive patients with portal hypertension having cryptogenic chronic liver disease (cases) and hepatitis B- or C-related cirrhosis (controls) were prospectively enrolled. We studied tissue transglutaminase (tTG) antibody and duodenal histology in study patients. **RESULT:** Sixty-one cases (including 14 NCIPH patients) and 59 controls were enrolled. Celiac disease was noted in six cases (including two NCIPH patients) as compared to none in controls. In a significant proportion of the remaining study subjects, duodenal biopsy showed villous atrophy, crypt hyperplasia, and lamina propria inflammation, not accompanied by raised intraepithelial lymphocytes (IELs); this was seen more commonly in cases as compared to controls. An unexpectedly high rate of tTG antibody positivity was seen in study subjects (66 %) of cases as compared to 29 % in controls (p-value < 0.001), which could indicate false-positive test result. **CONCLUSION:** In this study, 10 % of patients with unexplained portal hypertension (cryptogenic chronic liver disease) had associated celiac disease. In addition, an unexplained enteropathy was seen in a significant proportion of study patients, more so in patients with cryptogenic chronic liver disease. This finding warrants further investigation.

**NAT**

**PMID:**25231910 **PMCID:**

**CO**

**Mascarenhas M(1),** Kamath MS(1), Muthukumar K(1), Mangalaraj AM(1), Chandy A(1), Aleyamma T(1).

Obstetric outcomes of monozygotic pregnancies conceived following assisted reproductive technology: A retrospective study.

J Hum Reprod Sci. 2014 Apr;7(2):119-24. doi: 10.4103/0974-1208.138870.

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**OBJECTIVES:** The overwhelming numbers of twins following assisted reproductive technology (ART) are dichorionic twins, but monochorionic twins account for around 0.9% of post ART pregnancies. The data for post ART-monochorionic pregnancy outcomes are scarce due to the rarity of this condition. Hence, we evaluated the obstetric outcomes of monochorionic and dichorionic pregnancies conceived on ART. **SETTINGS:** University teaching hospital. **STUDY DESIGN:** A case-control study of monochorionic diamniotic (MCDA) and dichorionic diamniotic (DCDA) pregnancies conceived following ART treatment. Charts of all women who conceived following ART from 2008 to 2013 were screened. Among them, the monochorionic twins diagnosed in the first trimester were included and their obstetric outcome was followed-up. For comparison, an equal number of dichorionic twin pregnancies from age and body mass index matched mothers was selected. **RESULTS:** The baseline clinical characteristics were similar between the two groups. MCDA group had a higher miscarriage rate (50%) than the DCDA group (10%), with three second trimester miscarriages in the MCDA group. The live birth rates were lower in the MCDA versus DCDA group (40% vs. 90%). Among triplet pregnancies with a monochorionic component, the live birth rate was only 25%. **CONCLUSIONS:** Monochorionic pregnancies following ART have poorer obstetric outcomes when compared to dichorionic pregnancies. For monochorionic pregnancies following ART, intensive antenatal surveillance at a tertiary level obstetric and neonatal center may help optimize the outcome.

**NAT**

**PMCID:** PMC4150138 **PMID:** 25191025 [PubMed]

**CO**

**Mathews, V.,** Srivastava, A. and Chandy, M.

Allogeneic Stem Cell Transplantation for Thalassemia Major  
Hematol Oncol Clin North Am; 2014, 28 (6): 1187-1200

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Allogeneic stem cell transplant remains the only curative option for beta-thalassemia major. In patients with good risk features it is reasonable to anticipate a greater than 90% chance of a successful transplant outcome. The conventional risk stratification system has limitations and alternative systems are being explored to better identify subsets that require innovative approaches. Several novel regimens have been evaluated to reduce treatment-related morbidity and mortality. There remain challenges in improving the clinical outcome of high-risk patients. There are limited data on the role of splenectomy before transplantation or optimal posttransplant chelation and care of these patients.

**INTL**

**PMID:**25459187 **PMCID:**

**CO**

**Matthai, T. P.,** Zachariah, U. G. and Matthai, S. M.

Recurrent episodic acute kidney injury as presenting manifestation of mitochondrial myopathy  
Indian J Nephrol; 2014, 24 (6): 387-9

**Address:** Department of Nephrology, St. Mary's Dialysis Centre, Karipal Hospital, Kottayam, Kerala, India.

Department of Hepatology, Central Electron Microscopy Unit, Christian Medical College, Vellore, Tamil Nadu, India.

Department of Pathology, Central Electron Microscopy Unit, Christian

Medical College, Vellore, Tamil Nadu, India.

Mitochondrial cytopathies (MC) are a rare heterogenous group of disorders with frequent multisystem involvement including uncommon renal manifestations. Acute kidney injury (AKI) as the primary manifestation of MC is extremely rare. Here, we report a case of recurrent episodic AKI in an adult male who was subsequently diagnosed to have mitochondrial disease.

#### NAT

PMID:25484535 PMCID:4244721

#### CO

**Mcgreedy, R.**, Prakash, J. A., Benjamin, S. J., Watthanaworawit, W., Anantatat, T., Tanganuchitcharnchai, A., Ling, C. L., Tan, S. O., Ashley, E. A., Pimanpanarak, M., Blacksell, S. D., Day, N. P., Singhasivanon, P., White, N. J., Nosten, F. and Paris, D. H.

Pregnancy outcome in relation to treatment of murine typhus and scrub typhus infection: a fever cohort and a case series analysis

PLoS Negl Trop Dis; 2014, 8 (11): e3327

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Centre for Tropical Medicine, Nuffield Department of Medicine, University of Oxford, Oxford, United Kingdom; Mahidol-Oxford Tropical Medicine Research Unit (MORU), Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand.

**BACKGROUND:** There is a paucity of published reports on pregnancy outcome following scrub and murine typhus despite these infections being leading causes of undifferentiated fever in Asia.

This study aimed to relate pregnancy outcome with treatment of typhus.

**METHODOLOGY/PRINCIPAL FINDINGS:**

Data were analyzed from: i) pregnant women with a diagnosis of scrub and/or murine typhus from a fever cohort studies; ii) case series of published studies in PubMed using the search terms "scrub typhus" (ST), "murine typhus" (MT), "Orientia tsutsugamushi", "Rickettsia tsutsugamushi", "Rickettsia typhi", "rickettsiae", "typhus", or "rickettsiosis"; and "pregnancy", until February 2014 and iii) an unpublished case series. Fever clearance time (FCT) and pregnancy outcome (miscarriage and delivery) were compared to treatment. Poor neonatal outcome was a composite measure for pregnancies sustained to 28 weeks or more of gestation ending in stillbirth, preterm birth, or delivery of a growth restricted or low birth weight newborn.

**RESULTS:** There were 26 women in the fever cohort. MT and ST were clinically indistinguishable apart from two ST patients with eschars. FCTs (median [range] hours) were 25 [16-42] for azithromycin (n=5), 34 [20-53] for antimalarials (n=5) and 92 [6-260] for other antibiotics/supportive therapy (n=16). There were 36.4% (8/22) with a poor neonatal outcome. In 18 years, 97 pregnancies were collated, 82 with known outcomes, including two maternal deaths. Proportions of miscarriage 17.3% (14/81) and poor neonatal outcomes 41.8% (28/67) were high, increasing with longer FCTs (p=0.050, linear trend). Use of azithromycin was not significantly associated with improved neonatal outcomes (p=0.610).

**CONCLUSION:** The published ST and MT world literature amounts to less than 100 pregnancies due to under recognition and under diagnosis. Evidence supporting the most commonly used treatment, azithromycin, is weak. Collaborative, prospective clinical trials in pregnant women are urgently required to reduce the burden of adverse maternal and newborn

outcomes and to determine the safety and efficacy of antimicrobial treatment.

#### INTL

**PMID:**25412503 **PMCID:**4238995  
**CO**

**Mukherjee, S.**, Salphale, P. and Singh, V.

Late onset angioma serpiginosum of the breast with co-existing cherry angioma  
Indian Dermatol Online J; 2014, 5 (3): 316-9

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Department of Pathology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

Angioma serpiginosum is a cutaneous vascular nevoid disorder that presents as red, nonblanchable and grouped macules distributed in a serpiginous pattern and resembles purpura. It usually begins in childhood and commonly affects the lower limbs and the buttocks. Late onset of the lesions is unusual. We report a 46-year-old female who presented with progressively extending lesions on her breast since preceding four years. She also had a cherry angioma overlying the lesions, an observation hitherto not reported so far.

#### NAT

**PMID:**25165654 **PMCID:**4144222  
**CO**

**Muthusamy K**(1), Thomas MM(1), George RE(2), Alexander M(1), Mani S(3), Benjamin RN(1).  
Siblings with fucosidosis.

J Pediatr Neurosci. 2014 May;9(2):156-8. doi: 10.4103/1817-1745.139331.

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Fucosidosis is a rare lysosomal storage disorder due to deficiency of fucosidase enzyme, with around 100 cases reported worldwide. Here, we describe the clinical and imaging features in two siblings with fucosidosis. An 8-year-old girl presented with global developmental delay, followed by regression of acquired milestones from 3 years of age with bipyramidal, extrapyramidal involvement, coarse facies, telangiectatic lesions, dysostosis multiplex, characteristic magnetic resonance imaging finding along with undetectable levels of the fucosidase activity, which confirmed the diagnosis. Younger sibling has mild developmental delay with autistic traits with no neuroregression until now. He also has undetectable level of fucosidase enzyme activity and is being considered for stem cell transplantation. New case reports would expand the clinical spectrum, early diagnosis and help formulating appropriate therapy. Early diagnosis is crucial and hence sibling screening can be done, and those in the presymptomatic stage can undergo hematopoietic stem cell transplantation, which is potentially curable.

#### NAT

**PMCID:** PMC4166842 **PMID:** 25250075  
[PubMed]

#### CO

**Muthusamy, K.**, Sudhakar, S. V., Yoganathan, S., Thomas, M. M. and Alexander, M.

Hypomyelination, Hypodontia, Hypogonadotropic Hypogonadism (4H) Syndrome With Vertebral Anomalies: A Novel Association  
J Child Neurol; 2014,

**Address:**Section of Neurology, Department of Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

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Hypomyelination, hypodontia, hypogonadotropic hypogonadism (4H) syndrome is a rare hypomyelination disorder with around 40 cases reported worldwide. Children with hypomyelination, hypodontia, hypogonadotropic hypogonadism syndrome present with varying degrees of developmental delay with a spastic ataxic syndrome with delayed eruption of teeth along with disruption in the eruption sequence, hypogonadotropic hypogonadism, and a fluctuating clinical course with intercurrent infections and varying periods of stability. The disorder is caused by mutations in POL3A and POL3B genes and is collectively termed as pol III-related leukodystrophies. Here we describe 2 children with hypomyelination, hypodontia, hypogonadotropic hypogonadism syndrome and the association of multiple vertebral fusion anomalies in one of them, which has not been previously described in the literature. We conclude that the spectrum of the disorder is not limited to brain parenchyma alone and involves all the structures arising from neural ectoderm, and this needs further research

**INTL****PMID:**25213661 **PMCID:****CO**

**Nachimuthu, G.,** Arockiaraj, J., Krishnan, V. and Sundararaj, G. D. Hemophilic pseudotumor of the first lumbar vertebra  
Indian J Orthop; 2014, 48 (6): 617-20

**Address:**Department of Orthopaedics, Christian Medical College, Vellore, Tamil Nadu, India.

Hemophilic pseudotumor involving the spine is extremely uncommon and presents a challenging problem. Preoperative planning, angiography, intra and perioperative monitoring with factor VIII cover and postoperative care for hemophilic pseudotumor is vital. Recognition of the artery of Adamkiewicz in the thoracolumbar junction helps to avoid intraoperative neurological injury. We report the case of a 26-year-old male patient with hemophilia A, who presented with a massive pseudotumor

involving the first lumbar vertebra and the left iliopsoas. Preoperative angiography revealed the artery of Adamkiewicz arising from the left first lumbar segmental artery. Excision of pseudotumor was successfully carried out with additional spinal stabilization. At 2 years followup, there was no recurrence and the patient was well stabilized with a satisfactory functional status. Surgical excision gives satisfactory outcome in such cases.

**NAT****PMID:**25404776 **PMCID:**4232833**CO**

**Naik, D.,** Jebasingh, K. F., Cherian, A. J. and Dasgupta, R.

Ectopic thymic parathyroid adenoma  
BMJ Case Rep; 2014, 2014

**Address:**Department of Endocrinology, Christian Medical College, Vellore, Tamil Nadu, India.

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**INTL****PMID:**25257890 **PMCID:****CO**

**Navamani, K.,** Natarajan, M. M., Lionel, A. P. and Kumar, S.

Hepatitis a virus infection-associated hemophagocytic lymphohistiocytosis in two children

Indian J Hematol Blood Transfus; 2014, 30 (Suppl 1): 239-42

**Address:**Department of Paediatrics, Christian Medical College, Vellore, 632004 India.

Hemophagocytic lymphohistiocytosis (HLH) is a syndrome characterized by high fever, maculopapular rash, neurological symptoms, abnormal liver functions and coagulopathy. Primary HLH is due to an underlying genetic abnormality. Secondary HLH are due to an underlying infection, autoimmune disease or malignancy. Secondary HLH due to viral infections are commonly due to the herpes group commonest of which

is the Epstein Barr virus (EBV). We describe two children with virus associated hemophagocytic lymphohistiocytosis (VAHLH) secondary to hepatitis A infection.

**NAT**

**PMID:**25332588 **PMCID:**4192162

**CO**

**Noel, J.,** Krishnadas, R., Gopalakrishnan, R. and Kuruvilla, A. Delusional disorder: an unusual presentation  
Indian J Psychol Med; 2014, 36 (4): 444-6

**Address:**Department of Psychiatry, Christian Medical College, Vellore, Tamil Nadu, India.

Delusions with a sexual theme are rare, but when present are usually seen in patients with schizophrenia or other chronic psychotic disorders. We report a case of delusional disorder, with a single belief of a sexual theme. This report focuses on the management issues, wherein a combination of pharmacological and nonpharmacological interventions proved helpful

**NAT**

**PMID:**25336783 **PMCID:**4201803

**CO**

**Palaniappan, P.,** Lionel, A. P. and Kumar, S. Successful treatment of calcinosis cutis in juvenile dermatomyositis with pamidronate  
J Clin Rheumatol; 2014, 20 (8): 454-5

**Address:**Department of Paediatrics Christian Medical College Vellore, India sathishkumar\_cmc@yahoo.com.

**INTL**

**PMID:**25417690 **PMCID:**

**CO**

**Parker, E. P.,** Kampmann, B., Kang, G. and Grassly, N. C. Influence of enteric infections on response to oral poliovirus vaccine: a systematic review and meta-analysis  
J Infect Dis; 2014, 210 (6): 853-64

**Address:**Department of Infectious Disease Epidemiology.

Department of Paediatrics, St Mary's Campus, Imperial College London, United Kingdom MRC Unit, The Gambia, Fajara.

Division of Gastrointestinal Sciences, Christian Medical College, Vellore, India.

**BACKGROUND:** The impaired immunogenicity of oral poliovirus vaccine (OPV) in low-income countries has been apparent since the early field trials of this vaccine. Infection with enteropathogens at the time of vaccination may contribute to this phenomenon. However, the relative influence of these infections on OPV performance remains uncertain. **METHODS:** We conducted a systematic review to examine the impact of concurrent enteric infections on OPV response. Using random-effects models, we assessed the effects of nonpolio enteroviruses (NPEVs) and diarrhea on the odds of seroconversion and/or vaccine virus shedding. **RESULTS:** We identified 25 trials in which OPV outcomes were compared according to the presence or absence of enteric infections, the majority of which (n = 17) reported only on NPEVs. Concurrent NPEVs significantly reduced the odds of per-dose seroconversion for type 1 poliovirus (odds ratio [OR] 0.44, 95% confidence interval 0.23-0.84), but not type 2 (OR 0.53 [0.19-1.46]) or type 3 (OR 0.56 [0.27-1.12]). A similar reduction, significant for type 1 poliovirus (OR 0.50 [0.28-0.89]), was observed in the odds of vaccine virus shedding among NPEV-infected individuals. Concurrent diarrhea significantly inhibited per-dose seroconversion overall (OR 0.61 [0.38-0.87]). **CONCLUSIONS:** Our findings are consistent with an inhibitory effect of concurrent enteric infections on OPV response.

**INTL**

**PMID:**24688069 **PMCID:**4136801

**CO**

**Peter, J.,** Andrew, N. H., Smith, C., Figueira, E. and Selva, D. Idiopathic inflammatory orbital myositis presenting with vision loss

Orbit; 2014, 33 (6): 449-52

**Address:**Department of Ophthalmology, Schell Eye Hospital, Christian Medical College, Vellore, India.

We present a first case of 58-year-old man with vision loss in a biopsy-proven idiopathic

inflammatory orbital tendon sparing myositis. Tests for thyroid autoantibodies were negative at the initial presentation and at 10-month follow-up period. The diagnosis was confirmed on histopathological examination and was also supported by avid sarcolemmal staining for MHC-1 and MHC-2.

**INTL**

**PMID:**25207637 **PMCID:**

**CO**

**Peter, J.,** Joseph, G., Mathew, V. and Peter, J. V.

Visual loss in Takayasu Arteritis - Look Beyond the Eye

J Clin Diagn Res; 2014, 8 (8): MD06-7

**Address:**Assistant Professor, Department of Ophthalmology, Christian Medical College, Vellore, India.

Professor and Head, Department of Cardiology Unit I, Christian Medical College, Vellore, India

Professor, Department of Neurology, Christian Medical College, Vellore, India

Associate Professor, Department of Medicine, Christian Medical College, Vellore, India.

Patients with Takayasu arteritis often present with reduced vision related either to the disease per se or due to complications of therapy. We report a patient with Takayasu arteritis who developed acute onset bilateral visual loss 6wks following percutaneous revascularization of occluded aortic arch branches. No ocular cause for the visual loss was evident. The reason for visual loss in this patient was an extraocular cause. Ocular and extraocular causes of visual loss in Takayasu arteritis are discussed.

**INTL**

**PMID:**25300450 **PMCID:**4190754

**CO**

**Pramanick, A.,** Peedicayil, A. and Shah, A.

Bilateral tubal pregnancy with intrauterine pregnancy in a natural conception cycle along with liver cell failure: case report and review of literature

J Obstet Gynaecol India; 2014, 64 (Suppl 1): 50-2

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Department of Pathology, Christian Medical College and Hospital, Vellore, India.

**NAT**

**PMID:**25404809 **PMCID:**4228004

**CO**

**Punnen, A.,** Loganathan, S. K., Veetiyil, G. I., Scott, J. X. and Kumar, S.

Neonate with orbital bleed

Pediatr Blood Cancer; 2014,

**Address:**Department of Pediatrics, Christian Medical College, Vellore, 632004,, India.

**INTL**

**PMID:**25447027 **PMCID:**

**CO**

**Raghunath, R.,** Varghese, G. and Simon, B.

Chronic arthritis of the hip joint: an unusual complication of an inadequately treated fistula-in-ano

BMJ Case Rep; 2014, 2014

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Department of Radiology, Christian Medical College, Vellore, Tamil Nadu, India.

We report a case of chronic arthritis of the right hip joint in an otherwise healthy young male athlete as a complication of inadequately treated anal fistula. A young male athlete presented with symptoms of right hip pain and difficulty in walking and intermittent fever for 2 months. He had a history of perianal abscess drainage. On examination he was found to have a

tender right hip joint with severe restriction of movements. He was also found to have a partially drained right ischiorectal abscess. X-ray and MRI of the hip joint revealed chronic arthritis of the right hip joint, which was communicating with a complex fistula-in-ano. He underwent a diversion sigmoid colostomy and right ischiorectal abscess drainage along with appropriate antibiotics with a plan for definitive hip joint procedure later. He was lost to follow-up and succumbed to severe perianal sepsis within a few months.

**INTL**

**PMID:**25414226 **PMCID:**

**CO**

**Rajagopal, V.,** Sundaresan, L., Rajkumar, A. P., Chittybabu, C., Kuruvilla, A., Srivastava, A., Balasubramanian, P., Jacob, K. S. and Jacob, M.

Genetic association between the DRD4 promoter polymorphism and clozapine-induced sialorrhea

Psychiatr Genet; 2014, 24 (6): 273-6

**Address:**Departments of aBiochemistry bPsychiatry cHematology, Christian Medical College, Vellore, Tamil Nadu, India dDepartment of Biomedicine, Aarhus University, Aarhus, Denmark.

The use of clozapine, an effective antipsychotic drug used in treatment-resistant schizophrenia, is associated with adverse effects. Sialorrhea is one such effect, which can be distressing for many patients. Studies on the pharmacogenetics of the adverse effects of clozapine are limited. The aim of the present study was to determine whether clozapine-induced sialorrhea is associated with a 120 base-pairs (bp) tandem duplication polymorphism in the dopamine receptor subtype D4 (DRD4) gene. Ninety-five patients, mean age 35.43+/-9.43 years, with treatment-resistant schizophrenia and on clozapine were included in the study. Development of sialorrhea in response to the drug, as manifested by drooling of saliva, was documented in 45 (47.4%) patients.

Genotyping of the patients was carried out to detect the presence of the polymorphism of interest. Clozapine-induced sialorrhea was found to be associated significantly with the 120-bp duplication in DRD4. The association was found to fit a log-additive model with an odds ratio of 2.95 (95% confidence interval 1.51-5.75; P=0.0006). Thus, the presence of the 120-bp duplication in DRD4 appears to confer a risk for sialorrhea in response to clozapine therapy. The underlying pathophysiology and clinical significance of this phenomenon warrant further investigation.

**INTL**

**PMID:**25304228 **PMCID:**

**CO**

**Rajan, S.,** Kurien, M., Gupta, A. K., Mathews, S. S., Albert, R. R. and Tychicus, D.

Velopharyngeal incompetence in patients with cleft palate, flexible video pharyngoscopy and perceptual speech assessment: a correlational pilot study  
J Laryngol Otol; 2014, 128 (11): 986-90

**Address:**Department of Otorhinolaryngology and Head and Neck Surgery, Christian Medical College, Vellore, Tamil Nadu, India. Department of Plastic Surgery, Christian Medical College, Vellore, Tamil Nadu, India.

**OBJECTIVES:** To assess the role of video endoscopy in evaluating velopharyngeal incompetence and investigate a possible relationship between velopharyngeal incompetence type and speech defect in cleft palate patients. **METHODS:** A prospective study of 28 pre- or post-operative cleft palate patients with speech defects who attended Plastic Surgery-Cleft Palate and ENT out-patient clinics was performed. The velar defect type was determined using a flexible endoscope and findings were video recorded. Speech pathology was assessed using the cleft palate audit protocol for speech. **RESULTS:** A significant, clinically relevant relationship was noted between the perceived

characteristics of hypernasality and velopharyngeal insufficiency type. Hypernasal speech was a definite clinical indicator of velopharyngeal incompetence, and the type 1 velopharyngeal defect was most common. Type 1 velopharyngeal coronal-type dysfunction was strongly associated with hypernasality ( $p < 0.05$ ). When speech substitution was noted, type 2 velopharyngeal (or sagittal) incompetence could be predicted ( $p < 0.05$ ). **CONCLUSION:** In the management of cleft palate patients, it is important that surgical correction of the defect and achieving velopharyngeal competency for speech are performed simultaneously. Pre-operative velopharyngeal endoscopy with speech assessment will define the anatomical and functional bases for velopharyngeal correction and assist in planning and tailoring the pharyngeal flap.

**INTL**

**PMID:**25335572 **PMCID:**  
**CO**

**Rakesh, P.,** Alex, R. G., Varghese, G. M., Mathew, P., David, T., Manipadam, M. T., Nair, S. and Abraham, O. C.  
Kikuchi-fujimoto disease: clinical and laboratory characteristics and outcome  
J Glob Infect Dis; 2014, 6 (4): 147-50

**Address:**Department of Community Health, Christian Medical College, Vellore, Tamil Nadu, India.

Department of Internal Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

Department of Pathology, Christian Medical College, Vellore, Tamil Nadu, India.

**INTRODUCTION:** Kikuchi-Fujimoto disease is an uncommon disorder with worldwide distribution, characterized by fever and benign enlargement of the lymph nodes, primarily affecting young adults. Awareness about this disorder may help prevent misdiagnosis and inappropriate investigations and treatment. The objective of the study was to evaluate the clinical and laboratory characteristics of histopathologically confirmed cases of

Kikuchi's disease from a tertiary care center in southern India. **MATERIALS AND METHODS:** Retrospective analysis of all adult patients with histopathologically confirmed Kikuchi's disease from January 2007 to December 2011 in a 2700-bed teaching hospital in South India was done. The clinical and laboratory characteristics and outcome were analyzed. **RESULTS:** There were 22 histopathologically confirmed cases of Kikuchi's disease over the 5-year period of this study. The mean age of the subjects' was 29.7 years (SD 8.11) and majority were women (Male: female-1:3.4). Apart from enlarged cervical lymph nodes, prolonged fever was the most common presenting complaint (77.3%). The major laboratory features included anemia (54.5%), increased erythrocyte sedimentation rate (31.8%), elevated alanine aminotransferase (27.2%) and elevated lactate dehydrogenase (LDH) (31.8%). **CONCLUSION:** Even though rare, Kikuchi's disease should be considered in the differential diagnosis of young individuals, especially women, presenting with lymphadenopathy and prolonged fever. Establishing the diagnosis histopathologically is essential to avoid inappropriate investigations and therapy.

**INTL**

**PMID:**25538452 **PMCID:**4265829  
**CO**

**Rathinavelu, B.,** Arockiaraj, J., Krishnan, V., Amritanand, R. and Sundararaj, G. D.

The Extended Posterior Circumferential Decompression Technique in the Management of Tubercular Spondylitis with and without Paraplegia

Asian Spine J; 2014, 8 (6): 711-9

**Address:**Department of Orthopaedics, Christian Medical College and Hospital, Vellore, India.

**STUDY DESIGN:** Retrospective clinical series. **PURPOSE:** To study the clinical, functional and radiological results of patients with tuberculous spondylitis with and without paraplegia, treated surgically using the "Extended Posterior

Circumferential Decompression (EPCD)" technique. OVERVIEW OF LITERATURE: With the increasing possibility of addressing all three columns by a single approach, posterior and posterolateral approaches are gaining acceptance. A single exposure for cases with neurological deficit and kyphotic deformity requiring circumferential decompression, anterior column reconstruction and posterior instrumentation is helpful. METHODS: Forty-one patients with dorsal/dorsolumbar/lumbar tubercular spondylitis who were operated using the EPCD approach between 2006 to 2009 were included. Postoperatively, patients were started on nine-month anti-tuberculous treatment. They were serially followed up to thirty-six months and both clinical measures (including pain, neurological status and ambulatory status) and radiological measures (including kyphotic angle correction, loss of correction and healing status) were used for assessment. RESULTS: Disease-healing with bony fusion (interbody fusion) was seen in 97.5% of cases. Average deformity (kyphosis) correction was 54.6% in dorsal spine and 207.3% in lumbar spine. Corresponding loss of correction was 3.6 degrees in dorsal spine and 1.9 degrees in the lumbar spine. Neurological recovery in Frankel B and C paraplegia was 85.7% and 62.5%, respectively. CONCLUSIONS: The EPCD approach permits all the advantages of a single or dual session anterior and posterior surgery, with significant benefits in terms of decreased operative time, reduced hospital stay and better kyphotic angle correction.

**INTL****PMID:25558312 PMCID:****CO****Rathore, S.,** Pramanick, A., Regi, A. and Lionel, J.

Aplastic anemia in pregnancy

J Obstet Gynaecol India; 2014, 64 (Suppl 1): 26-8

**Address:**Department of Obstetrics and Gynecology Unit III, Christian Medical College, Vellore, 632004 India.**NAT****PMID:25404800 PMCID:4228002****CO****Rose, W.,** Rajendran, G. and Peter, J. Crusted scabies Indian Pediatr; 2014, 51 (8): 680**Address:** Department of Pediatrics, CMC, Vellore, India. [winsleyrose@cmcvellore.ac.in](mailto:winsleyrose@cmcvellore.ac.in)**NAT****PMID:25129017 PMCID:****CO****Russell, P. S.,** John, J. K., Lakshmanan, J., Russell, S., Nair, M. K. and Ganesh, B.

Pre-intervention Predictors for Acquisition of Adaptive Behavior Among Children with Intellectual Disability Indian J Pediatr; 2014, 81 Suppl 2 165-8

**Address:**Child and Adolescent Psychiatry Unit, Department of Psychiatry, Christian Medical College, Vellore, 632 002, Tamil Nadu, India, [russell@cmcvellore.ac.in](mailto:russell@cmcvellore.ac.in).

**OBJECTIVE:** To determine the predictive factors associated with the adaptive behavior acquisition among children with Intellectual Disability (ID) in two different training packages. **METHODS:** Parents of 52 consecutive children completed a demographic data form. Pre-intervention quantification of ID, parental attitude and adaptive behavior assessments were done using the Binet-Kamat Test of Intelligence or Gessells Developmental Schedule, Parental Attitude Scale towards Management of Intellectual Disability and Vineland Social Maturity Scale respectively, by independent raters. Univariate and multiple logistic regression models were used to identify the predictive models for the training outcomes and further validated using re-sampling technique. **RESULTS:** Predictive factors associated with the good outcome in the multimodal adaptive behavior training plus interactive group psycho-education group were: younger age of the parent trained, and more than two siblings. Among the multimodal adaptive behavior training plus didactic lectures group, education of parent trained

predicted better adaptive behavior interventional outcome. There was no association between the place of residence, socio-economic status, profession of parent, level of disability or the parental attitude. **CONCLUSIONS:** Different predictive factors are associated with potential short-term outcome of different adaptive behavior training for children with ID. Based on these pre-intervention predictors children and their parents can be given specific intervention packages.

**NAT**

**PMID:**25338491 **PMCID:**  
**CO**

**Sarkar, R.,** Kattula, D., Francis, M. R., Ajjampur, S. S., Prabakaran, A. D., Jayavelu, N., Muliyl, J., Balraj, V., Naumova, E. N., Ward, H. D. and Kang, G.

Risk factors for cryptosporidiosis among children in a semi urban slum in southern India: a nested case-control study

Am J Trop Med Hyg; 2014, 91 (6): 1128-37

**Address:**Division of Gastrointestinal Sciences, Christian Medical College, Vellore, India; Community Health Department, Christian Medical College, Vellore, India; Department of Civil and Environmental Engineering, Tufts University School of Engineering, Medford, Massachusetts; Division of Geographic Medicine and Infectious Diseases, Tufts Medical Center, Tufts University School of Medicine, Boston, Massachusetts.

Division of Gastrointestinal Sciences, Christian Medical College, Vellore, India; Community Health Department, Christian Medical College, Vellore, India; Department of Civil and Environmental Engineering, Tufts University School of Engineering, Medford, Massachusetts; Division of Geographic Medicine and Infectious Diseases, Tufts Medical Center, Tufts University School of Medicine, Boston, Massachusetts  
[gkang@cmcvellore.ac.in](mailto:gkang@cmcvellore.ac.in).

The risk factors for acquisition of cryptosporidial infection in resource-poor

settings are poorly understood. A nested case-control study was conducted to assess factors associated with childhood cryptosporidiosis (detected by stool polymerase chain reaction) in an endemic, Indian slum community using data from two community-based studies with 580 children followed prospectively until their second birthday. Factors were assessed for overall cryptosporidiosis (N = 406), and for multiple (N = 208), asymptomatic (N = 243), and symptomatic (N = 163) infections, respectively. Presence of older siblings (odds ratio [OR] = 1.88, P = 0.002) and stunting at 6 months of age (OR = 1.74, P = 0.019) were important risk factors for childhood cryptosporidiosis. Always boiling drinking water before consumption, the use of a toilet by all members of the family, and maternal age  $\geq$  23 years were protective. These results provide insights into acquisition of childhood cryptosporidiosis in settings with poor environmental sanitation, contaminated public water supply systems, and close human-animal contact. Disease control strategies will require a multifaceted approach.

**INTL**

**PMID:**25331810 **PMCID:**  
**CO**

**Sarkar, S.,** Rajaratnam, S., Backianathan, S., Chacko, G. and Chacko, A. G.

Radiation-induced opticochiasmatic glioblastoma multiforme following conventional radiotherapy for Cushing's disease

Br J Neurosurg; 2014, 28 (4): 510-2

**Address:**Department of Neurological Sciences, Christian Medical College, Vellore, TN, India.

We report the rare occurrence of an opticochiasmatic glioblastoma multiforme 6 years following conventional radiotherapy for Cushing's disease. This article highlights the risks of collateral damage to the optic

apparatus when irradiating the sellar region.

**INTL**

**PMID:24066683 PMCID:**

**CO**

**Sarkar, S.**, Rajaratnam, S., Chacko, G. and Chacko, A. G.

Endocrinological outcomes following endoscopic and microscopic transsphenoidal surgery in 113 patients with acromegaly

Clin Neurol Neurosurg; 2014, 126 190-5

**Address:**Section of Neurosurgery, Department of Neurological Sciences, Christian Medical College, Vellore, India.

Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, India.

Section of Neurosurgery, Department of Neurological Sciences, Christian Medical College, Vellore, India. Electronic

**Address:** [agchacko@cmcvellore.ac.in](mailto:agchacko@cmcvellore.ac.in).

**BACKGROUND:** To describe outcomes and complications in patients undergoing transsphenoidal surgery for acromegaly using the 2010 consensus criteria for biochemical remission. **METHODS:** Retrospective review of 113 treatment naive patients who underwent transsphenoidal surgery with the endoscopic (n=66) and the endonasal microscopic technique (n=47). Cure was defined if the age and sex-adjusted IGF-1 level was normal and either the basal GH was <1ng/ml or the nadir GH was <0.4ng/ml following oral glucose suppression at last follow-up. **RESULTS:** The mean age at presentation was 38.1+/-7.1 years and 86% of tumors were macroadenomas. Adenoma sizes averaged 21.1+/-9.7mm, but 56% of all tumors were >/=2cm in size and 43.4% were invasive. Remission rates between endoscopic and microscopic transsphenoidal surgery did not differ significantly overall (28.8% versus 36.2%). On univariate analysis, a preoperative GH level <40ng/ml, adenoma size <20mm and non-invasiveness were predictors of remission at follow-up. Although there were no statistically significant differences in remission rates between the endoscopic and microsurgical

groups, surgically induced hypopituitarism was less frequent with the former. **CONCLUSIONS:** We report our surgical experience with predominantly large, invasive GH adenomas using the 2010 criteria for cure. Patients with smaller, non-invasive tumors with lower preoperative GH levels are most likely to achieve remission. Outcomes with either the microscopic or endoscopic approach do not differ significantly, although the rate of surgically induced hypopituitarism may be higher with the former. Transsphenoidal surgery remains the first line of treatment for patients with acromegaly, but invasive adenomas will frequently require adjuvant therapy.

**INTL**

**PMID:25278017 PMCID:**

**CO**

**Sen S;** Chacko J; Karl S; Mathai J; Thomas R; Dastidar A; Barla Sri Sathya Ravi Kishore; Joseph Ninan P; George J Pediatric bladder augmentation in developing country: Lessons learnt from an experience of 195 cases

Journal of International Medical Sciences Academy. 2014 apr-jun; 27(2): 79-83

**Address:** Department of Pediatric Surgery and Rehabilitation Medicine, CMC, Vellore. E-mail:

[paedsur@cmcvellore.ac.in](mailto:paedsur@cmcvellore.ac.in)

**ABSTRACT:** We report our experience with 195 children who had undergone bladder augmentation in our department during the period 1997-2009. These included 78 children with neurogenic bladder, 73 children with incontinent exstrophy and 27 children with posterior urethral valves. While incontinence was a major clinical symptom in many of these children, 107 children had hydronephrosis and 53 had elevated levels of serum creatinine preoperatively. Tissue used for augmentation includes sigmoid colon in 118, ileocecal segment in 39, ileum in 21 and a dilated ureter in 14. Concomitant

surgery included bladder neck procedures (Young Dees Leadbetter plasty, bladder neck closure, fascial slings) in 80 children, a catheterizable abdominal stoma in 184, and variety of anti reflux procedures. Special techniques of augmentation such as the preperitoneal augmentation and the "doughnut" augmentation are also described. Results (mean follow up period of 5 years, longest 15 years) were highly satisfactory as regards cure of incontinence and stabilization of hydronephrosis. Vesicoureteric reflux resolved in 98 of 129 units studied. Renal failure, if severe preoperatively, continued to progress and was the major cause of late mortality.

**KEYWORDS:**

Humans; Child; India; Urologic Surgical Procedures; Urinary Bladder/SU

References: 34

**NAT**

**Record Identifier: NI248419**

**CO**

**Sen, I.** and Agarwal, S.  
Cutaneous lesions from lymphangioma circumscriptum  
ANZ J Surg; 2014,

**Address:**Department of Vascular Surgery, Christian Medical College, Vellore, Tamil Nadu, India.

**INTL**

**PMID:**25556623 **PMCID:**

**CO**

**Senapati, J.,** Devasia, A. J., David, S., Manipadam, M. T., Nair, S., Jayandharan, G. R. and George, B.

Diffuse large B cell lymphoma in wiskott-Aldrich syndrome: a case report and review of literature

Indian J Hematol Blood Transfus; 2014, 30 (Suppl 1): 309-13

**Address:**Department of Clinical Haematology, Christian Medical College and Hospital, Vellore, 632004 India.

Department of General Pathology, Christian Medical College and Hospital, Vellore, 632004 India.

Wiskott-Aldrich syndrome (WAS) is an X linked rare primary immunodeficiency syndrome with an increased propensity for infection, autoimmunity and malignancy. Here we report a male child, who was diagnosed with WAS at 1 year of age following evaluation for symptomatic thrombocytopenia and eczematous skin lesions. He presented later with lymphadenopathy, which was consistent with diffuse large B cell lymphoma on histopathology. He received 6 cycles of R-CHOP chemotherapy for the same and is presently in remission after 6 months. We review the major publications of lymphoma in WAS and discuss the pathological findings, treatment and prognosis of lymphoma in WAS.

**NAT**

**PMID:**25332606 **PMCID:**4192205

**CO**

**Senapati, J.,** Devasia, A. J., Sudhakar, S. and Viswabandya, A.

Asymptomatic gastrosplenic fistula in a patient with marginal zonal lymphoma transformed to diffuse large B cell lymphoma--a case report and review of literature

Ann Hematol; 2014, 93 (9): 1599-602

**Address:**Department of Clinical Haematology, Christian Medical College and Hospital, Vellore, 632004, Tamil Nadu, India, jsalwayswins@gmail.com.

**INTL**

**PMID:**24362455 **PMCID:**

**CO**

**Sengupta, M.,** Benjamin, S. and Prakash, J. A.

Scrub typhus continues to be a threat in pregnancy

Int J Gynaecol Obstet; 2014, 127 (2): 212

**Address:**Department of Clinical Microbiology, Christian Medical College, Vellore, India.

Department of Obstetrics and Gynecology, Christian Medical College, Vellore, India.

Department of Clinical Microbiology, Christian Medical College, Vellore, India.

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**INTL**

**PMID:25109770 PMCID:**

**CO**

**Shetty, S.**, Hephzibah, J., Borah, B., Burad, D., Chandrakumar, V., Paul, M. J. and Thomas, N.

Paraneoplastic polyarthrititis in association with metastatic neuroendocrine tumour of the adrenal gland

Australas Med J; 2014, 7 (8): 345-9

**Address:**Department of Endocrinology, Diabetes & Metabolism, Christian Medical College, Vellore, India.

Department of Nuclear Medicine, Christian Medical College, Vellore, India.

Department of General Pathology, Christian Medical College, Vellore, India.

Department of Endocrine Surgery, Christian Medical College, Vellore, India.

Paraneoplastic polyarthrititis is a rare manifestation described in association with various solid tumours. We describe the clinical presentation, diagnostic evaluation, differential diagnosis, and management of a 28-year-old woman who presented with fever, weight loss, and symmetrical polyarthrititis, subsequently diagnosed to have a metastatic neuroendocrine tumour of the adrenal gland with paraneoplastic polyarthrititis. Paraneoplastic polyarthrititis must be considered in polyarthrititis unexplained by common aetiologies. The unusual presentation of this case, alerts us about the atypical presentation of these tumours. To the best of our knowledge, this is the first case study of a neuroendocrine tumour presenting as paraneoplastic polyarthrititis.

**INTL**

**PMID:25279010 PMCID:4157154**

**CO**

**Shetty, S.**, Kapoor, N., Naik, D., Asha, H. S., Prabu, S., Thomas, N., Seshadri, M. S. and Paul, T. V.

Osteoporosis in healthy South Indian males and the influence of life style factors and vitamin d status on bone mineral density

J Osteoporos; 2014, 2014 723238

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**Address:**Department of Endocrinology, Diabetes & Metabolism, Christian Medical College & Hospital, Vellore 632004, India.

**Objective.** To study the prevalence of osteoporosis and vitamin D deficiency in healthy men and to explore the influence of various life style factors on bone mineral density (BMD) and also to look at number of subjects warranting treatment. **Methods.** Ambulatory south Indian men aged above 50 were recruited by cluster random sampling. The physical activity, risk factors in the FRAX tool, BMD, vitamin D, and PTH were assessed. The number of people needing treatment was calculated, which included subjects with osteoporosis and osteopenia with 10-year probability of major osteoporotic fracture >20 percent and hip fracture >3 percent in FRAX India. **Results.** A total of 252 men with a mean age of 58 years were studied. The prevalence of osteoporosis and osteopenia at any one site was 20% (50/252) and 58%, respectively. Vitamin D deficiency (<20 ng/dL) was seen in 53%. On multiple logistic regression, BMI (OR 0.3; P value = 0.04) and physical activity (OR 0.4; P value < 0.001) had protective effect on BMD. Twenty-five percent warranted treatment. **Conclusions.** A significantly large proportion of south Indian men had osteoporosis and vitamin D deficiency. Further interventional studies are needed to look at reduction in end points like fractures in these subjects.

**INTL**

**PMID:25478284 PMCID:4244976**

**CO**

**Simon, B.**, Chandramohan, A., Eapen, A., Nayak, S. and Jeyaraj, V.

Intravascular mesenchymal chondrosarcoma

J Vasc Interv Radiol; 2014, 25 (12): 1937

**Address:**Department of Radiodiagnosis, Christian Medical College and Hospital, Vellore, Tamil Nadu, India 632004. Electronic **Address:**

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Medical College and Hospital, Vellore,  
Tamil Nadu, India 632004.

**INTL****PMID:**25457141 **PMCID:****CO**

**Simon, B.**, Oommen, S. P., Shah, K.,  
Mani, S. E. and Gibikote, S.

Cockayne syndrome: characteristic  
neuroimaging features  
*Acta Neurol Belg*; 2014,

**Address:**Department of Radiology,  
Christian Medical College, Vellore,  
632004, India,  
drbettysimon@gmail.com.

**INTL****PMID:**25381627 **PMCID:****CO**

**Singh, G.**, Gladdy, G., Chandy, T. T.  
and Sen, N.

Incidence and outcome of acute lung  
injury and acute respiratory distress  
syndrome in the surgical intensive care  
unit

*Indian J Crit Care Med*; 2014, 18 (10):  
659-65

**Address:**Department of Anaesthesia,  
Christian Medical College and Hospital,  
Vellore, Tamil Nadu, India.

Division of Critical Care, Christian  
Medical College and Hospital, Vellore,  
Tamil Nadu, India.

**INTRODUCTION:** To determine the  
incidence and mortality of acute lung  
injury (ALI) and acute respiratory  
distress syndrome (ARDS) in a cohort of  
patients with risk factors admitted to the  
Surgical Intensive Care Unit (SICU).

**MATERIALS AND METHODS:** A  
prospective observational inception  
cohort study with no intervention was  
conducted over 12 months. All patients  
with at least one known risk factor for  
ALI/ARDS admitted to the SICU were  
included in the study. The APACHE II  
severity of disease classification system  
scoring was performed within 1 h of

admission. The ventilatory parameters  
and chest radiographs were recorded  
every 24 h. The P/F ratio, PEEP and  
Lung Injury Score were calculated each  
day until the day of discharge from the  
Intensive Care Unit or for the first 7  
days of admission, whichever was  
shorter. **RESULTS:** The incidence of  
ARDS among those who were  
mechanically ventilated was 11.4%.  
Sepsis was the most common (34.6%)  
etiology. Among those with risk factors,  
the incidence of ARDS was 30% and that  
of ALI was 32.7%. The mortality in  
those with ARDS was 41.8%. Those who  
develop ARDS had higher APACHE II  
scores, lower pH and higher PaCO<sub>2</sub> at  
admission compared with those who  
developed ALI or no lung injury.  
**CONCLUSION:** The incidence and  
mortality of ARDS was similar to other  
studies. Identifying those with risk  
factors for ARDS or mortality will enable  
appropriate interventional measures.

**NAT****PMID:**25316976 **PMCID:**4195196**CO**

**Tiewsoh I**; Singh V; Jajoo UN

Megaloblastic anemia with peripheral  
neuropathy, a misleading initial  
presentation in POEMS syndrome: A  
case report

*Journal of Mahatma Gandhi Institute of  
Medical Sciences*. 2014 mar; 19(1): 55-  
58

**ADDRESS:** Dr. Iadarilang Tiewsoh,  
Room no 216, LIQ, CMC Vellore - 632  
004, Tamil Nadu, India. E-mail:  
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**ABSTRACT:** POEMS (peripheral  
neuropathy, organomegaly,  
endocrinopathy, M protein, skin  
changes) syndrome is a rare  
multisystem paraneoplastic disorder that  
occurs in the setting of a plasma cell  
dyscrasia. A 57-year-old male with initial  
presentation of peripheral neuropathy of  
lower limbs and a peripheral blood  
picture of megaloblastic anemia,

presented with progressive lower motor neuron weakness over few months; followed by additional features of skin hyperpigmentation, generalized lymphadenopathy, erectile dysfunction, weight loss, and an attack of cerebrovascular accident (stroke infarct) which recovered. On further evaluation with time, there were presence of hepatosplenomegaly, Castleman's disease of the lymph node on biopsy, serum electrophoresis suggestive of monoclonal gammopathy with light band lambda chain, and endocrinopathy (hypothyroidism and hypogonadism). His bone marrow was suggestive of plasmacytosis. This case report describes a patient who presented with initial picture of peripheral neuropathy with megaloblastic anemia, but when followed-up there were diverse clinical manifestations fulfilling the diagnostic clinical criteria of POEMS Syndrome.

**KEYWORDS:** Humans; Male

**OTHER KEYWORDS:** Castleman's Disease; Poems; Polyneuropathy; Vascular Endothelial Growth Factor

**References:** 7

#### **NAT**

Record Identifier: NI248667 **NON**

#### **INDEXED**

#### **CO**

**Tilak, M.,** Paul, A., Samuel, C. S., David, J. A., Viswabandya, A. and Srivastava, A.

Cryotherapy for acute haemarthrosis in haemophilia - attempts to understand the 'ice age' practice

Haemophilia; 2015, 21 (1): e103-5

**Address:**Department of Physical Medicine and Rehabilitation, Christian Medical College, Vellore, India.

#### **INTL**

**PMID:**25471230 **PMCID:**

#### **CO**

**Turel, M. K.,** Thakar, S. and Rajshekhar, V.

Quality of life following surgery for large and giant vestibular schwannomas: a prospective study

J Neurosurg; 2014, 1-9

**Address:**Department of Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

**OBJECT** Prospective studies of quality of life (QOL) are infrequently performed in patients undergoing surgery for vestibular schwannoma (VS). The authors designed this to study to investigate health-related QOL (HR-QOL) in patients with large and giant VSs before and after surgery. **METHODS** Between January 2009 and December 2012, HR-QOL was measured prospectively before and after surgery, using the 36-Item Short Form Health Survey (SF-36), in 100 patients who underwent surgery for unilateral large or giant VS (tumor size  $\geq 3$  cm). The Glasgow Benefit Inventory (GBI) was also used to evaluate the effect of surgery. **RESULTS** A total of 100 patients were included in the study (65 men and 35 women). Their mean age ( $\pm$  SD) was 44.2  $\pm$  11.5 years. The preoperative QOL was decreased in all SF-36 domains. A 1-year follow-up evaluation was conducted for all patients (mean 13.5  $\pm$  5.3 months after surgery). The results showed an improvement in HR-QOL compared with preoperative status in all cases, with 63%-85% of patients showing a minimum clinically important difference (MCID) in various domains. A second follow-up evaluation was performed in 51 cases (mean time after surgery, 29.0  $\pm$  8.3 months) and showed sustained improvement in SF-36 scores. In some domains there was further improvement beyond the first follow-up. On the GBI, 87% of patients reported improvement, 1% felt no change, and 12% of patients reported deterioration. **CONCLUSIONS** Patients harboring large or giant VSs score lower on all the QOL domains compared with the normative population. More than 60% showed a clinically significant improvement in HR-QOL 1 year after surgery, a result that was sustained at subsequent follow-up.

#### **INTL**

**PMID:**25479119 **PMCID:**

#### **CO**

**Upadhyay, R.,** Kant, S., Prakash, V. and Saheer, S.

Sinobronchial allergic aspergillosis with allergic bronchopulmonary aspergillosis: a less common co-existence  
BMJ Case Rep; 2014, 2014

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Department of Pulmonary Medicine, CMC, Vellore, Tamil Nadu, India.

Allergic bronchopulmonary aspergillosis (ABPA) is an immunological pulmonary disorder that is characterised by a hyper-responsiveness of the airways to *Aspergillus fumigatus*. Although several other fungi may also present with similar clinical conditions, *Aspergillus* remains the most common fungal pathogen causing airway infections. Co-existence of ABPA with allergic *Aspergillus* sinusitis (AAS) is an uncommon presentation. The concept of one airway/one disease justifies the co-existence of ABPA with AAS, but it does not always hold true. We report a case of a 35-year-old woman who presented with symptoms suggestive of bronchial asthma. On further investigation, the radiological pattern showed fleeting shadows and CT scan showed central cystic bronchiectatic changes characteristic of ABPA. The nasal secretions were investigated for the presence of *Aspergillus* and were found to be positive. Hence a diagnosis of ABPA with AAS was established. The patient was treated with oral steroids and antifungal drugs

**INTL**

**PMID:**25371437 **PMCID:**

**CO**

**Upadhyay, R.**, Prakash, V., Singh, A. B. and Saheer, S.

Maxillary sinusitis with pulmonary tuberculosis

BMJ Case Rep; 2014, 2014 bcr-2014-203952

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Department of Pulmonary Medicine, CMC, Vellore, Tamil Nadu, India.

Tubercular infection of the nasal cavity is an infrequently encountered condition. More so, after the discovery of relevant antibiotics, nasal sinus tuberculosis is not commonly seen. Few cases have reported tuberculosis of the paranasal sinuses, nasopharynx and larynx. With the increasing incidence of HIV, these rare forms of infection have started re-emerging. We present a case of a middle aged man presenting with nasal cavity lesion along with pulmonary tuberculosis, which came to light only after the diagnosis of maxillary sinus tuberculosis.

**INTL**

**PMID:**25085948 **PMCID:**

**CO**

**V, K., Raiyani, P. D. and Vyas, S. S.**

Tracheobronchial amyloidosis-a series of two cases

J Clin Diagn Res; 2014, 8 (9): FD09-10

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Amyloidosis is a rare disorder characterised by accumulation of insoluble fibrillar proteins in extracellular space. Respiratory amyloidosis presents as two tracheobronchial forms (local and diffuse) and two parenchymal forms (nodular and diffuse), of which diffuse tracheobronchial amyloidosis is the least common. We herein present two cases of tracheobronchial amyloidosis.

**INTL**

**PMID:**25386446 **PMCID:**4225898

**CO**

**Valson AT(1), David VG(1), Balaji V(2), John GT(3).**

Multifocal bacterial osteomyelitis in a renal allograft recipient following urosepsis.

Indian J Nephrol. 2014 May;24(3):189-92. doi: 10.4103/0971-4065.132022.

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Non-tubercular bacterial osteomyelitis is a rare infection. We report on a renal allograft recipient with osteomyelitis complicating urosepsis, manifesting as a multifocal infection poorly responsive to appropriate antibiotics and surgical intervention and culminating in graft loss.

**NAT**

**PMCID:** PMC4127842 **PMID:** 25120300 [PubMed]

**CO**

**Venkatramani, V.** and Banerji, J. S. Spontaneous perinephric hemorrhage (Wunderlich syndrome) secondary to polyarteritis nodosa: Computed tomography and angiographic findings Indian J Urol; 2014, 30 (4): 452-3

**Address:**Department of Urology, Christian Medical College, Vellore, Tamil Nadu, India.

We report the case of a young man who presented with spontaneous left perinephric hematoma and per-rectal bleeding. Evaluation revealed renal and superior mesenteric arterial aneurysms secondary to polyarteritis nodosa (PAN). Computed tomography and angiographic findings are presented. The aetiology of spontaneous perinephric hemorrhage along with relevant features of PAN are discussed.

**NAT**

**PMID:**25378832 **PMCID:**4220390

**CO**

**Venkatramani, V.**, Chandrasingh, J., Devasia, A. and Kekre, N. S. Exstrophy-epispadias Complex Presenting in Adulthood: A Single-center Review of Presentation, Management, and Outcomes Urology; 2014, 84 (5): 1243-7

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Department of Urology, Christian Medical College, Vellore, India.

**OBJECTIVE:** To study the presentation, management, and outcome of patients with exstrophy-epispadias complex, who present in adulthood (aged >18 years).

**MATERIALS AND METHODS:** A retrospective review of the electronic medical records of patients with exstrophy-epispadias complex managed from January 2001 to December 2010 was undertaken. Patients aged >18 years at presentation, with detailed medical records were selected. They were classified into 2 groups: group A (previously untreated) and group B (residual defects or complications after childhood surgery). **RESULTS:** Thirty-nine patients with exstrophy-epispadias complex presented to our institution over this 10-year period. Of these 26 were adults (aged >18 years; range, 18-48 years). Detailed medical records could be obtained for 21 of them and they were included. Group A consisted of 4 patients-2 male and 2 female. All underwent cystectomy; 2 had an ileal conduit and 2 had ureterosigmoidostomy (Mainz II). All had improved quality of life and a stable renal function at follow-up. Group B consisted of 17 patients. Mean number of surgeries attempted previously was 4.4 (range, 2-13). Presentation was varied but primarily involved incontinence of urine (n = 12). Four patients were lost to follow-up, 2 were managed conservatively, and 11 underwent a surgical procedure. All patients returned to normal activity with an improvement in the quality of life postoperatively.

**CONCLUSION:** Exstrophy-epispadias complex is difficult to manage in resource-poor settings associated with illiteracy and poverty. However, successful rehabilitation and an improved quality of life are possible even in cases presenting in adults.

**INTL**

**PMID:**25443942 **PMCID:**

**CO**

**Williams, A.** and Singh, G.

Tongue bite injury after use of transcranial electric stimulation motor-evoked potential monitoring  
*J Anaesthesiol Clin Pharmacol*; 2014, 30 (3): 439-40

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**INTL**

**PMID:**25190968 **PMCID:**4152700

**CO**

**Young, G. P.,** Mortimer, E. K., Gopalsamy, G. L., Alpers, D. H., Binder, H. J., Manary, M. J., Ramakrishna, B. S., Brown, I. L. and Brewer, T. G.

Zinc deficiency in children with environmental enteropathy-development of new strategies: report from an expert workshop

*Am J Clin Nutr*; 2014, 100 (4): 1198-207

**Address:**From the School of Medicine, Flinders University of South Australia, Adelaide, Australia (GPY, EKM, GLG, and ILB); Washington University School of Medicine, St Louis, MO (DHA and MJM); Yale University School of Medicine, New Haven, CT (HJB); the Department of Medical Gastroenterology, Christian Medical College Vellore, Vellore, India (BSR); and Enteric and Diarrheal Diseases, the Bill & Melinda Gates Foundation, Seattle, WA (TGB).

Zinc deficiency is a major cause of childhood morbidity and mortality. The WHO/UNICEF strategy for zinc supplementation as adjunctive therapy for diarrhea is poorly implemented. A conference of experts in zinc nutrition and gastrointestinal disorders was convened to consider approaches that might complement the current recommendation and what research was needed to develop these approaches. Several key points were identified. The design of novel zinc interventions would be facilitated by a better understanding of how disturbed gut function, such as environmental (or tropical) enteropathy, affects zinc absorption, losses, and homeostasis. Because only 10% of zinc stores are able to be rapidly turned over, and appear to be rapidly depleted by acute intestinal illness, they are

probably best maintained by complementary regular supplementation in a primary prevention strategy rather than secondary prevention triggered by acute diarrhea. The assessment of zinc status is challenging and complex without simple, validated measures to facilitate field testing of novel interventions. Zinc bioavailability may be a crucial factor in the success of primary prevention strategies, and a range of options, all still inadequately explored, might be valuable in improving zinc nutrition. Some therapeutic actions of zinc on diarrhea seem attributable to pharmacologic effects, whereas others are related to the reversal of deficiency (ie, nutritional). The distinction between these 2 mechanisms cannot be clarified given the insensitivity of serum zinc to identify subclinical deficiency states. Why zinc seems to be less effective than expected at all ages, and ineffective for secondary prevention of diarrhea in children <12 mo of age, remains unclear. It was concluded that a reframing of the current recommendation is warranted with consideration of how to better optimize and deliver zinc and whether to provide a complementary public health primary prevention zinc strategy. This requires careful consideration of the zinc product to be used as well as strategies for its delivery.

**INTL**

**PMID:**25240082 **PMCID:**4163797

**CO**

**Babji, S.,** Arumugam, R., Sarvanabhavan, A., Moses, P. D., Simon, A., Aggarwal, I., Mathew, A., Sr, Anita and Kang, G.  
Multi-center surveillance of rotavirus diarrhea in hospitalized children <5 years of age in India, 2009-2012  
Vaccine; 2014, 32 Suppl 1 A10-2

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Diarrheal disease due to Group A rotaviruses continues to be an important cause of morbidity in the developing world and India contributes significantly to the disease burden. Surveillance carried out between July 2009 and June 2012 at two medical centers in south India and one center in north India estimated 39% of all diarrheal

admissions to be due to rotavirus. The most prevalent genotype isolated was G1P[8](33%) followed by G2P[4](17%). G9P[4] has also emerged as a significant cause of rotavirus diarrhea. No seasonal variation was noticed from the centers in south India, whereas we observed increased rotavirus diarrhea in the center in north India during March and April.

**INTL**

**PMID:**25091661 **PMCID:**

**EPH**

**John, J.,** Sarkar, R., Muliyl, J., Bhandari, N., Bhan, M. K. and Kang, G. Rotavirus gastroenteritis in India, 2011-2013: revised estimates of disease burden and potential impact of vaccines Vaccine; 2014, 32 Suppl 1 A5-9

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While improvements in oral rehydration use and access to healthcare have contributed to impressive gains in child survival, diarrheal diseases remain the second most important cause of child mortality in India. Pathogen specific disease rates, while key to deciding on the utility of specific public health interventions such as vaccines, are extremely difficult to obtain in developing country settings with less than optimal health access, diagnostic services and information systems. This study combined disease burden within five cohorts of infants followed up for diarrheal morbidity with data from the nationally representative Indian Rotavirus Surveillance Network and applies rates of rotavirus related events to UNICEF birth and mortality estimates for India. These estimates, while limited by the lack of data from nationally representative population based studies, use methods consistent with those employed by the World Health Organization Child Health Epidemiology Reference Group. We estimate that

11.37 million episodes of rotavirus gastroenteritis occur each year in India, requiring 3.27 million outpatient visits and 872,000 inpatient admissions when health access is unconstrained, resulting in a need for Rs. 10.37 billion each year in direct costs. An estimated 78,000 rotavirus-associated deaths occur annually of which 59,000 occur in the first 2 years of life. Introduction of a rotavirus vaccine of similar efficacy to the Rotavac in the national immunization program would result in 686,277 fewer outpatient visits, 291,756 fewer hospitalizations and 26,985 fewer deaths each year in India, assuming no indirect effects for the vaccine

**INTL**

**PMID:**25091681 **PMCID:**

**EPH**

**John, T. J.**

Hepatitis B immunization in public health mode in India

Indian Pediatr; 2014, 51 (11): 869-70

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**NAT**

**PMID:**25432213 **PMCID:**

**EPH**

**John, T. J.**

Encephalopathy clusters conflated with encephalitis outbreaks

Indian Pediatr; 2014, 51 (11): 937

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**NAT**

**PMID:**25432236 **PMCID:**

**EPH**

**Kattula, D.,** Sarkar, R., Sivarathinaswamy, P., Velusamy, V., Venugopal, S., Naumova, E. N., Muliyl, J., Ward, H. and Kang, G.

The first 1000 days of life: prenatal and postnatal risk factors for morbidity and growth in a birth cohort in southern India

BMJ Open; 2014, 4 (7): e005404

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Department of Gastrointestinal Sciences, Christian Medical College, Vellore, Tamil Nadu, India Division of Geographic Medicine and Infectious Diseases, Tufts Medical Center, Boston, Massachusetts, USA.

**OBJECTIVE:** To estimate the burden and assess prenatal and postnatal determinants of illnesses experienced by children residing in a semiurban slum, during the first 1000 days of life. **DESIGN:** Community-based birth cohort **SETTING:** Southern India **PARTICIPANTS:** Four hundred and ninety-seven children of 561 pregnant women recruited and followed for 2 years with surveillance and anthropometry. **MAIN OUTCOME MEASURE:** Incidence rates of illness; rates of clinic visits and hospitalisations; factors associated with low birth weight, various illnesses and growth. **RESULTS:** Data on 10 377.7 child-months of follow-up estimated an average rate of 14.8 illnesses/child-year. Gastrointestinal and respiratory illnesses were 20.6% and 47.8% of the total disease burden, respectively. The hospitalisation rate reduced from 46/100 child-years during infancy to 19/100 child-years in the second year. Anaemia during pregnancy (OR=2.3, 95% CI=1.08 to 5.18), less than four antenatal visits (OR=6.8, 95% CI=2.1 to 22.5) and preterm birth (OR=3.3, 95% CI=1.1 to 9.7) were independent prenatal risk factors for low birth weight. Female gender (HR=0.88, 95% CI=0.79 to 0.99) and 6 months of exclusive breast feeding (HR=0.76, 95% CI=0.66 to 0.88) offered protection against all morbidity. Average monthly height and weight gain were lower in female child and children exclusively breast fed for 6 months. **CONCLUSIONS:** The high morbidity in Indian slum children in the first 1000 days of life was mainly due to

prenatal factors and gastrointestinal and respiratory illness. Policymakers need disease prevalence and pathways to target high-risk groups with appropriate interventions in the community.

**INTL**

**PMID:**25056979 **PMCID:**4120427

**EPH**

**Madsen, C.**, Mogensen, P., Thomas, N., Christensen, D. L., Bygbjerg, I. C., Mohan, V., Inbakumari, M., Nadig, S. V., Alex, R., Geetanjali, F. S., Westgate, K., Brage, S., Vaag, A. and Grunnet, L. G. Effects of an outdoor bicycle-based intervention in healthy rural Indian men with normal and low birth weight *J Dev Orig Health Dis*; 2014, 1-11

**Address:** 1Department of Diabetes and Metabolism, Copenhagen University Hospital

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2Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, India.

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4Department of Community Health, Christian Medical College, Vellore, India.

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6MRC Epidemiology Unit, University of Cambridge, Cambridge, United Kingdom.

Physical inactivity and low birth weight (LBW) may lead to an increased risk for developing type 2 diabetes. The extent to which LBW individuals may benefit from physical exercise training when compared with those with normal birth weight (NBW) controls is uncertain. We assessed the impact of an outdoor exercise intervention on body composition, insulin secretion and action in young men born with LBW and NBW in rural India. A total of 61 LBW and 56 NBW healthy young men were recruited into the study. The individuals were instructed to perform outdoor bicycle exercise training for 45 min every day. Fasting blood samples, intravenous glucose tolerance tests and bioimpedance body composition

assessment were carried out. Physical activity was measured using combined accelerometry and heart rate monitoring during the first and the last week of the intervention. Following the exercise intervention, the LBW group displayed an increase in physical fitness [55.0 ml (O<sub>2</sub>)/kg min (52.0-58.0)-57.5 ml (O<sub>2</sub>)/kg min (54.4-60.5)] level and total fat-free mass [10.9% (8.0-13.4)-11.4% (8.0-14.6)], as well as a corresponding decline in the ratio of total fat mass/fat-free mass. In contrast, an increase in total fat percentage as well as total fat mass was observed in the NBW group. After intervention, fasting plasma insulin levels, homoeostasis model assessments (HOMA) of insulin resistance (HOMA-IR) and insulin secretion (HOMA-IS), improved to the same extent in both the groups. In summary, young men born with LBW in rural India benefit metabolically from exercise training to an extent comparable with NBW controls.

**INTL****PMID:**25514893 **PMCID:****EPH**

**Mathew, A., Rao, P. S., Sowmyanarayanan, T. V. and Kang, G.** Severity of rotavirus gastroenteritis in an Indian population: report from a 3 year surveillance study  
*Vaccine*; 2014, 32 Suppl 1 A45-8

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This study investigated the severity of rotavirus gastroenteritis (RVGE) in hospitalized children less than 60 months of age and compared severity in the first five months of life to severity in children 6 to 23 months of age. Results from a 3 year surveillance study show an early peak of rotavirus disease, with 117 (31%) RVGE hospitalizations in children <6 months old. Higher incidence of severe dehydration, acidemia and acidosis at admission and prolonged hospitalization >7 days were seen in infants 0-5 months of age. The

findings support the need for consideration of timely immunization or an accelerated immunization schedule with a birth dose to protect this vulnerable age.

**INTL****PMID:**25091679 **PMCID:****EPH**

**Mohan, V. R., Jayaraman, T., Babu, P., Dorny, P., Vercruyse, J. and Rajshekhar, V.**

Prevalence and risk factors for *Taenia solium* taeniasis in Kaniyambadi block, Tamil Nadu, South India  
*Indian J Public Health*; 2014, 58 (3): 202-3

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**NAT****PMID:**25116828 **PMCID:****EPH**

**Mohan, V. R., Sharma, S., Ramanujam, K., Babji, S., Koshy, B., Bondu, J. D., John, S. M. and Kang, G.**

Effects of elevated blood lead levels in preschool children in urban Vellore  
*Indian Pediatr*; 2014, 51 (8): 621-5

**Address:**Departments of Community Health, # Surgery, \$ Gastrointestinal Sciences, ^Developmental Pediatrics, \*\* Clinical Biochemistry and \*Low Cost Effective Care Unit, Christian Medical College, Vellore. Tamil Nadu. Correspondence to: Dr Venkata Raghava Mohan, Department of Community Health, Christian Medical College, Vellore 632 002, Tamil Nadu, India. venkat@cmcvellore.ac.in.

**OBJECTIVE:** To study the burden and associated risk factors for elevated blood lead levels among pre-school children (15-24 months) in urban Vellore, and to study its effects on child cognition and anemia. **DESIGN:** An investigative study through Mal-ED cohort. **SETTING:** Eight adjacent urban slums in Vellore, Tamil Nadu. **PARTICIPANTS:** 251 babies recruited through Mal-ED Network. **OUTCOME MEASURES:** Blood lead levels using Graphite Furnace Atomic Absorption Spectrophotometry method at 15 and 24 mo; hemoglobin estimation

by azidemet hemoglobin method; cognitive levels using Bayley Scales of Infant Development III. **RESULTS:** Around 45% of children at 15 months and 46.4% at 24 months had elevated blood lead levels (>10 microg/dL). Among children who had elevated blood lead levels at 15 months, 69.2% (45/65) continued to have elevated levels at 24 months. After adjusting for potential confounders, children from houses having a piped drinking water supply and houses with mud or clay floors were at significantly higher risk of having elevated blood lead levels at 15 months. Thirty one percent (21/67) of the children with elevated blood lead levels had poor cognitive scores. Children with elevated blood lead levels at 15 months had higher risk (Adjusted OR 1.80; 95% CI 0.80 - 3.99) of having poorer cognitive scores at 24 months. More than half of the children (57%) were anemic at 15 months of age, and elevated blood lead levels were not significantly associated with anemia. **CONCLUSIONS:** Elevated blood lead levels are common among preschool children living in urban slums of Vellore. Poorer conditions of the living environment are associated with elevated lead levels.

**NAT****PMID:**25128994 **PMCID:****EPH**

**Paul, A., Gladstone, B. P., Mukhopadhy, I. and Kang, G.**  
Rotavirus infections in a community based cohort in Vellore, India  
Vaccine; 2014, 32 Suppl 1 A49-54

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**INTRODUCTION:** The burden of infection in communities determines the spread of rotavirus infection and disease in susceptible populations. This study reports rotavirus infection and disease in a community based birth cohort in Vellore. **METHODS:** Bimonthly

surveillance and diarrheal stool were collected from 452 children enrolled at birth, of whom 373 completed three years of follow up. Samples were screened for rotavirus by an ELISA and genotyped by reverse transcription polymerase chain reaction for VP7 and VP4 genes. Rotavirus incidence rates were calculated using Poisson regression equations. Risk factors associated with symptomatic and asymptomatic rotavirus infections were compared using multiple logistic regression. **RESULTS:** A total of 1149 episodes of rotavirus infections occurred in 94.4% children in the cohort. Incidence of rotavirus infection was 1.04 (0.97-1.1) per child-year with 0.75 asymptomatic and 0.29 symptomatic infections per child-year. About 18% of the children were infected in the first month, mainly with the G10P[11] strain. Rotavirus infections were more prevalent during October-March, but seasonality was not as marked in rotavirus disease. Rotavirus was associated with 15.1% of mild diarrhea, 38.9% of moderate/severe diarrhea and 66.7% of very severe diarrhea. Four common G types - G1 (26.8%), G2 (16%), G10 (11.2%) and G9 (9.6%) were seen, with high rates of mixed infections and untypable samples. Male gender, presence of siblings and low maternal education were associated with rotavirus disease. **CONCLUSION:** This study demonstrates that rotavirus is the most common cause of gastroenteritis in the community, and indicates that since rotavirus caused the greatest proportion of moderate and severe disease, targeted interventions such as vaccines are needed for rotavirus, in addition to health education, sanitation and appropriate treatment to decrease diarrheal disease in communities.

**INTL****PMID:**25091680 **PMCID:****EPH**

**Premkumar, P. S., Parashar, U. D., Gastanaduy, P. A., Mccracken, J. P., De Oliveira, L. H., Payne, D. C., Patel, M. M., Tate, J. E. and Lopman, B. A.**  
Reduced Rotavirus Vaccine Effectiveness Among Children Born During the Rotavirus Season: A Pooled Analysis of 5 Case-Control Studies From the Americas

Clin Infect Dis; 2014,

**Address:**National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia The Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia.

Center for Health Studies, Universidad del Valle de Guatemala, Guatemala City. Pan American Health Organization, Washington, District of Columbia.

Using data from rotavirus vaccine effectiveness (VE) studies, we assessed whether rotavirus season modifies rotavirus VE in infants. In the first year of life, adjusted VE was 72% for children born during rotavirus season and 84% for children born in other months ( $P = .01$ ). Seasonal factors may interfere with vaccine performance.

#### INTL

**PMID:**25452592 **PMCID:**

#### EPH

**Premkumar, P.**, Lopman, B., Ramani, S., Paul, A., Gladstone, B., Muliylil, J., Mukhopadhy, I., Parashar, U. and Kang, G.

Association of serum antibodies with protection against rotavirus infection and disease in South Indian children Vaccine; 2014, 32 Suppl 1 A55-61

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National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention, 1600 Clifton Road, MS-G04, Atlanta, GA 30333, USA. Electronic **Address:** [blopman@cdc.gov](mailto:blopman@cdc.gov).

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National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention, 1600 Clifton Road, MS-G04, Atlanta, GA 30333, USA.

Serum antibodies play an important role in natural protection from rotavirus infection and disease, but conflicting estimates of association have emerged from epidemiological studies in different geographical settings. In this study, we aim to assess the relationship between pre-existing serum immunoglobulin (Ig)G and IgA titers with protection against rotavirus infection and disease in a birth cohort of Indian children. Children were recruited at birth and followed up for 36 months. Stool samples were collected every 2 weeks and during episodes of diarrhea and serum samples were obtained at least every 6 months. The incidence rate of rotavirus infection and diarrhea was 0.9 (95% CI: 0.88, 0.99) and 0.2 (95% CI: 0.19, 0.25) episodes per child year, respectively. The risk of rotavirus infection and diarrhea decreased with age, while antibody titers (IgG and IgA) increased with age. After adjusting for age and number of previous infections, higher levels of IgG and IgA were independently associated with reduced risk of rotavirus infection. However, we did not find a clear association of IgG or IgA with rotavirus diarrhea risk or a threshold level of protection. The study supports a correlation of serum antibodies in reducing the risk of rotavirus infections, however the potential of serum antibody titer as a correlate of protection is not clear for children in lower income settings.

#### INTL

**PMID:**25091682 **PMCID:**

#### EPH

**Rahman, S. M.**, Angeline, R. P., David, K. V. and Christopher, P.

Role of Family Medicine Education in India's Step Toward Universal Health Coverage

J Family Med Prim Care; 2014, 3 (3): 180-2

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India's commitment to universal health coverage has grown stronger with the submission of High Level Expert Group report by the Planning Commission in 2012. With this report comes the commitment to increase the primary health-care workforce to meet the population needs. However, the focus should not be just to increase the number of health workers, but to produce better health workers. Doctors, nurses and community health workers trained in primary and secondary health-care facilities can make a significant contribution in responding to the needs of the local community. The role of family medicine education is worth exploring in this context to equip the primary care health workers with the competencies of providing person-centered, comprehensive and continuous care.

#### INTL

**PMID:** 25374848 **PMCID:** 4209666

#### EPH

**Rupa, V.**, Isaac, R., Jalagandeeswaran, R., Manoharan, A. and Rebekah, G. Epidemiology of nasopharyngeal colonization by *S. pneumoniae* in Indian infants in the first 2 years of life  
*Int J Pediatr Otorhinolaryngol*; 2014, 78 (10): 1701-6

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Department of Medicine (Infectious Diseases Unit), Christian Medical College, Vellore, India.

Department of Biostatistics, Christian Medical College, Vellore, India.

**BACKGROUND:** Streptococcus pneumoniae is a leading cause of invasive disease in developing countries like India. Although the 13 valent

pneumococcal vaccine has already been introduced in the country, there is very little epidemiological data regarding *S. pneumoniae* colonization and antibiotic susceptibility in Indian infants.

**METHODS:** We studied serogroup/serotype (SGT) distribution and antibiotic susceptibility pattern of *S. pneumoniae* in unvaccinated Indian infants by performing monthly nasopharyngeal swabbing of a birth cohort for 2 years. **RESULTS:** Colonization began soon after birth and was complete in the first year of life in the majority of those colonized. Carriage rates increased during winter ( $p < 0.01$ ) and in those with upper respiratory infection (URI) ( $p < 0.01$ ). The most frequently (76.1%) isolated SGT were 19, 6, 15, 23, 9, 35 and 10. Vaccine SGT accounted for 60.5% of all colonizers. Antibiotic resistance was maximum for cotrimoxazole (94.3%) and least for erythromycin (11.2%) with no penicillin resistance. Ten of the commonest SGT which cause invasive disease among Indian infants comprised 46.9% of the colonizers. Serogroups 1, 5, 45 and 12 which cause invasive disease in under-fives were not seen in this birth cohort in the first year. **CONCLUSIONS:** *S. pneumoniae* colonization in Indian infants commences soon after birth and chiefly occurs in the first year of life. The 13 valent vaccine may protect against a little less than half the commonly seen invasive SGT of *S*

#### INTL

**PMID:** 25112164 **PMCID:**

#### EPH

**Sarkar, R.**, Tate, J. E., Ajjampur, S. S., Kattula, D., John, J., Ward, H. D. and Kang, G.

Burden of diarrhea, hospitalization and mortality due to cryptosporidial infections in Indian children

*PLoS Negl Trop Dis*; 2014, 8 (7): e3042

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Centers for Disease Control and Prevention, Atlanta, Georgia, United States of America.

Christian Medical College, Vellore, Tamil Nadu, India; Tufts Medical Center, Boston, Massachusetts, United States of America.

**BACKGROUND:** Cryptosporidium spp. is a common, but under-reported cause of childhood diarrhea throughout the world, especially in developing countries. A comprehensive estimate of the burden of cryptosporidiosis in resource-poor settings is not available.

**METHODOLOGY/PRINCIPAL FINDINGS:** We used published and unpublished studies to estimate the burden of diarrhea, hospitalization and mortality due to cryptosporidial infections in Indian children. Our estimates suggest that annually, one in every 6-11 children <2 years of age will have an episode of cryptosporidial diarrhea, 1 in every 169-633 children will be hospitalized and 1 in every 2890-7247 children will die due to cryptosporidiosis. Since there are approximately 42 million children <2 years of age in India, it is estimated that Cryptosporidium results in 3.9-7.1 million diarrheal episodes, 66.4-249.0 thousand hospitalizations, and 5.8-14.6 thousand deaths each year.

**CONCLUSIONS/SIGNIFICANCE:** The findings of this study suggest a high burden of cryptosporidiosis among children <2 years of age in India and makes a compelling case for further research on transmission and prevention modalities of Cryptosporidium spp. in India and other developing countries.

**INTL**

**PMID:**25058664 **PMCID:**4109911

**EPH**

**Tate, J. E.,** Arora, R., Bhan, M. K., Yewale, V., Parashar, U. D. and Kang, G. Rotavirus disease and vaccines in India: a tremendous public health opportunity Vaccine; 2014, 32 Suppl 1 vii-xii

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Ministry of Science and Technology, Government of India, India.  
Indian Academy of Pediatrics, Mumbai, Maharashtra, India.  
Christian Medical College, Vellore, Tamil Nadu, India. **Electronic Address:** [gkang@cmcvellore.ac.in](mailto:gkang@cmcvellore.ac.in).

**INTL**

**PMID:**25091690 **PMCID:**

**EPH**

**Abraham, A.,** Devasia, A. J., Varatharajan, S., Karathedath, S., Balasubramanian, P. and Mathews, V. Effect of cytosine arabinoside metabolizing enzyme expression on drug toxicity in acute myeloid leukemia Ann Hematol; 2014,

**Address:**Department of Haematology, Christian Medical College, Vellore, 632004, India.

**INTL**

**PMID:**25391240 **PMCID:**

**MISC**

**Balamurugan, R.,** Chandragunasekaran, A. S., Chellappan, G., Rajaram, K., Ramamoorthi, G. and Ramakrishna, B. S. Probiotic potential of lactic acid bacteria present in home made curd in southern India Indian J Med Res; 2014, 140 (3): 345-55

**Address:**The Wellcome Trust Research Laboratory, Department of Gastrointestinal Sciences, Christian Medical College, Vellore, India.

**BACKGROUND & OBJECTIVES:** The human gut microbiota play a significant role in nutritional processes. The concept

of probiotics has led to widespread consumption of food preparations containing probiotic microbes such as curd and yogurt. Curd prepared at home is consumed every day in most homes in southern India. In this study the home-made curd was evaluated for lactic acid bacteria (LAB) with probiotic potential. METHODS: Fifteen LAB (12 lactobacilli, 1 *IO actococcus*, 2 *Leuconostoc*) and one yeast isolated from home-made curd were evaluated for resistance to acid, pepsin, pancreatin and bile salts; antimicrobial resistance; intrinsic antimicrobial activity; adherence to Caco-2 epithelial cells; ability to block pathogen adherence to Caco-2 cells; ability to inhibit interleukin (IL)-8 secretion from HT-29 epithelial cells in response to *Vibrio cholerae*; and ability to induce anti-inflammatory cytokine expression in THP-1 monocyte cells. RESULTS: Lactobacillus abundance in fermenting curd peaked sharply at 12 h. Nine of the strains survived exposure to acid (pH 3.0) for at least one hour, and all strains survived in the presence of pancreatin or bile salts for 3 h. None showed haemolytic activity. All were resistant to most antimicrobials tested, but were sensitive to imipenem. Most strains inhibited the growth of *Salmonella Typhimurium* while five inhibited growth of *V. cholerae* O139. Seven strains showed adherence to Caco-2 cells ranging from 20-104 per cent of adherence of an adherent strain of *Escherichia coli*, but all inhibited *V. cholerae* adherence to Caco-2 cells by 20-100 per cent. They inhibited interleukin-8 secretion from HT-29 cells, in response to *V. cholerae*, by 50-80 per cent. Two strains induced IL-10 and IL-12 messenger ribonucleic acid (mRNA) expression in THP-1 cells. INTERPRETATION & CONCLUSIONS: LAB in curd had properties consistent with probiotic potential, but these were not consistent across species. LAB abundance in curd increased rapidly at 12 h of fermentation at room temperature and declined thereafter.

**NAT**

**PMID:**25366201 **PMCID:**4248380

**MISC**

**Benjamin, T. E.**, Crasta, J. E., Suresh, A. P., Alwinesh, M. J., Kanniappan, G., Padankatti, S. M., Nair, M. K. and Russell, P. S.

Sensory profile caregiver questionnaire: a measure for sensory impairment among children with developmental disabilities in India

Indian J Pediatr; 2014, 81 Suppl 2 183-6

**Address:** Department of Occupational Therapy, Christian Medical College, Vellore, Tamil Nadu, India.

**OBJECTIVE:** There is no validated measure for assessing sensory processing among children with Developmental Disorders (DD) in India, and therefore, the authors validated the Sensory Profile Caregiver Questionnaire (SPCQ). METHODS: Parents of 119 children with DD or typical development completed the SPCQ. The diagnosis of DD was confirmed by psychologists using standardized measures. Two experienced occupational therapists independently diagnosed sensory processing dysfunction by consensus or reference standard diagnosis. The convergent and divergent validity were assessed by another rater. The data was analyzed for diagnostic accuracy, reliability and validity appropriately. RESULTS: A total SPCQ score of  $\leq 481$  ( $Sn = 81.58\%$ ,  $Sp = 85.19\%$ ;  $AUC = 0.90$ ,  $z = 14.95$ ;  $P 0.0001$ ) is appropriate for the diagnosis of sensory processing dysfunction. The inter-rater reliability ( $ICC = 0.87$ ), test-retest reliability ( $ICC = 0.90$ ), internal consistency (Cronbach's  $\alpha = 0.86$ ), section-total correlation, face and content validity for the SPCQ were good. Convergent validity with the Sensory Processing Measure ( $r = -0.76$ ,  $P 0.001$ ), and divergent validity with the subscale scores for social skills/oppositional behavior of ADD-H Comprehensive Teacher Rating Scale ( $r = 0.32$ ;  $P 0.1$ ;  $r = 0.08$ ;  $P 0.6$ ) was established. CONCLUSIONS: The SPCQ has adequate psychometric properties for use in the Indian population for identifying sensory processing dysfunction

**NAT**

**PMID:**25338495 **PMCID:**

**MISC****Bhaskar, A.**

Playing games during a lecture hour: experience with an online blood grouping game

Adv Physiol Educ; 2014, 38 (3): 277-8

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**INTL**

**PMID:**25179620 **PMCID:**4154262

**MISC****Chandramouleeswaran, S.,** Edwin, N. C. and Braganza, D.

Job stress, satisfaction, and coping strategies among medical interns in a South Indian tertiary hospital

Indian J Psychol Med; 2014, 36 (3): 308-11

**Address:** Department of Psychiatry, Christian Medical College, Vellore, Tamil Nadu, India.

Department of General Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND:** It has previously been demonstrated that there is a significant drop in all domains of quality of life among interns during internship. **AIMS:** A modified version of the health consultant's job stress and satisfaction questionnaire (HCJSSQ) was used to assess and quantify aspects of internship that were perceived as stressful and satisfying. Methods used to cope with work place stress were explored. **SETTINGS AND DESIGN:** A prospective cohort study was undertaken among 93 medical interns doing a rotating internship at the Christian Medical College and Hospital, a tertiary-care hospital in southern India. **MATERIALS AND METHODS:** After completion of 6 months of internship, the modified version of the HCJSSQ was administered to all participants. **STATISTICAL ANALYSIS:** The data were entered into Statistical Package for the Social Sciences (SPSS) Version 9 by double data entry technique. Percentages of interns reporting high levels of stress,

satisfaction were calculated. **RESULTS:** While 63.4% of interns reported high levels of satisfaction, 45.2% of the interns experienced high levels of stress, 17.6% coped with work stress by using alcohol and nicotine, and 37% coped through unhealthy eating habits. **CONCLUSION:** More people found internship satisfying than stressful. However, a high proportion found it stressful, and many reported unhealthy coping mechanisms.

**NAT**

**PMID:**25035558 **PMCID:**4100420

**MISC****Chandramouleeswaran, S.,** Edwin, N. C., Victor, P. J. and Tharyan, P.

The emergency physician's assessment of suicide risk in intentional self-poisoning using the modified SAD PERSONS scale versus standard psychiatric evaluation in a general hospital in South India: A cross-sectional study

Trop Doct; 2015, 45 (1): 21-6

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Professor, Department of Psychiatry, Prof BV Moses Centre for Evidence-Informed Health Care and Health Policy, Christian Medical College, Vellore, Tamil Nadu, India.

**INTRODUCTION:** The reliable identification, by emergency physicians, of those with intentional self-poisoning at risk of repeating attempts is crucial, particularly in countries with a shortfall of mental health professionals. **METHODS:** This cross-sectional study of intentional self-poisoning in India compared an emergency physician's assessment for the need for psychiatric referral, using the modified SAD PERSONS Scale (MSPS) as an interview guide, with a standard psychiatric interview. **RESULTS:** In 67 consecutive

adults with intentional self-poisoning, MSPS cut-off scores of 5 or more best approximated psychiatric assessments for the need for psychiatric referral (positive likelihood ratio 2.9, 95% confidence interval [CI] 0.8-10.2; negative likelihood ratio 0.5, 95% CI 0.3-0.8). **CONCLUSIONS:** MSPS-guided emergency physicians' assessments after self-poisoning showed modest concordance with psychiatric assessments of suicide-risk. Concordance with psychiatric assessments may improve if risk factors prevalent in different settings are identified and incorporated in the MSPS.

**INTL****PMID:**25358507**PMCID:****MISC**

**Checkley, W.,** White, A. C., Jr., Jaganath, D., Arrowood, M. J., Chalmers, R. M., Chen, X., Fayer, R., Griffiths, J. K., Guerrant, R. L., Hedstrom, L., Huston, C. D., Kotloff, K. L., Kang, G., Mead, J. R., Miller, M., Petri, W. A., Jr., Priest, J. W., Roos, D. S., Striepen, B., Thompson, R. C., Ward, H. D., Van Voorhis, W. A., Xiao, L., Zhu, G. and Houpt, E. R.

A review of the global burden, novel diagnostics, therapeutics, and vaccine targets for cryptosporidium  
Lancet Infect Dis; 2015, 15 (1): 85-94

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Division of Infectious Diseases and International Health, University of Virginia, Charlottesville, VA, USA.

Department of Biology and Department of Chemistry, Brandeis University, Waltham, MA, USA.

Division of Infectious Diseases, University of Vermont, Burlington, VT, USA.

Division of Infectious Disease and Tropical Pediatrics, Department of Pediatrics, Center for Vaccine Development, University of Maryland School of Medicine, Baltimore, MD, USA.

Division of Gastrointestinal Sciences, Christian Medical College, Vellore, India.

Department of Pediatrics, Emory University, Atlanta, GA, USA; Atlanta VA Medical Center, Decatur, GA, USA.

Fogarty International Center, National Institutes of Health, Bethesda, MD, USA.

Department of Biology, University of Pennsylvania, Philadelphia, PA, USA.

Center for Tropical and Emerging Global Diseases, University of Georgia, Athens, GA, USA.

School of Veterinary and Life Sciences, Murdoch University, Perth, WA, Australia.

Division of Geographic Medicine and Infectious Diseases, Tufts Medical Center Boston, MA, USA.

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Cryptosporidium spp are well recognised as causes of diarrhoeal disease during waterborne epidemics and in immunocompromised hosts. Studies have also drawn attention to an underestimated global burden and suggest major gaps in optimum diagnosis, treatment, and immunisation. Cryptosporidiosis is increasingly identified as an important cause of morbidity and mortality worldwide. Studies in low-resource settings and

high-income countries have confirmed the importance of cryptosporidium as a cause of diarrhoea and childhood malnutrition. Diagnostic tests for cryptosporidium infection are suboptimum, necessitating specialised tests that are often insensitive. Antigen-detection and PCR improve sensitivity, and multiplexed antigen detection and molecular assays are underused. Therapy has some effect in healthy hosts and no proven efficacy in patients with AIDS. Use of cryptosporidium genomes has helped to identify promising therapeutic targets, and drugs are in development, but methods to assess the efficacy in vitro and in animals are not well standardised. Partial immunity after exposure suggests the potential for successful vaccines, and several are in development; however, surrogates of protection are not well defined. Improved methods for propagation and genetic manipulation of the organism would be significant advances.

**INTL**

**PMID:**25278220 **PMCID:**

**MISC**

**Chellappan, S.,** Ezhilarasu, P., Gnanadurai, A., George, R. and Christopher, S.

Can symptom relief be provided in the home to palliative care cancer patients by the primary caregivers? An Indian study

Cancer Nurs; 2014, 37 (5): E40-7

**Address:**Author Affiliation: Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND:** A large proportion of cancer deaths occur in the developing world, with limited resources for palliative care. Many patients dying at home experience difficult symptoms. **OBJECTIVE:** The objective of this study was to assess the feasibility of a structured training program on symptom management along with an acute symptom management kit for primary caregivers of cancer patients receiving home care. **METHODS:** Descriptive design was used. Thirty primary caregivers of cancer patients attending the palliative care clinic in Vellore, South

India, were provided training on the administration of drugs for acute symptoms. A plastic box with partitions for drugs specific to symptom was provided. On follow-up visits, the usage of the kit, drugs used, and routes of administration were noted. A structured questionnaire with a 4-point scale was used to assess primary caregiver views and satisfaction. **RESULTS:** Of primary caregivers, 96.7% used a kit. The common medications used were morphine, metoclopramide, dexamethasone, and benzodiazepines. Seventy-three percent of primary caregivers administered subcutaneous injections at home. Hospital visits for acute symptoms reduced by 80%; 90% were satisfied with the training received; 73% stated it was not a burden to treat the patient at home. **CONCLUSION:** The training program and acute symptom management kit were favorably received and appropriately used by caregivers of diverse backgrounds. Rural backgrounds and illiteracy were not barriers to acceptance. **IMPLICATION FOR PRACTICE:** Healthcare professionals should train caregivers during hospital visits, empowering them to manage acute symptoms and provide simple nursing care. This is doubly important in countries where resources are limited and palliative care facilities scarce.

**INTL**

**PMID:**24172754 **PMCID:**

**MISC**

**Crasta, J. E.,** Benjamin, T. E., Suresh, A. P., Alwinesh, M. T., Kanniappan, G., Padankatti, S. M., Russell, P. S. and Nair, M. K.

Feeding problems among children with autism in a clinical population in India  
Indian J Pediatr; 2014, 81 Suppl 2 169-72

**Address:**Department of Occupational Therapy, Christian Medical College, Vellore, Tamil Nadu, India.

**OBJECTIVES:** To compare the prevalence and profile of feeding problems (FP) and their relationship with sensory processing in children with autism and intellectual disability (ID). **METHODS:** Children between ages 3 to 10 y with autism (N = 41) and ID (N =

56) were recruited and assessed with Brief Autism Mealtime Behavior Inventory, Sensory Profile Questionnaire, Childhood Autism Rating Scale and Binet-Kamat Scale of Intelligence or Gesell's Developmental Schedule. Assessments were done by independent raters. Bivariate and multivariate analyses were used appropriately. RESULTS: The prevalence of FP were 61 and 46.4 % among children with autism and ID respectively. Feeding problems were severe among children with autism (P 0.001), especially in young children with autism (P 0.05), and gender was not related to FP. Disruptive meal-time behaviors (P 0.001) and food over-selectivity (P 0.02) were significantly more among children with autism in the bivariate and multivariate analysis. Feeding problems and various dimensions of sensory processing were significantly associated after controlling the confounders. CONCLUSIONS: These findings underscore the need for mandatory assessment of FP in children with developmental disabilities, and if present, they need to be addressed with multimodal-multidisciplinary interventions.

**NAT****PMID:**25413215 **PMCID:****MISC**

**George, P. V.**, Hooda, A., Pati, P. K., Varghese, L. and Lahiri, A.  
Effect of a Government Scheme on Reperfusion Trends in a tertiary care centre in South India  
Indian Heart J; 2014, 66 (5): 503-5

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Hospital, Vellore 632004, Tamil Nadu, India.

AIMS: Coronary artery disease is the leading cause of mortality and morbidity in our country, of which ST elevation myocardial infarction (STEMI) accounts for the major part of health spending. We sought to study the effect of induction of government health insurance scheme on the trends of reperfusion in patients of acute STEMI. METHODS AND RESULTS: 1133 patients presenting with acute STEMI enrolled. 1079 (95.1%) received some form of reperfusion therapy. Primary PCI was used in 60.6% of patients as the primary reperfusion modality, a six fold increase as compared to previous years. Government health insurance accounted for the one third of all. 34.5% patients underwent pharmacological reperfusion, most commonly with streptokinase. 4.9% patients of STEMI did not receive any form of reperfusion therapy in contrast to 14% during previous years. CONCLUSION: Introduction of government health insurance along with increased awareness has resulted in dramatic changes in the management of STEMI patients.

**NAT****PMID:**25443602 **PMCID:**4223206**MISC**

**Gupta, R.**, James, P., Thangakunam, B. and Christopher, D. J.  
Medical thoracoscopic removal of a metal needle from the pleural space  
BMJ Case Rep; 2014, 2014

**Address:**Department of Pulmonary Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

Pulmonary Department, Christian Medical College, Vellore, Tamil Nadu, India.

Medical thoracoscopy is an excellent diagnostic and therapeutic tool for management of pleural diseases. There have been case reports of removal of foreign bodies from pleural spaces with video-assisted thoracoscopic surgery under general anaesthesia by thoracic surgeons. We present a case of successful removal of an 8 cm long

metal needle from the pleural space with single port medical semirigid thoracoscopy under local anaesthesia by a chest physician. Removal of a foreign body from the pleural space is one more indication for medical thoracoscopy, however, an experienced chest physician and proper case selection are very important for safety and a successful outcome of this procedure.

**INTL**

**PMID:**25301430 **PMCID:**

**MISC**

**Halder, A.** and Jose, R.

Residual adherent placenta with bladder injury: can we use methotrexate?

J Obstet Gynaecol India; 2014, 64 (4): 293-4

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**NAT**

**PMID:**25136179 **PMCID:**4126940

**MISC**

**Iadarling T**

POEMS Syndrome: Response to queries  
Journal of Mahatma Gandhi Institute of Medical Sciences. 2014 sep; 19(2): 170-71

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**KEYWORDS:**

POEMS Syndrome; Humans

References: 3

**NAT**

Record Identifier: NI248656

**NON INDEXED**

**MISC**

**Jacob, K. S.**

Insight in psychosis: An independent predictor of outcome or an explanatory model of illness?

Asian J Psychiatr; 2014, 11 65-71

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While the traditional view within psychiatry is that insight is independent of psychopathology and predicts the course and outcome of psychosis, recent data from India argues that insight is secondary to interaction between progression of illness on one hand and local culture and social environment on the other. The findings suggest that "insight" is an explanatory model (EM) and may reflect attempts at coping with the devastating effects of mental disorders. Most societies are pluralistic and offer multiple, divergent and contradictory explanations for illnesses. These belief systems interact with the trajectory of the person's illness to produce a unique personal understanding, often based on a set of complex and contradictory EMs. Like all EMs, insight provides meaning to explain and overcome challenges including disabling symptoms, persistent deficits, impaired social relations and difficult livelihood issues. The persistence of distress, impairment, disability and handicap, despite regular and optimal treatment, call for explanations, which go beyond the simplistic concept of disease. People tend to choose EMs, which are non-stigmatizing and which seem to help explain and rationalize their individual concerns. The frequent presence of multiple and often contradictory EMs, held simultaneously, suggest that they are pragmatic responses at coping. The results advocate a non-judgmental approach and broad based assessment of EMs of illness and their comparison with culturally appropriate beliefs, attributions and actions. The biomedical model of illness should be presented without dismissing patient beliefs or belittling local cultural explanations for illness. Clinical practice demands a negotiation of shared model of care and treatment plan between patient and physician perspectives. The diversity of patients, problems, beliefs and cultures mandates the need to educate, match, negotiate and integrate psychiatric and psychological frameworks and

interventions. It calls for multifaceted and nuanced understanding of "insight" and explanatory models of illness.

**INTL**

**PMID:**25453700 **PMCID:**

**MISC**

**Jayaprakash, S.**, Jeevanandam, J. and Subramani, K.

Ab initio molecular orbital and density functional studies on the ring-opening reaction of oxetene

J Mol Model; 2014, 20 (11): 2494

**Address:**Department of Chemistry, Islamiah College, Vaniyambadi, Vellore District, Tamil Nadu, India, [s.jayaprakash004@gmail.com](mailto:s.jayaprakash004@gmail.com).

Electrocyclic ring opening (ERO) reaction of 2H-Oxete (oxetene) has been carried out computationally in the gas phase and ring opening barrier has been computed. When comparing the ERO reaction of oxetene with the parent hydrocarbon (cyclobutene), the ring opening of cyclobutene is found to exhibit pericyclic behavior while oxetene shows mild pseudopericyclic nature. Computation of the nucleus-independent chemical shift (NICS) of oxetene adds evidence for pseudopericyclic behavior of oxetene. By locking of lone pair of electrons by hydrogen bonding, it is seen that the pseudopericyclic nature of the ring opening of oxetene is converted into a pericyclic one. CASSCF(5,6)/6-311+G\*\* computation was carried out to understand the extent of involvement of lone pair of electrons during the course of the reaction. CR-CCSD(T)/6-311+G\*\* computation was performed to assess the energies of the reactant, transition state and the product more accurately

**INTL**

**PMID:**25367041 **PMCID:**

**MISC**

**Jebasingh, F. K.**, Naik, D., Chandramohan, A. and Paul, M. J.

Posterior gastric diverticulum mimicking adrenal adenoma on imaging

BMJ Case Rep; 2014, 2014

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Department of Endocrine Surgery, Christian Medical College, Vellore, Tamil Nadu, India.

**INTL**

**PMID:**25535229 **PMCID:**

**MISC**

**John, S. M.**, Thomas, R. J., Kaki, S., Sharma, S. L., Ramanujam, K., Raghava, M. V., Koshy, B., Bose, A., Rose, A., Rose, W., Ramachandran, A., Joseph, A. J., Babji, S. and Kang, G.

Establishment of the MAL-ED birth cohort study site in Vellore, Southern India

Clin Infect Dis; 2014, 59 Suppl 4 S295-9

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The Indian Etiology, Risk Factors and Interactions of Enteric Infections and Malnutrition and the Consequences for Child Health and Development (MAL-ED) site is in Vellore, Tamil Nadu, in south India and is coordinated by the Christian Medical College, Vellore, which has many years of experience in establishing and following cohorts. India is a diverse country, and no single area can be representative with regard to many health and socioeconomic indicators. The site in Vellore is an urban semiorganized settlement or slum. In the study site, the average family size is 5.7, adults who are gainfully employed are mostly unskilled laborers, and 51% of the population uses the field as their toilet facility. Previous studies from Vellore slums have reported stunting in well over a third of children, comparable to national estimates. The infant mortality rate is 38 per 1000 live births, with deaths due mainly to perinatal and infectious causes. Rigorous staff

training, monitoring, supervision and refinement of tools have been essential to maintaining the quality of the significantly large quantity of data collected. Establishing a field clinic within the site has minimized inconvenience to participants and researchers and enabled better rapport with the community and better follow-up. These factors contribute to the wealth of information that will be generated from the MAL-ED multisite cohort, which will improve our understanding of enteric infections and its interactions with malnutrition and development of young children.

**INTL**

**PMID:25305300 PMCID:**

**MISC**

**Joseph, G.**, Chacko, S. T., Stephen, E. and Joseph, E.

Transseptal ascending aortic access facilitates transcatheter embolization of proximal type I endoleak associated with bird-beak configuration of an endograft in the proximal aortic arch

J Endovasc Ther; 2014, 21 (6): 805-11

**Address:**1 Department of Cardiology, Christian Medical College, Vellore, India. Purpose : To report the initial use of antegrade transseptal ascending aortic access to perform transcatheter embolization of a proximal type I endoleak associated with bird-beak configuration of an endograft in the proximal aortic arch. Case Report : A 61-year-old man underwent endovascular repair of a large, symptomatic aortic arch aneurysm located distal to the left common carotid artery using a fenestrated endograft. Completion angiography showed bird-beak configuration of the proximal endograft and a large type Ia endoleak. In a separate procedure, the endoleak was embolized with cyanoacrylate glue via an antegrade ascending aortic access obtained through a transseptal sheath stabilized by an indwelling arteriovenous wire loop. This approach provided straight-line access into the endoleak with requisite catheter support, and complete thrombosis of the aneurysm sac was achieved. The patient's

symptoms abated, and at 1-year follow-up, there was no endoleak, and the aneurysm sac had shrunken markedly. Conclusion : Antegrade transseptal ascending aortic access facilitates transcatheter embolization of type Ia endoleak in the proximal aortic arch.

**INTL**

**PMID:25453882 PMCID:**

**MISC**

**Korah, S.**, Philip, S., Jasper, S., Antonio-Santos, A. and Braganza, A.

Strabismus surgery before versus after completion of amblyopia therapy in children

Cochrane Database Syst Rev; 2014, 10 CD009272

**Address:**Department of Ophthalmology, Christian Medical College, Vellore, Tamil Nadu, India, 632001.

**BACKGROUND:** Normal visual development occurs when the brain is able to integrate the visual input from each of the two eyes to form a single three-dimensional image. The process of development of complete three-dimensional vision begins at birth and is almost complete by 24 months of age. The development of this binocular vision is hindered by any abnormality that prevents the brain from receiving a clear, similar image from each eye, due to decreased vision (e.g. amblyopia), or due to misalignment of the two eyes (strabismus or squint) in infancy and early childhood. Currently, practice patterns for management of a child with both strabismus and amblyopia are not standardized. **OBJECTIVES:** To study the functional and anatomic (ocular alignment) outcomes of strabismus surgery before completion of amblyopia therapy as compared with surgery after completion of amblyopia therapy in children under seven years of age. **SEARCH METHODS:** We searched CENTRAL (which contains the Cochrane Eyes and Vision Group Trials Register) (2014, Issue 6), Ovid MEDLINE, Ovid MEDLINE In-Process and Other Non-Indexed Citations, Ovid MEDLINE Daily, Ovid OLDMEDLINE (January 1946 to July 2014), EMBASE (January 1980 to July 2014), Latin American and Caribbean

Health Sciences Literature Database (LILACS) (January 1982 to July 2014), the metaRegister of Controlled Trials (mRCT) ([www.controlled-trials.com](http://www.controlled-trials.com)), ClinicalTrials.gov ([www.clinicaltrials.gov](http://www.clinicaltrials.gov)) and the World Health Organization (WHO) International Clinical Trials Registry Platform (ICTRP) ([www.who.int/ictrp/search/en](http://www.who.int/ictrp/search/en)). We did not use any date or language restrictions in the electronic searches for trials. We last searched the electronic databases on 24 July 2014. A manual search for articles from a review of the references of the selected publications and conference abstracts was completed to identify any additional relevant studies. SELECTION CRITERIA: We searched for randomized controlled trials (RCTs) that provided data on strabismus surgery in children less than seven years of age, performed after initiation of, but before completion of amblyopia therapy, as compared with strabismus surgery after completion of amblyopia therapy. DATA COLLECTION AND ANALYSIS: Two authors independently assessed studies identified from the electronic and manual searches. MAIN RESULTS: There were no RCTs that fit our inclusion criteria and so no analysis was possible. AUTHORS' CONCLUSIONS: As there are no RCTs currently available and the best existing evidence is only from non-randomized studies, there is a need for prospective RCTs to investigate strabismus surgery in the presence of strabismic amblyopia. The optimal timing of when to perform strabismus surgery in children with amblyopia is unknown.

**INTL****PMID:**25315969 **PMCID:****MISC****Kumar, S.**

A time of change

Indian J Urol; 2014, 30 (4): 365

**Address:**Associate Editor, Indian Journal of Urology, Professor in Urology, Christian Medical College, Vellore, Tamilnadu, India E-mail: [drksingh@hotmail.com](mailto:drksingh@hotmail.com).

**NAT****PMID:**25378812 **PMCID:**4220370**MISC**

**Kurien, R. T.,** Chowdhury, S. D., Unnikrishnan, L. S., Simon, E. G., Dutta, A. K., Mahanta, K., Alex, T. and Joseph, A. J.

Endoscopic treatment of a duodenal duplication cyst

Endoscopy; 2014, 46 Suppl 1 UCTN E583-4

**Address:**Department of Gastrointestinal Sciences, Christian Medical College, Vellore, India.

Department of Radiodiagnosis, Christian Medical College, Vellore, India.

Department of Pathology, Christian Medical College, Vellore, India.

**INTL****PMID:**25502250 **PMCID:****MISC**

**Lionel, K. R.,** Singh, G., Mathew, R. R., Moorthy, R. K. and Rajshekhar, V.

Hypoventilation: an aid to the neurosurgeon

Neurol India; 2014, 62 (4): 441-3

**Address:**Department of Anaesthesia, Christian Medical College, Vellore, Tamil Nadu, India.

**NAT****PMID:**25237957 **PMCID:****MISC**

**Madhuri, V.** and Gahukamble, A.

Cochrane in context: Interventions for treating femoral shaft fractures in children and adolescents

Evid Based Child Health; 2014, 9 (4): 827-8

**Address:**Paediatric Orthopaedics Unit, Christian Medical College, Vellore, India. [madhuriwalter@cmcvellore.ac.in](mailto:madhuriwalter@cmcvellore.ac.in).

Cochrane Review: Interventions for treating femoral shaft fractures in children and adolescents Madhuri V, Dutt V, Gahukamble AD, Tharyan P. Interventions for treating femoral shaft fractures in children and adolescents. Cochrane Database of Systematic Reviews 2014, Issue 7. Art. No.: CD009076. DOI:

10.1002/14651858.CD009076.pub2.

This companion piece to the review, "Interventions for treating femoral shaft

fractures in children and adolescents," contains the following pieces: The abstract of the review A commentary from one or more of the review authors, explaining why the review team felt the review was an important one to produce Some other recently published references on this topic.

**INTL****PMID:**25504971 **PMCID:****MISC**

**Madhuri, V.,** Dutt, V., Gahukamble, A. D. and Tharyan, P.

Interventions for treating femoral shaft fractures in children and adolescents  
Cochrane Database Syst Rev; 2014, 7 CD009076

**Address:**Paediatric Orthopaedics Unit, Christian Medical College, Ida Scudder Road, Vellore, Tamilnadu, India, 632004.

**BACKGROUND:** Fractures of the femoral shaft in children are relatively uncommon but serious injuries that disrupt the lives of children and their carers and can result in significant long-term disability. Treatment involves either surgical fixation, such as intramedullary nailing or external fixation, or conservative treatment involving prolonged immobilisation, often in hospital. **OBJECTIVES:** To assess the effects (benefits and harms) of interventions for treating femoral shaft fractures in children and adolescents. **SEARCH METHODS:** We searched the Cochrane Bone, Joint and Muscle Trauma Group Specialised Register (accessed 16 August 2013), the Cochrane Central Register of Controlled Trials (The Cochrane Library 2013 Issue 7), MEDLINE (1946 to August Week 1 2013), EMBASE (1980 to 2012 week 9), CINAHL (16 August 2013), clinical trials registries, conference proceedings and reference lists; and contacted trial authors and experts in the field. **SELECTION CRITERIA:** Randomised and quasi-randomised controlled trials comparing conservative and surgical interventions for diaphyseal fractures of the femur in children under 18 years of age. Our primary outcomes were functional outcome measures,

unacceptable malunion, and serious adverse events. **DATA COLLECTION AND ANALYSIS:** Two authors independently screened and selected trials, assessed risk of bias and extracted data. We assessed the overall quality of the evidence for each outcome for each comparison using the GRADE approach. We pooled data using a fixed-effect model. **MAIN RESULTS:** We included 10 trials (six randomised and four quasi-randomised) involving a total of 527 children (531 fractures). All trials were at some risk of bias, including performance bias as care provider blinding was not practical, but to a differing extent. Just one trial was at low risk of selection bias. Reflecting both the risk of bias and the imprecision of findings, we judged the quality of evidence to be 'low' for most outcomes, meaning that we are unsure about the estimates of effect. Most trials failed to report on self-assessed function or when children resumed their usual activities. The trials evaluated 10 different comparisons, belonging to three main categories. Surgical versus conservative treatment Four trials presenting data for 264 children aged 4 to 12 years made this comparison. Low quality evidence (one trial, 101 children) showed children had very similar function assessed using the RAND health status score at two years after surgery (external fixation) compared with conservative treatment (spica cast): mean 69 versus 68. The other three trials did not report on function. There was moderate quality evidence (four trials, 264 children, aged 4 to 12 years, followed up 3 to 24 months) that surgery reduced the risk of malunion (risk ratio (RR) 0.29, 95% confidence interval (CI) 0.15 to 0.59, 4 trials). Assuming an illustrative baseline risk of 115 malunions per 1000 in children treated conservatively, these data equate to 81 fewer (95% CI 47 to 97 fewer) malunions per 1000 in surgically-treated children. Conversely, low quality evidence indicated that there were more serious adverse events such as infections after surgery (RR 2.39, 95% CI 1.10 to 5.17, 4 trials). Assuming an illustrative baseline risk of 40 serious adverse events per 1000 for conservative treatment, these data

equate to 56 more (95% CI 4 to 167 more) serious adverse events per 1000 children treated surgically. There was low quality evidence (one trial, 101 children) of similar satisfaction levels in children and parents with surgery involving external fixation and plaster cast only. However, there was low quality evidence (one trial, 46 children) that more parents were satisfied with intramedullary nailing than with traction followed by a cast, and that surgery reduced the time taken off from school. Comparisons of different methods of conservative treatmentThe three trials in this category made three different comparisons. We are very unsure if unacceptable malunion rates differ between immediate hip spica versus skeletal traction followed by spica in children aged 3 to 10 years followed up for six to eight weeks (RR 4.0, 95% CI 0.5 to 32.9; one trial, 42 children; very low quality evidence). Malunion rates at 5 to 10 years may not differ between traction followed by functional orthosis versus traction followed by spica cast in children aged 5 to 13 years (RR 0.98, 95% CI 0.46 to 2.12; one trial, 43 children; low quality evidence). We are very unsure (very low quality evidence) if either function or serious adverse events (zero events reported) differ between single-leg versus double-leg spica casts (one trial, 52 young children aged two to seven years). Low quality evidence on the same comparison indicates that single-leg casts are less awkward to manage by parents, more comfortable for the child and may require less time off work by the caregiver. Comparisons of different methods of surgical treatmentThe three trials in this category made three different comparisons. Very low quality evidence means that we are very unsure if the rates of malunion, serious adverse events, time to return to school or parental satisfaction actually differ in children whose fractures were fixed using elastic stable intramedullary nailing or external fixation (one trial, 19 children). The same applies to the rates of serious adverse events and time to resume full weight-bearing in children treated with dynamic versus static external fixation (one trial, 52 children).

Very low quality evidence (one trial, 47 children) means that we do not know if malunion, serious adverse events and time to resume weight-bearing actually differ between intramedullary nailing versus submuscular plating. However, there could be more difficulties in plate removal subsequently. **AUTHORS' CONCLUSIONS:** There is insufficient evidence to determine if long-term function differs between surgical and conservative treatment. Surgery results in lower rates of malunion in children aged 4 to 12 years, but may increase the risk of serious adverse events. Elastic stable intramedullary nailing may reduce recovery time. There is insufficient evidence from comparisons of different methods of conservative treatment or of different methods of surgical treatment to draw conclusions on the relative effects of the treatments compared in the included trials.

**INTL**

**PMID:**25072888 **PMCID:**

**MISC**

**Mandal, S.,** Pile, K., Chacko, R. T. and Danda, D.

Malignancy and autoimmunity: causally or casually related?

Int J Rheum Dis; 2014, 17 (6): 601-5

**Address:**Department of Clinical Immunology and Rheumatology, Christian Medical College and Hospital, Vellore, India

**INTL**

**PMID:**25346148 **PMCID:**

**MISC**

**Mariappan, R.,** Harshit, C. R. and Prasanna, R. G.

Novel Method of Identifying Intraoperative Cuff Leak and its Treatment While Monitoring Cuff Pressure

J Neurosurg Anesthesiol; 2014,

**Address:**Christian Medical College, Vellore Tamil Nadu, India.

**INTL**

**PMID:**25514495 **PMCID:**

**MISC**

**Mathews, V.**

Generic imatinib: the real-deal or just a deal?  
Leuk Lymphoma; 2014, 55 (12): 2678-80

**Address:**Department of Clinical Hematology, Christian Medical College, Vellore, Tamil Nadu, India

**INTL**

**PMID:**24798742 **PMCID:**

**MISC**

**Mohan, V. R.**, Sarkar, R., Abraham, V. J., Balraj, V. and Naumova, E. N.

Differential patterns, trends and hotspots of road traffic injuries on different road networks in Vellore district, southern India

Trop Med Int Health; 2014,

**Address:**Christian Medical College, Vellore, India.

**OBJECTIVE:** To describe spatial and temporal profiles of Road Traffic Injuries (RTIs) on different road networks in Vellore district of southern India. **METHODS:** Using the information in the police maintained First Information Reports (FIRs), daily time series of RTI counts were created and temporal characteristics were analysed with respect to the vehicle, road types and time of the day for the period January 2005 to May 2007. Daily incidence and trend of RTIs were estimated using a Poisson regression analysis. **RESULTS:** Of the reported 3262 RTIs, 52% had occurred on the National Highway (NH). The overall RTI rate on the NH was 8.8/100 000 vehicles per day with significantly higher pedestrian involvement. The mean numbers of RTIs were significantly higher on weekends. Thirteen percentage of all RTIs were associated with fatalities. Hotspots are major town junctions, and RTI rates differ over different stretches of the NH. **CONCLUSION:** In India, FIRs form a valuable source of RTI information. Information on different vehicle profile, RTI patterns, and their spatial and temporal trends can be used by administrators to devise effective strategies for RTI prevention by concentrating on the high-risk areas,

thereby optimising the use of available personnel and resources.

**INTL**

**PMID:**25425088 **PMCID:**

**MISC**

**Naik, G. S.**, Kodagali, R., Mathew, B. S., Thomas, M., Prabha, R., Mathew, V. and Fleming, D. H.

Therapeutic Drug Monitoring of Levetiracetam and Lamotrigine: Is there a Need?

Ther Drug Monit; 2014,

**Address:**1Department of Pharmacology and Clinical Pharmacology, Christian Medical College, Vellore, 632 004, Tamil Nadu, India 2Department of Neurological Sciences, Christian Medical College, Vellore, 632 004, Tamil Nadu, India.

**BACKGROUND::** This study was a retrospective assessment of the therapeutic drug monitoring (TDM) data collected for levetiracetam and lamotrigine from a clinical setting. The proportion of patients in relation to the therapeutic ranges for serum concentrations of lamotrigine and levetiracetam were estimated and the influence of age and anticonvulsant co-mediations on their clearances were studied. **METHODS::** Information on levetiracetam (2011-2013) and lamotrigine (2008-2013) dose, trough concentration, age, sex, body weight and anticonvulsant co-mediations prescribed was obtained from the TDM register and archived medical records. Patients were categorized into 4 groups based on anticonvulsant co-mediations and further divided into 3 sub-groups based on age (a: < 9 years; b: 9-17 years; c: >/=18 years). In each sub-group, the proportion of patients who achieved trough concentrations in the therapeutic range for levetiracetam and lamotrigine was computed. Apparent clearance (CL/F) was compared across sub-groups by one way ANOVA and factors which significantly predicted CL/F were identified by stepwise multiple linear regression. **RESULTS::** Overall, 348 (330 patients) and 706 (493 patients) samples for levetiracetam and lamotrigine were included in the analysis. 56.9 % and 72.4% were within, 43.1% and 23.9% below, 0%

and 3.7% above the therapeutic range for levetiracetam and lamotrigine respectively. A significant difference in CL/F was noted across subgroups for levetiracetam ( $p < 0.001$ ) and lamotrigine ( $p < 0.001$ ). Age  $< 9$  years, age  $\geq 18$  years and inducer co-medications significantly predicted CL/F for levetiracetam. For lamotrigine, inhibitor co-medications, age  $< 9$  years, inducer co-medications and age 9 -17 years significantly predicted CL/F. **CONCLUSION:** These findings emphasize the need to monitor relatively newer anticonvulsants, lamotrigine and levetiracetam especially among children and when other anticonvulsant co-medications are prescribed or discontinued in the treatment regimen.

**INTL**

**PMID:**25478905 **PMCID:**

**MISC**

**Nayak, R.,** Shetty, S., Kapoor, N., Chacko, A. G. and Paul, T. V.  
Visual vignette

Endocr Pract; 2014, 20 (11): 1237

**Address:**Department of Neurosurgery, Unit-I, Christian Medical College and Hospital, Vellore, India.

Department of Endocrinology, Diabetes, and Metabolism, Christian Medical College and Hospital, Vellore, India.

**INTL**

**PMID:**25100394 **PMCID:**

**MISC**

**Panda, A.**

Commenatry on Gautam G. Is it truly outrageous to consider radical prostatectomy for men with metastatic prostate cancer? Indian J Urol 2014;30:366-7

Indian J Urol; 2014, 30 (4): 368

**Address:**Associate Editor, Indian Journal of Urology, Associate Professor of Urology, Christian Medical College, Vellore - 632 004, Tamil Nadu, India. E-mail: arabindpanda@gmail.com.

**NAT**

**PMID:**25378814 **PMCID:**4220372

**MISC**

**Pati, P. K.,** Verghese, M. J. and George, P. V.

Isolation of left subclavian artery with reversal of neurological and hemodynamic abnormalities after percutaneous closure

Indian Heart J; 2014, 66 (4): 477-80

**Address:**Professor, Department of Cardiology, Christian Medical College and Hospital, Vellore, Tamil Nadu 632004, India. Electronic **Address:** jeyapati@yahoo.com.

Assistant Professor, Department of Cardiology, Christian Medical College and Hospital, Vellore, Tamil Nadu 632004, India.

Professor and Head, Department of Cardiology, Christian Medical College and Hospital, Vellore, Tamil Nadu 632004, India.

Isolation of left subclavian artery is a rare congenital anomaly. In this abnormality, the left subclavian artery arises from the homo-lateral pulmonary artery rather than from aorta. This condition is often diagnosed by angiography and treated by surgery. The authors present a case, which had vertebro-basilar insufficiency, subclavian steal phenomenon and pulmonary plethora. All these clinical signs disappeared by a simple percutaneous intervention.

**INTL**

**PMID:**25173211 **PMCID:**4150035

**MISC**

**Paul, S. A.,** Karthik, A. K., Chacko, R. and Karunya, W.

Audit on titanium reconstruction of mandibular defects for jaw lesions

J Pharm Bioallied Sci; 2014, 6 (Suppl 1): S39-43

**Address:**Department of Dental and Oral Surgery, Unit I, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

Department of Oral and Maxillofacial Surgery, JKK Nattraiah Dental College and Hospital, Komarapalayam, Tamil Nadu, India.

**AIMS:** The aim of the study is to audit the titanium reconstruction of jaw

defects in benign conditions in Christian Medical College and Hospital, Vellore. **METHODS AND MATERIAL:** A retrospective study of titanium reconstruction of mandibular defects due to jaw lesions at Christian Medical College and Hospital, Vellore, India, between May 2008 and May 2011. **RESULTS:** Mouth opening, facial symmetry, occlusion, chewing ability, plate exposure and patient satisfaction were used as outcome measures. **CONCLUSIONS:** The three-dimensional titanium plate is a reasonable material for immediate mandible reconstruction after surgical resection of benign jaw pathologies.

**INTL****PMID:**25210382 **PMCID:**4157278**MISC**

**Peter, J. V.,** Sudarsan, T. I. and Moran, J. L.

Clinical features of organophosphate poisoning: A review of different classification systems and approaches  
Indian J Crit Care Med; 2014, 18 (11): 735-45

**Address:**Department of Medical Intensive Care, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. Department of Intensive Care Medicine, The Queen Elizabeth Hospital, Woodville, South Australia 5011, Australia.

**PURPOSE:** The typical toxidrome in organophosphate (OP) poisoning comprises of the Salivation, Lacrimation, Urination, Defecation, Gastric cramps, Emesis (SLUDGE) symptoms. However, several other manifestations are described. We review the spectrum of symptoms and signs in OP poisoning as well as the different approaches to clinical features in these patients. **MATERIALS AND METHODS:** Articles were obtained by electronic search of PubMed((R)) between 1966 and April 2014 using the search terms organophosphorus compounds or phosphoric acid esters AND poison or poisoning AND manifestations. **RESULTS:** Of the 5026 articles on OP poisoning, 2584 articles pertained to human poisoning; 452 articles focusing on clinical manifestations in human OP

poisoning were retrieved for detailed evaluation. In addition to the traditional approach of symptoms and signs of OP poisoning as peripheral (muscarinic, nicotinic) and central nervous system receptor stimulation, symptoms were alternatively approached using a time-based classification. In this, symptom onset was categorized as acute (within 24-h), delayed (24-h to 2-week) or late (beyond 2-week). Although most symptoms occur with minutes or hours following acute exposure, delayed onset symptoms occurring after a period of minimal or mild symptoms, may impact treatment and timing of the discharge following acute exposure. Symptoms and signs were also viewed as an organ specific as cardiovascular, respiratory or neurological manifestations. An organ specific approach enables focused management of individual organ dysfunction that may vary with different OP compounds. **CONCLUSIONS:** Different approaches to the symptoms and signs in OP poisoning may better our understanding of the underlying mechanism that in turn may assist with the management of acutely poisoned patients.

**NAT****PMID:**25425841 **PMCID:**4238091**MISC**

**Raji, J. B.,** Velavan, J., Anbarasi, S. and Grant, L.

Can credit systems help in family medicine training in developing countries? An innovative concept  
J Family Med Prim Care; 2014, 3 (3): 183-7

**Address:**Department of Distance Education, Christian Medical College, Vellore, Tamil Nadu, India.

Department of General Practice, Global Health Academy, University of Edinburgh, Edinburgh, Scotland, UK.

There is irrefutable evidence that health systems perform best when supported by a Family Physician network. Training a critical mass of highly skilled Family Physicians can help developing countries to reach their Millennium Development Goals and deliver comprehensive patient-centered health care to their

population. The challenge in developing countries is the need to rapidly train these Family Physicians in large numbers, while also ensuring the quality of the learning, and assuring the quality of training. The experience of Christian Medical College (CMC), Vellore, India and other global examples confirm the fact that training large numbers is possible through well-designed blended learning programs. The question then arises as to how these programs can be standardized. Globally, the concept of the "credit system" has become the watch-word for many training programs seeking standardization. This article explores the possibility of introducing incremental academic certifications using credit systems as a method to standardize these blended learning programs, gives a glimpse at the innovation that CMC, Vellore is piloting in this regard partnering with the University of Edinburgh and analyses the possible benefits and pitfalls of such an approach.

**INTL**

**PMID:**25374849**PMCID:**4209667

**MISC**

**Rao, T. S.**, Arora, R., Khera, A., Tate, J. E., Parashar, U. and Kang, G. Insights from global data for use of rotavirus vaccines in India Vaccine; 2014, 32 Suppl 1 A171-8

**Address:**Department of Biotechnology, Ministry of Science and Technology, Government of India, CGO Complex, New Delhi, India.

Division of Epidemiology and Communicable Diseases, Indian Council for Medical Research, Ansari Nagar, New Delhi, India.

Child Health and Immunization, Ministry of Health and Family Welfare, Nirman Bhawan, New Delhi, India.

Viral Gastroenteritis Division, Centers for Disease Control and Prevention, Atlanta, GA, USA.

Division of Gastrointestinal Sciences, Christian Medical College, Vellore 632004, Tamil Nadu, India. Electronic

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Rotavirus vaccines are being introduced in several low- and middle-income

countries across the world with and without support from the GAVI Alliance. India has the highest disease burden of rotavirus based on morbidity and mortality estimates and several indigenous vaccine manufacturers are developing rotavirus vaccines. One candidate has undergone phase III testing and others have completed evaluation in phase II. Global data on licensed vaccine performance in terms of impact on disease, strain diversity, safety and cost-effectiveness has been reviewed to provide a framework for decision making in India.

**INTL**

**PMID:**25091672 **PMCID:**

**MISC**

**Samuel, R.**, Ramanathan, K., Mathews, J. E. and Seshadri, M. S.

Back to the future: examining type 2 diabetic vasculature using the gestational diabetic placenta Diab Vasc Dis Res; 2014, 11 (5): 363-5

**Address:**Centre for Stem Cell Research, Christian Medical College, Vellore, India rekhasamuel@cmcvellore.ac.in.

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Understanding the association between the intrauterine hyperglycemic milieu and the development of adult diabetic vasculopathy is of particular relevance in India, where diabetes and vascular disease are prevalent. The gestational diabetes mellitus placenta is a valuable tool to examine blood vessels that have been exposed to hyperglycemic cues. We report an interesting observation in a cohort of gestational diabetes mellitus foetal placental vasculature from South India. Transmission electron microscopy demonstrated pericyte detachment and pericyte ghost cells reminiscent of adult type 2 diabetic retinopathy, in gestational diabetes mellitus foetal placental blood vessels that were not observed in non-gestational diabetes mellitus placentas ( $p \leq 0.001$ ).

Endothelial cell irregularity was observed in 76% gestational diabetes mellitus foetal blood vessels as compared with 10.4% non-gestational diabetes mellitus placental vasculature ( $p \leq 0.001$ ). Other abnormalities noted in gestational diabetes mellitus placenta included mitochondrial abnormalities, increased micro vessel density and thickening of basement membranes. These results suggest that adult type 2 diabetic vasculopathy has developmental origins in utero

**INTL**

**PMID:**25116005**PMCID:**

**MISC**

**Samuelkamaleshkumar, S.,** Reethajanetsureka, S., Pauljebaraj, P., Benschamir, B., Padankatti, S. M. and David, J. A.

Mirror therapy enhances motor performance in the paretic upper limb after stroke: a pilot randomized controlled trial

Arch Phys Med Rehabil; 2014, 95 (11): 2000-5

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Christian Medical College Vellore, Vellore, Tamil Nadu, India.

**OBJECTIVE:** To investigate the effectiveness of mirror therapy (MT) combined with bilateral arm training and graded activities to improve motor performance in the paretic upper limb after stroke. **DESIGN:** Randomized, controlled, assessor-blinded study. **SETTING:** Inpatient stroke rehabilitation center of a tertiary care teaching hospital. **PARTICIPANTS:** Patients with first-time ischemic or hemorrhagic stroke (N=20), confined to the territory of the middle cerebral artery, occurring <6 months before the commencement of the study. **INTERVENTION:** The MT and control group participants underwent a patient-specific multidisciplinary rehabilitation program including conventional occupational therapy, physical therapy, and speech therapy for 5 d/wk, 6 h/d, over 3 weeks. The participants in the MT group

received 1 hour of MT in addition to the conventional stroke rehabilitation. **MAIN OUTCOME MEASURES:** The Upper Extremity Fugl-Meyer Assessment for motor recovery, Brunnstrom stages of motor recovery for the arm and hand, Box and Block Test for gross manual hand dexterity, and modified Ashworth scale to assess the spasticity. **RESULTS:** After 3 weeks of MT, mean change scores were significantly greater in the MT group than in the control group for the Fugl-Meyer Assessment ( $P=.008$ ), Brunnstrom stages of motor recovery for the arm ( $P=.003$ ) and hand ( $P=.003$ ), and the Box and Block Test ( $P=.022$ ). No significant difference was found between the groups for modified Ashworth scale ( $P=.647$ ). **CONCLUSIONS:** MT when combined with bilateral arm training and graded activities was effective in improving motor performance of the paretic upper limb after stroke compared with conventional therapy without MT.

**INTL**

**PMID:**25064777 **PMCID:**

**MISC**

**Senapati, J.,** Devasia, A. J., Alex, A. A. and George, B.

Early T cell precursor lymphoid blast crisis of chronic myeloid leukemia - A novel transformation  
Hematol Oncol Stem Cell Ther; 2014,

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**INTL**

**PMID:**25497977 **PMCID:**

**MISC**

**Siromani, U.**, Thasian, T., Selvaraj, K. G., Daniel, D., Mammen, J. J., Nair, S. C. and Isaac, R.

Determinants which influence to donate blood voluntarily at a northeast district of the state of Tamil Nadu, South India  
Indian J Community Med; 2014, 39 (4): 250

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Rural Unit for Health and Social Affairs (RUHSA), Christian Medical College, Vellore, Tamilnadu, India.

Professor, Department of Bio-Statistics, Christian Medical College, Vellore, Tamilnadu, India.

**NAT**

**PMID:**25364151 **PMCID:**4215508

**MISC**

**Suresh, A. P.**, Benjamin, T. E., Crasta, J. E., Alwinesh, M. T., Kanniappan, G., Padankatti, S. M., Nair, M. K. and Russell, P. S.

Comparison of Burden Among Primary Care-givers of Children with Autism and Intellectual Disability Against Children with Intellectual Disability Only in a Hospital Population in India  
Indian J Pediatr; 2014, 81 Suppl 2 179-82

**Address:**Department of Occupational Therapy, Christian Medical College, Vellore, Tamil Nadu, India.

**OBJECTIVE:** To compare the burden among the primary caregivers (PCG) of children with autism and intellectual disability (ASD + ID) against intellectual disability (ID) only, and identify the factors that predict high caregiver burden. **METHODS:** Children with either ASD + ID (N = 41) or ID (N = 56) and their PCG were recruited and assessed using the Family Burden Interview Schedule, Binet Kamat Scale of Intelligence or Gesell's Developmental Schedule and Vineland Social Maturity Scale, Childhood Autism Rating Scale, Sensory Profile and Brief Autism Mealtime Behavior Inventory after collecting the socio-demographic details.

Appropriate bivariate and multivariate statistical test were used. **RESULTS:** The total burden and level of burden was similar among PCG of children with ASD + ID and ID (P = 0.8). However, financial burden (P = 0.03) and burden due to the effects on the physical health of other family members (P = 0.03) was more among the ID group. The burden due to the effects on family interaction was more (P = 0.009) in the ASD + ID group. The socio-economic status (OR = 3.60; P = 0.03) and the kinship of the primary care-giver (OR = 0.37; P = 0.008) were significantly associated with high level of burden. In addition, the diagnosis, and gender of the child contributed to the prediction model for high level of burden. **CONCLUSIONS:** The interventions for children with ASD + ID and ID should have modules to address burden among PCG. Disability specific burden alleviating strategies should be used among PCG who are at risk of having high burden.

**NAT**

**PMID:**25387661 **PMCID:**

**MISC**

**Thangadurai, P.** and Jacob, K. S.  
Medicalizing distress, ignoring public health strategies  
Indian J Psychol Med; 2014, 36 (4): 351-4

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**NAT**

**PMCID:**4201784 **PMID:**25336764

**MISC**

**Thomas HM(1)**, Balukrishna S, Devakumar D, Muthuswamy P, Samuel EJ.

Can positron emission tomography be more than a diagnostic tool? A survey on clinical practice among radiation oncologists in India.  
Indian J Cancer. 2014 Apr-Jun;51(2):145-9. doi: 10.4103/0019-509X.138247.

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**AIM:** The purpose of the survey was to understand the role of positron emission tomography (PET) in clinical radiotherapy practice among the radiation oncologists' in India. **SETTINGS AND DESIGN:** An online questionnaire was developed to survey the oncologists on their use of PET, viewing protocols, contouring techniques practiced, the barriers on the use of PET and the need for training in use of PET in radiotherapy. The questionnaire was sent to about 500 oncologists and 76 completed responses were received.

**RESULTS:** The survey shows that radiation oncologists use PET largely to assess treatment response and staging but limitedly use it for radiotherapy treatment planning. Only manual contouring and fixed threshold based delineation techniques (e.g. 40% maximum standard uptake value [SUV max ] or SUV 2.5) are used. Cost is the major barrier in the wider use of PET, followed by limited availability of FDG radionuclide tracer. Limited or no training was available for the use of PET. **CONCLUSIONS:** Our survey revealed the vast difference between literature suggestions and actual clinical practice on the use of PET in radiotherapy. Additional training and standardization of protocols for use of PET in radiotherapy is essential for fully utilizing the capability of PET.

#### **NAT**

**PMID:** 25104197 [PubMed - in process]

#### **MISC**

**Thomas, N.,** Singh, A., Sankaran, S., Russell, P. S., Tsheringla, S., Viswanathan, S. A. and Nair, M. K.

ICD-10 and Alternative Diagnostic Criteria for Childhood Autism Among Children with Intellectual Disability  
Indian J Pediatr; 2014, 81 Suppl 2 173-8

**Address:** Child and Adolescent Psychiatry Unit, Department of Psychiatry, Vellore, 632 002, Tamil Nadu, India.

**OBJECTIVES:** The diagnosis of Childhood Autism (CA) among children with Intellectual Disability (ID) based on clinical criteria validated for populations with average intelligence compromises its diagnostic accuracy in this special population. This study documents the diagnostic accuracy of ICD-10 and alternative criteria for CA in ID population. **METHODS:** Consensus clinical diagnosis of autism made by a multi-disciplinary team as the reference data were extracted from the case notes and psychological tests details by two trainee psychologists, and ICD-10 based clinical diagnosis, demographics, ID, CA related data documented independently of the psychiatrist. The appropriate statistical analyses were completed. **RESULTS:** Repetitive behaviors formed the most common symptom cluster. The high internal consistency ( $\kappa = 0.75$ ) among the three groups of ICD-10 symptoms indicate their usefulness in the diagnosis of CA among children with ID, but significantly more children with ID failed to meet the ICD-10 criteria for CA. The fourth alternative criteria had the highest concordance with the reference standard (100 %) and the first alternative criteria had the highest agreement with the reference standard ( $\kappa = 0.88$ ) in identifying CA among ID. The diagnostic accuracy of all the alternative criteria was significantly better than that of ICD-10 with the first alternative criteria having the best diagnostic accuracy ( $S_n = 98\%$ ;  $S_p = 100\%$ ;  $PPV = 1$ ;  $NPV = 0.83$ ) closest to the reference standard. **CONCLUSIONS:** The symptom clusters in ICD-10 for CA should be retained, however reorganising the diagnostic criteria is required for diagnosing CA accurately among children with ID. The first alternative criteria can significantly improve the case identifying ability and

diagnostic accuracy altering there by the epidemiological data on Childhood Autism among children with Intellectual Disability.

**NAT**

**PMID:**25297645 **PMCID:**

**MISC**

**Tsheringla, S.**, Minju, K. A., Russell, S., Mammen, P., Russell, P. S. and Nair, M. K.

A Meta-analysis of the Diagnostic Accuracy of Autism Diagnostic Observation Schedule Module-1 for Autism Spectrum Disorders

Indian J Pediatr; 2014, 81 Suppl 2 187-92

**Address:**Child and Adolescent Psychiatry Unit, Department of Psychiatry, Christian Medical College, Vellore, 632 002, Tamil Nadu, India.

**OBJECTIVE:** Autism Diagnostic Observation Schedule (ADOS) is considered gold standard for the diagnosis of Autism Spectrum Disorders (ASD). The authors evaluated the cumulative diagnostic accuracy of ADOS-Module 1 (ADOS(M1)) using the original diagnostic algorithm with meta-analysis and meta-regression. **METHODS:** The authors, electronically and manually searched for studies from 1999 to 2013 that evaluated the accuracy of ADOS(M1) using the original diagnostic algorithm in detecting ASD. Primary results of Sensitivity (Sn), Specificity (Sp) and Diagnostic Odds Ratio (DOR) for ADOS(M1) were summarized using random-effects model. Summary Receiver Operating characteristic Curves and its Area Under the Curve (SROC-AUC) were used to summarize overall diagnostic accuracy of ADOS(M1). The modifying effects of quality of study and sample size, on the diagnostic odds ratio, were investigated using meta-regression. **RESULTS:** A total of 7 cross-sectional studies provided data on 4,057 children. The pooled Sn, Sp, DOR and SROC-AUC for the overall diagnostic accuracy of ADOS(M1) were: 0.91 (95 % CI = 0.88 to 0.93), 0.27 (95 % CI = 0.24 to 0.30), 5.40 (95 % CI = 1.51 to 19.23) and 0.52 respectively. Meta-regression analysis showed a non-

significant relationship between ADOS(M1) and study quality as well as sample size. There were subgroup differences in the DOR. **CONCLUSIONS:** The authors conclude that ADOS(M1) with the original diagnostic algorithm lacks overall diagnostic accuracy and pooled specificity to confirm the diagnosis of Autism Spectrum Disorders. ADOS(M1) with the revised diagnostic algorithm should be used instead for the diagnosis of this group of disorders.

**NAT**

**PMID:**25377926 **PMCID:**

**MISC**

**Tsheringla, S.**, Minju, K. A., Russell, S., Mammen, P., Russell, P. S. and Nair, M. K.

Erratum to: A Meta-analysis of the Diagnostic Accuracy of Autism Diagnostic Observation Schedule Module-1 for Autism Spectrum Disorders Indian J Pediatr; 2014, 81 Suppl 2 193-5

**Address:**Child and Adolescent Psychiatry Unit, Department of Psychiatry, Christian Medical College, Vellore, 632 002, Tamil Nadu, India.

**NAT**

**PMID:**25514887 **PMCID:**

**MISC**

**Tsheringla, S.**, Simon, A., Russell, P. S., Shankar, S., Russell, S., Mammen, P. and Nair, M. K.

ADD-H-Comprehensive Teacher's Rating Scale (ACTeRS): A Measure for Attention Deficit Hyperactivity Disorder Among Children with Intellectual Disability in India

Indian J Pediatr; 2014, 81 Suppl 2 161-4

**Address:**Child and Adolescent Psychiatry Unit, Department of Psychiatry, Christian Medical College, Vellore, 632 002, Tamil Nadu, India.

**OBJECTIVE:** There is no validated measure for assessing Attention Deficit Hyperactivity Disorder (ADHD) in India, and therefore, the authors validated the ADD-H Comprehensive Teacher's Rating Scale (ACTeRS). **METHODS:** Teachers/parents/clinicians of 110 children with ADHD completed the ACTeRS. The diagnosis of ADHD was

confirmed by an independent multi-disciplinary team using ICD-10 diagnosis for diagnostic accuracy and criterion validity. The convergent and divergent validity were assessed by another rater. The data was analyzed for diagnostic accuracy, reliability and validity appropriately. **RESULTS:** An ACTeRS score of  $\geq 61$  [Sensitivity (Sn) = 85.51 %; Specificity (Sp) = 90.24 %; Area under the curve (AUC) = 0.94] is appropriate for the diagnosis of ADHD. The test-re-test reliability [Intra-class correlation coefficient (ICC) = 0.87], internal consistency (Cronbach's alpha = 0.80; range of 0.89-0.93), section-total correlation, face and content validity for the ACTeRS were good. Convergent validity of attention deficit, hyperactivity and oppositional subscales of ACTeRS with the corresponding subscales of Swanson, Nolan & Pelham Rating Scale-Revised (SNAP-IV) was moderate ( $r = 0.60$ ,  $P = 0.005$ ;  $r = 0.49$ ,  $P = 0.02$ ;  $r = 0.58$ ,  $P = 0.008$  respectively), and negative correlation with the Childhood Autism Rating Scale ( $r = -0.36$ ;  $P = 0.1$ ) for divergent validity was found. The criterion validity analysis showed a high concordance rate of 82.52 % between ACTeRS and International Classification of Diseases, Edition 10 (ICD-10) diagnosis of ADHD. A 4-factor structure was replicated. **CONCLUSIONS:** The ACTeRS has adequate psychometric properties for use in the Indian population for identifying ADHD.

**NAT****PMID:**25265891 **PMCID:****MISC****Williams, A.,** George, C., Atul, P. S., Sam, S. and Shukla, S.

An audit of morbidity and mortality associated with foreign body aspiration in children from a tertiary level hospital in Northern India

Afr J Paediatr Surg; 2014, 11 (4): 287-92

**Address:** Department of Anaesthesiology, Christian Medical College, Vellore, India.

**BACKGROUND:** There is paucity of data regarding the morbidity and mortality of rigid bronchoscopy in children for foreign body (FB) retrieval from India. The aim was to audit data regarding anaesthetic management of rigid bronchoscopy in children and associated morbidity and mortality. **MATERIALS AND METHODS:** Hospital records of all patients below 18 years of age undergoing rigid bronchoscopy for suspected FB aspiration (FBA) between January 1, 2002 and December 31, 2011 were audited to assess their demographic profile, anaesthetic management, complications, and postoperative outcomes. The children were divided into early and late diagnosis groups depending on whether they presented to the hospital within 24 hours of FBA, or later. **RESULTS:** One hundred and forty children, predominantly male (75%), with an average age of 1-year and 8 months, presented to our hospital for rigid bronchoscopy during the study period. Majority of children presented in the late diagnosis group (59.29% vs. 40.71%). The penetration syndrome was observed in 22% of patients. Majority of patients aspirated an organic FB (organic: Inorganic FB = 3:1), with peanuts being the most common (49.28%). A significantly higher number of children presented with cough ( $P = 0.0001$ ) and history of choking ( $P = 0.0022$ ) in the early diagnosis group and crepitations ( $P = 0.0011$ ) in the late diagnosis group. Major complications included cardiac arrest (2.1%), pneumothorax (0.7%), and laryngeal oedema (9.3%). The average duration of hospitalization in our series was 3.08  $\pm$  0.7 days. **CONCLUSIONS:** Foreign body aspiration causes considerable morbidity, especially when diagnosis is delayed.

**INTL****PMID:**25323175 **PMCID:****MISC**