

# CHRISTIAN MEDICAL COLLEGE VELLORE



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*Research Digest - 2016*

## Editor's Message:

Dear Friends,

The Annual Research Digest for the term Jan - Dec 2016 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 for compiling the current issue.

Dr. Biju George

MBBS MD DM

Addl. Vice-Principal (Research)

The logo features the words "Research Digest" in a highly decorative, black, gothic-style font. The letters are ornate with intricate flourishes and swirls, particularly around the 'R' and 'D'. The text is set against a solid olive-green background.

Research Digest

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## **Dr. Biju George**

**MBBS MD DM**

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

# Research Digest

**Amirtharaj GJ(1)**, Natarajan SK(1), Pulimood A(1), Balasubramanian KA(1), Venkatraman A(2), Ramachandran A(3).

Role of Oxygen Free Radicals, Nitric Oxide and Mitochondria in Mediating Cardiac Alterations During Liver Cirrhosis Induced by Thioacetamide.

Cardiovasc Toxicol. 2016 Apr 30. [Epub ahead of print]

#### Author information:

(1)The Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, Christian Medical College, Ida Scudder Road, Vellore, 632004, India. (2)Center for Stem Cell Research, Christian Medical College, Ida Scudder Road, Vellore, 632004, India. (3)The Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, Christian Medical College, Ida Scudder Road, Vellore, 632004, India. [wellcome@cmcvellore.ac.in](mailto:wellcome@cmcvellore.ac.in).

Thioacetamide (TAA) administration is widely used for induction of liver cirrhosis in rats, where reactive oxygen radicals (ROS) and nitric oxide (NO) participate in development of liver damage. Cardiac dysfunction is an important complication of liver cirrhosis, but the role of ROS or NO in cardiac abnormalities during liver cirrhosis is not well understood. This was investigated in animals after TAA-induced liver cirrhosis and temporal changes in oxidative stress, NO and mitochondrial function in the heart evaluated. TAA induced elevation in cardiac levels of nitrate before development of frank liver cirrhosis, without gross histological alterations. This was accompanied by an early induction of P38 MAP kinase, which is influenced by ROS and plays an important signaling role for induction of iNOS. Increased nitrotyrosine, protein oxidation and lipid peroxidation in the heart and cardiac mitochondria, suggestive of oxidative stress, also preceded frank liver cirrhosis

However, compromised cardiac mitochondrial function with a decrease in respiratory control ratio and increased mitochondrial swelling was seen later, when cirrhosis was evident. In conclusion, TAA induces elevations in ROS and NO in the heart in parallel to early liver damage. This leads to later development of functional deficits in cardiac mitochondria after development of liver cirrhosis. DOI: 10.1007/s12012-016-9371-1

**INTL**

**PMID:27131982**

**BS**

**Bakthavatchalam YD(1)**, Anandan S(1), Veeraraghavan B(1).

Laboratory Detection and Clinical Implication of Oxacillinase-48 like Carbapenemase: The Hidden

Threat J Glob Infect Dis. 2016 Jan-Mar;8(1):41-50. doi: 10.4103/0974-777X.176149.

#### Author information:

(1)Department of Clinical Microbiology, Christian Medical College, Vellore, Tamil Nadu, India.

Carbapenemase producing Gram-negative pathogen is of great concern for physician. The challenging aspects are treatment option and infection control. Monitoring of respective carbapenemase resistance mechanism is necessary to prevent the outbreaks. Currently, the rapid emergence of oxacillinase (OXA-48) like is alarming. Increasing frequency of OXA-48 is seen than the classical carbapenemase (KPC, NDM, IMP, and VIM) across the world. The bla OXA-48 gene is commonly identified in *Escherichia coli* and *Klebsiella pneumoniae*. The transferrable plasmid of OXA-48 is associated with rapid spread and inter-species dissemination. In general, OXA-48-like enzymes weakly hydrolyzes both carbapenem and broad spectrum cephalosporins. Except OXA-163, which effectively hydrolyzes cephalosporin. This poor hydrolytic profile obscures the detection of OXA-48-like. It may go undetected in routine diagnosis and complicates the treatment option. Co-production of OXA-48-like with CTX-M-15 and other carbapenemase (NDM, VIM) leads to the emergence of multidrug resistant strains. DOI: 10.4103/0974-777X.176149

**NAT**

**PMCID: PMC4785756 PMID:27013843**

**BS**

**Bakthavatchalam YD(1)**, Pragasam AK, Anandan S, Joshi S, Chaudhuri BN, Chitnis DS, Roy I, Tapan D, Veeraraghavan B.

Comparative in-vitro activity of ceftaroline against *Staphylococcus aureus* J Infect Dev Ctries. 2016 Jan 31;10(1):109-12. doi: 10.3855/jidc.7196 gates from India

#### Author information:

(1)Christian Medical College, Vellore, India. [cilviamicrovin@gmail.com](mailto:cilviamicrovin@gmail.com)

**INTL**

**PMID:26829546**

**BS**

**Chacko G(1).**

Epidermal growth factor gene amplification in high grade gliomas. *Neurol India*. 2016 Jan-Feb;64(1):25-6. doi: 10.4103/0028-3886.173672.

**Author information:**

(1)Department of Pathology, Christian Medical College,VelloreTamilNadu,India.DOI: 10.4103/0028-3886.173672

**NAT**

**PMID:**26754

**BS**

**Chacko MP(1)**, Augustin A(1), David VG(2), Valson AT(2), Daniel D(1).

Nonspecific positivity on the Luminex crossmatch assay for anti-human leukocyte antigen antibodies due to antibodies directed against the antibody coated beads.

Indian J Nephrol. 2016 Mar-Apr;26(2):134-7. doi: 10.4103/0971-4065.159305

**Author information:**

(1)Department of Transfusion Medicine and Immunohematology, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Nephrology, Christian Medical College, Vellore, Tamil Nadu, India.

Two cases are described of previously unreported false positivity on the Luminex crossmatch assay due to non HLA specific antibodies directed against the beads. In both cases the Luminex crossmatch indicated the presence of donor specific antibodies to class II HLA antigens, which was not substantiated by the clinical scenario or other assays. We could demonstrate the non specificity of these antibodies through using the same assay in a modified form where beads were unexposed to cell lysate and therefore did not carry HLA antigens at all. These cases further serve to emphasize the absolute necessity of correlating positive results with the priming history, and confirming their relevance using other platforms. DOI: 10.4103/0971-4065.159305

**NAT**

**PMCID:** PMC4795430, **PMID:**27051139

**BS**

**Chaudhary AK(1)**, Mohapatra R(2), Nagarajaram HA(2), Ranganath P(3),(4), Dalal A(3), Dutta A(5), Danda S(5), Girisha KM(6), Bashyam MD(1).

The novel EDAR p.L397H missense mutation causes autosomal dominant hypohidrotic ectodermal dysplasia.

J Eur Acad Dermatol Venereol. 2017 Jan;31(1):e17-e20. doi: 10.1111/jdv.13587. Epub 2016 May 11.

**Author information:**

(1)Laboratory of Molecular Oncology, Hyderabad, India. (2)Laboratory of Computational biology, Hyderabad, India. (3)Diagnostics Division, Centre for DNA Fingerprinting and Diagnostics, Hyderabad, India.

(4)Nizam's Institute of Medical Sciences, Hyderabad, India. (5)Christian Medical College, Vellore, India. (6)Department of Medical Genetics, Kasturba Medical College, Manipal University, Manipal, India. OI: 10.1111/jdv.13587

**INT**

**PMID:**27168349

**BS**

**Deepti Rana**, Aleya Tabasuma and Murugan Ramalingam.

Cell-laden alginate/polyacrylamide beads as carriers for stem cell delivery: preparation and characterization

**RSC Adv., 2016, 6, 20475-20484.**

Stem cell based therapies employ engraftment or systemic administration methods for the delivery of stem cells into the target tissues to enhance their regenerative potential. However, majority of the stem cells were found to migrate away from the target site soon after the transplantation, which directly hinders their clinical efficacy, in particular while treating cartilage defects. Therefore, the present study was designed to explore the feasibility and efficacy of an alginate/polyacrylamide (Algi/PAAm) composite biomaterial in the form of cell-laden hydrogel beads as a suitable carrier system to be able to hold the stem cells at the target site and deliver them efficiently. Human bone marrow-derived mesenchymal stem cells (hBMSCs) have been used as a model cell. The beads prepared at an optimized concentration ratio were characterized to study their physicochemical properties. Furthermore, cell-encapsulated Algi/PAAm beads were evaluated for their biological properties. The result of this study has demonstrated that the Algi/PAAm beads with their optimal composition were able to maintain the viability of the encapsulated cells during the period of study, suggesting the cellular compatibility of the beads. Additionally, the encapsulated cells showed round morphology within the beads, in contrast to the 2D-cultured spindle-like shape of hBMSCs. Based on the experimental data obtained in this study, cell-laden Algi/PAAm beads may serve as a potential carrier system for stem cell delivery.

**INT**

**Hareendran S**, Ramakrishna B, Jayandharan GR. . Synergistic inhibition of PARP-1 and NF- $\kappa$ B signaling downregulates immune response against recombinant AAV2 vectors during hepatic gene therapy.

**Eur J Immunol. 2016 Jan;46(1):154-66**

**Author information:**

(1)Centre for Stem Cell Research, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of General Pathology, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Hematology, Christian Medical College, Vellore, Tamil Nadu, India. (4)Department of Biological Sciences and Bioengineering, Indian Institute of Technology, Kanpur, Uttar Pradesh, India.

Host immune response remains a key obstacle to widespread application of adeno-associated virus (AAV) based gene therapy. Thus, targeted inhibition of the signaling pathways that trigger such immune responses will be beneficial. Previous studies have reported that DNA damage response proteins such as poly(ADP-ribose) polymerase-1 (PARP-1) negatively affect the integration of AAV in the host genome. However, the role of PARP-1 in regulating AAV transduction and the immune response against these vectors has not been elucidated. In this study, we demonstrate that repression of PARP-1 improves the transduction of single-stranded AAV vectors both in vitro (~174%) and in vivo (two- to 3.4-fold). Inhibition of PARP-1, also significantly downregulated the expression of several proinflammatory and cytokine markers such as TLRs, ILs, NF- $\kappa$ B subunit proteins associated with the host innate response against self-complementary AAV2 vectors. The suppression of the inflammatory response targeted against these vectors was more effective upon combined inhibition of PARP-1 and NF- $\kappa$ B signaling. This strategy also effectively attenuated the AAV capsid-specific cytotoxic T-cell response, with minimal effect on vector transduction, as demonstrated in normal C57BL/6 and hemophilia B mice. These data suggest that targeting specific host cellular proteins could be useful to attenuate the immune barriers to AAV-mediated gene therapy. © 2015 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim. DOI: 10.1002/eji.201545867

**INT****PMID:** 26443873**BS****Janardana R(1), Danda D(2).**

'Outside the box' genes, transcriptions and translations in Rheumatoid arthritis.

Int J Rheum Dis. 2016 Feb;19(2):114-5. doi: 10.1111/1756-185X.12846.

**Author information:**

(1)Department of Clinical Immunology & Rheumatology, Christian Medical College & Hospital, Vellore, India. ramya.aithala@gmail.com. (2)Department of Clinical Immunology &

Rheumatology, Christian Medical College & Hospital, Vellore, India. debashisdandacmc@hotmail.com. DOI: 10.1111/1756-185X.12846

**INTL****PMID:**26919171**BS**

**Jayakanthan K(1), Ramya J(1), Mandal SK(1), Sandhya P(2), Gowri M(3), Danda D(1).**

Younger patients with primary Sjögren's syndrome are more likely to have salivary IgG anti-muscarinic acetylcholine receptor type 3 antibodies.

Clin Rheumatol. 2016 Mar;35(3):657-62. doi: 10.1007/s10067-016-3186-0. Epub 2016Jan 26.

**Author information:**

(1)Department of Clinical Immunology & Rheumatology, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Clinical Immunology & Rheumatology, Christian Medical College, Vellore, Tamil Nadu, India. drsandhya.p123@gmail.com. (3)Department of Biostatistics, Christian Medical College, Vellore, Tamil Nadu, India.

Acetylcholine type 3 receptor (M3R) is recognized as an autoantigen in primary Sjögren's syndrome (pSS). Assay of anti-M3R antibody levels in serum is fraught with low sensitivity for diagnosis of pSS. Salivary assay is more likely to improve the diagnostic accuracy. Patients with pSS classified either by the American European Consensus Group (AECG) or American college of Rheumatology (ACR) criteria, attending rheumatology clinic between October 2014 and July 2015 were included. Hospital staff and lupus patients constituted healthy and disease controls, respectively. Evaluation of pSS included clinical evaluation, laboratory tests, ESSDAI and ESSPRI scoring. Unstimulated saliva was collected by the spitting method. Salivary IgG antibody against M3R (anti-M3R) was quantified by indirect ELISA. In this study, 43 patients with pSS, 34 with lupus and 42 healthy controls were recruited. The frequency of anti-M3R antibody levels was 55.81, 17.64 and 7 % for pSS, lupus and healthy controls, respectively. Area under the Receiver Operator Characteristic was 0.7791 (95 % CI, 0.67-0.87). Sensitivity and specificity of the assay for diagnosis of pSS were 44.19 and 88.16 %, respectively. Salivary anti-M3R IgG antibody positivity was associated with lower age, shorter disease duration and higher globulin levels in our cohort. Salivary anti-M3R IgG antibody assay has

high specificity in pSS; younger patients and those with hyperglobulinemia more frequently tested positive for this antibody. DOI: 10.1007/s10067-016-3186-0

**INTL**

**PMID:**26809799

**BS**

**Liu J(1)**, Gratz J(1), Amour C(2), Nshama R(2), Walongo T(2), Maro A(3), MdumaE(2), Platts-Mills J(1), Boisen N(4), Nataro J(4), Haverstick DM(5), Kabir F(6), Lertsethakarn P(7), Silapong S(7), Jeamwattanalert P(7), Bodhidatta L(7), MasonC(7), Begum S(8), Haque R(8), Praharaj I(9), Kang G(9), Houpt ER(1).

Optimization of Quantitative PCR Methods for Enteropathogen Detection.

PLoS One. 2016 Jun 23;11(6):e0158199.

doi: 10.1371/journal.pone.0158199.eCollection 2016.

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(1)Division of Infectious Diseases and International Health, University of Virginia, Charlottesville, Virginia, United States of America. (2)Haydom Global Health Institute, Haydom, Tanzania. (3)Kilimanjaro Clinical Research Institute, Moshi, Tanzania. (4)Department of Pediatrics, University of Virginia, Charlottesville, Virginia, United States of America. (5)Department of Pathology, University of Virginia, Charlottesville, Virginia, United States of America. (6)Department of Pediatrics and Child Health, Aga Khan University, Karachi, Pakistan. (7)Department of Enteric Diseases, Armed Forces Research Institute of Medical Sciences (AFRIMS), Bangkok, Thailand. (8)International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B), Dhaka, Bangladesh. (9)Christian Medical College, Vellore, Tamil Nadu, India.

Detection and quantification of enteropathogens in stool specimens is useful for diagnosing the cause of diarrhea but is technically challenging. Here we evaluate several important determinants of quantification: specimen collection, nucleic acid extraction, and extraction and amplification efficiency. First, we evaluate the molecular detection and quantification of pathogens in rectal swabs versus stool, using paired flocked rectal swabs and whole stool collected from 129 children hospitalized with diarrhea in Tanzania. Swabs generally yielded a higher quantification cycle (Cq) (average 29.7, standard deviation 3.5 vs. 25.3 ± 2.9 from stool, P<0.001) but were still able to detect 80% of pathogens with a Cq < 30 in stool. Second, a simplified total nucleic acid (TNA) extraction procedure was compared to separate DNA and RNA extractions and showed 92% (318/344) sensitivity and 98% (951/968) specificity, with no difference in Cq value for the positive results

( $\Delta Cq(\text{DNA}+\text{RNA}-\text{TNA}) = -0.01 \pm 1.17$ , P = 0.972, N = 318). Third, we devised a quantification scheme that adjusts pathogen quantity to the specimen's extraction and amplification efficiency, and show that this better estimates the quantity of spiked specimens than the raw target Cq. In sum, these methods for enteropathogen quantification, stool sample collection, and nucleic acid extraction will be useful for laboratories studying enteric disease. DOI: 10.1371/journal.pone.0158199

**INTL**

**PMCID:** PMC4918952 **PMID:**27336160

**BS**

**Mitra S(1)**, Choudhari R, Nori H, Abhilash KP, Jayaseelan V, Abraham AM, CherianAO, Prakash JA, Muliylil J.

Comparative evaluation of validity and cost-benefit analysis of rapid diagnostic test (RDT) kits in diagnosis of dengue infection using composite reference criteria: A cross-sectional study from south India.

J Vector Borne Dis. 2016 Mar;53(1):30-6.

**Author information:**

(1)Department of Accident and Emergency Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND & OBJECTIVES:** Rapid diagnostic test (RDT) kits are widely used in India for the diagnosis of dengue infection. It is important to evaluate the validity and reliability of these RDTs. The study was aimed to determine the sensitivity, specificity and predictive value of four commercially available RDTs [Panbio Dengue Duo cassette, Standard Diagnostics (SD) Bioline Dengue Duo, J. Mitra Dengue Day-1 test and Reckon Dengue IgG/IgM] against composite reference criteria (CRC), and compare the cost of the tests. **METHODS:** In this prospective observational study for diagnostic accuracy, we tested stored blood samples from 132 cases of dengue and 149 controls of other infections as classified based on CRC, with all the four RDTs. The CRC was based on the epidemiological considerations, common clinical features and laboratory abnormalities. The non-dengue controls were the cases of proven alternative diagnosis. The diagnostic performances of the tests were compared in terms of sensitivity, specificity and predictive value along with the cost involved per test. **RESULTS:** The sensitivity of the Panbio and SD RDT kits was found to be 97.7 and 64.3% respectively, and the specificities were 87.8 and 96.6% respectively. The sensitivity of the NS1 antigen capture by SD Duo, Reckon, J. Mitra RDTs

was 20.9, 18.6 and 27.1% respectively. The prevalence of dengue specific IgG antibody with Panbio RDT kits was 49.3%. The cost per test for Panbio, SD, Reckon and J. Mitra is US\$ 6.90, 4.27, 3.29 and 3.61 respectively. CONCLUSION: It was concluded that in dengue outbreak, Panbio IgM capture RDT alone is reliable and easily available test which can be used in acute phase of dengue infection in any resource limited set up. NS1 capture rates by any of the other three RDTs might not be reliable for the diagnosis of acute dengue infection.

**NAT**

**PMID:**27004576

**BS**

**Muthuirulandi Sethuvel DP(1)**, Devanga Ragupathi NK(1), Anandan S(1), Veeraraghavan B(1).

Update on: *Shigella* new serogroups/serotypes and their antimicrobial resistance.

Lett Appl Microbiol. 2017 Jan;64(1):8-18. doi: 10.1111/lam.12690. Epub 2016 Nov28.

**Author information:**

(1)Department of Clinical Microbiology, Christian Medical College, Vellore, India.

Shigellosis represents a major burden of disease in developing countries. A low infectious dose allows the disease to be spread effectively. Although shigellosis is mostly a self-limiting disease, antibiotics are recommended to reduce deaths, disease symptoms and organism-shedding time. However, in India, antimicrobial resistance among the genus *Shigella* is more common than among any other enteric bacteria. Notably, new serotypes or subserotypes in *Shigella* are reported from various parts of the world. Identification of new subserotypes of *Shigella* spp. is becoming a major issue as these strains are nontypeable by conventional serotyping. The commercially available antisera may not cover all possible epitopes of the O lipopolysaccharide antigen of *Shigella* serotypes. Therefore, molecular methods which most closely approach the resolution of full serotyping are necessary to identify such strains. In addition, the knowledge of a prevalent serotype in various geographic regions may assist in formulating strategies such as the development of a vaccine to prevent infection especially when the immunity to disease is serotype specific, and to understand the disease burden caused by new *Shigella* serotypes. © 2016 The Society for Applied Microbiology. DOI: 10.1111/lam.12690

**INTL**

**PMID:**27783408

**BS**

**Natarajan K(1)**, Abraham P(2).

Methotrexate administration induces differential and selective protein tyrosine nitration and cysteine nitrosylation in the subcellular organelles of the small intestinal mucosa of rats.

Chem Biol Interact. 2016 May 5;251:45-59. doi: 10.1016/j.cbi.2016.03.032. Epub 2016 Mar 30.

**Author information:**

(1)Department of Biochemistry, Christian Medical College, Bagayam, Vellore 632002, Tamil Nadu, India. (2)Department of Biochemistry, Christian Medical College, Bagayam, Vellore 632002, Tamil Nadu, India. Electronic address: [premilaabraham@cmcvellore.ac.in](mailto:premilaabraham@cmcvellore.ac.in).

Gastrointestinal toxicity is one of the most frequent dose limiting side effects of methotrexate (MTX), a commonly used chemotherapeutic drug. Peroxynitrite (PON) overproduction is reported to contribute to MTX induced gastrointestinal mucositis. However, the consequence of PON overproduction i.e. protein tyrosine nitration and protein cysteine nitrosylation, the subcellular distribution of these modified proteins and their molecular weights have not been investigated yet. Mucositis was induced in Wistar rats by the administration of 3 consecutive i.p. injections of MTX. Tyrosine nitrated proteins and cysteine nitrosylated proteins were determined in the subcellular organelles fractions of mucosa using immunoprecipitation and western blot. The proteins in the subcellular fractions were separated by 1D electrophoresis, and probed with anti -nitrotyrosine antibody and anti-nitrosocysteine antibody. After MTX treatment, a general increase in protein tyrosine nitration as well as a change in the spectrum of proteins that underwent nitration was observed. The relative densities of the 3 nitrotyrosine protein adducts were as follows: Mitochondria > cytosol > microsomes > nucleus. In the mitochondrial fraction increased nitration of 12 kDa, 25 kDa, 29 kDa, 47 kDa, and 62 kDa proteins, in the cytosol increased nitration of 12 kDa, 19 kDa, 45 kDa, and 60 kDa proteins and in the nuclear fraction increased nitration of 17 kDa, 35 kDa, and 58 kDa proteins was observed. On the other hand, MTX treatment resulted to a general decrease in protein cysteine nitrosylation in all the subcellular fractions. These results suggest that MTX induced, PON mediated small intestinal injury is mediated by differential nitration and nitrosylation of proteins in the subcellular organelles with increased protein tyrosine nitration and decreased cysteine nitrosylation. In addition MTX treatment results in selective nitration and nitrosylation of proteins in the intestinal mucosa. This differential nitrosative

modifications may contribute to MTX induced small intestinal injury. Copyright © 2016 Elsevier Ireland Ltd. All rights reserved. DOI: 10.1016/j.cbi.2016.03.032

**INTL**

**PMID:27038877**

**BS**

**Ninan MM(1)**, Gowri M(2), Christopher DJ(3), Rupali P(4), Michael JS(1).

The diagnostic utility of line probe assays for multidrug-resistant tuberculosis.

Pathog Glob Health. 2016 Jun-Jul;110(4-5):194-9.

doi:10.1080/20477724.2016.1214350. Epub 2016 Aug 8.

#### **Author information:**

(1)a Department of Microbiology , Christian Medical College and Hospital, Vellore , India. (2)b Department of Biostatistics , Christian Medical College and Hospital , Vellore , India. (3)c Department of Pulmonary Medicine , Christian Medical College and Hospital , Vellore , India. (4)d Department of Infectious Diseases , Christian Medical College and Hospital , Vellore , India.

Owing to the burden of multidrug-resistant tuberculosis, molecular techniques have been approved by the WHO for the rapid diagnosis of the same. The objectives of this prospective, diagnostic study, conducted at Christian Medical College, a tertiary care center in South India, were to compare the performance of line probe assay (GenoTypeMTBDRplus) with culture, as well as the Xpert MTB/Rif assay on sputum samples. Ninety-one consecutive suspects of multidrug-resistant pulmonary tuberculosis patients from January 2013 to June 2013 were enrolled in this study and the results of line probe assay compared to culture and Xpert MTB/Rif. Compared to culture, the assay demonstrated a sensitivity and specificity of 81.5% (95%CI 67.4-91.1%) and 87.5% (95%CI 71-96.5%) for the detection of tuberculosis, with sensitivity and specificity of 100% (95%CI 85.2-100%) and 93.8% (95%CI 69.8-99.8%), respectively, for rifampicin resistance . For isoniazid resistance, sensitivity and specificity were 89.3% (95%CI 71.8-97.7%) and 100% (95%CI 71.5-100%), respectively. Compared to Xpert MTB/Rif assay, the assay showed a sensitivity of 80% (95%CI 68.2-88.9%) and specificity of 100% (95%CI 85.8-100%) for the detection of tuberculosis a sensitivity of 94.3% (95%CI 80.8-99.3%) and specificity of 94.1% (95%CI 71.3-99.9%) for rifampicin resistance was attained. This assay performed well on smear positive samples, but poorly on smear negative and scanty samples, and can serve as a rapid diagnostic tool, particularly in isoniazid

monoresistant cases of tuberculosis, which are not diagnosed by Xpert MTB/Rif. DOI: 10.1080/20477724.2016.1214350

**INTL**

**PMCID: PMC5072114 PMID:27499239**

**BS**

#### **Peedicayil J(1).**

Epigenetic targets for the treatment of neurodegenerative diseases.

Clin Pharmacol Ther. 2016 May;99(5):481.

doi: 10.1002/cpt.323. Epub 2016 Jan 12.

#### **Author information:**

(1)Department of Pharmacology and Clinical Pharmacology, Christian Medical College, Vellore, 632 002, India.

#### **Comment on**

Clin Pharmacol Ther. 2015 Nov;98(5):492-501.

DOI: 10.1002/cpt.323

**INTL**

**PMID:26669276**

**BS**

#### **Peedicayil J(1).**

Preclinical epigenetic models for screening epigenetic drugs for schizophrenia.

J Pharmacol Toxicol Methods. 2016 Jan-Feb;77:1-5. doi:10.1016/j.vascn.2015.09.002. Epub 2015 Sep 11.

#### **Author information:**

(1)Department of Pharmacology and Clinical Pharmacology, Christian Medical College, Vellore, India. Electronic address: [jpeedi@cmcvellore.ac.in](mailto:jpeedi@cmcvellore.ac.in)

Schizophrenia is an important psychiatric disorder for which effective drugs are available. However, there are problems with current drug therapy of schizophrenia in that some patients do not respond adequately. Moreover, some patients show treatment resistance and some patients show cognitive decline despite treatment. Hence new and effective drugs will be useful for the treatment of this disorder. Since there is increasing evidence that epigenetic mechanisms of gene expression are defective in schizophrenia, drugs that correct epigenetic defects, epigenetic drugs, could be useful in the treatment of this disorder. This paper discusses preclinical epigenetic models for screening epigenetic drugs for schizophrenia. It also discusses how such models could be useful for the discovery and development of such drugs. Copyright © 2015

Elsevier Inc. All rights reserved. DOI: 10.1016/j.vascn.2015.09.002

INTL

PMID:26370661

BS

**Pragasam AK(1)**, Raghanivedha M(2), Anandan S(3), Veeraraghavan B(4).

Characterization of *Pseudomonas aeruginosa* with discrepant carbapenemsusceptibility profile.

Ann Clin Microbiol Antimicrob. 2016 Feb 24;15:12. doi: 10.1186/s12941-016-0127-3.

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*Pseudomonas aeruginosa* is the most common nosocomial pathogen, notorious for its multidrug resistance and causes life threatening infections. Carbapenems were considered as the last resort of drugs for the treatment of multi drug resistant *P. aeruginosa* infections. The emergence of resistance to carbapenems limits its use for treatment. Unlike other organisms, in *P. aeruginosa* intrinsic/chromosomal mediated resistance mechanisms plays a major role for carbapenem resistance rather than the carbapenemases. Carbapenemase producing organisms becomes resistant to both imipenem and meropenem. However, in our clinical settings, we have observed rare carbapenem resistant phenotypes such as imipenem resistant but meropenem susceptible (IRMS) and meropenem resistant but imipenem susceptible (MRIS) phenotypes. Thus we have chosen these rare phenotypes to look for the respective resistance mechanisms by phenotypic and molecular methods. From this study we found that, IRMS is primarily due to the mutations across various regions in the loops of *oprD* gene and MRIS is due to the over expression of *mexAB* efflux pumps. This study results confirms that, this rare phenotypes are due to the intrinsic/chromosomal mediated mechanisms, which occurred due to the antibiotic selection pressure. This study also provided data concerning alterations in outer membrane permeability which is often associated with the increased levels of antibiotic efflux. Consequently, this study provided the prevalence of the various resistance mechanisms that have deployed by the organism to resist antibiotics

through different phenotypes. DOI: 10.1186/s12941-016-0127-3

INTL

PMCID: PMC4765188 PMID:26911874

BS

**Qian P(1)**, He XC(1), Paulson A(1), Li Z(2), Tao F(2), Perry JM(1), Guo F(1), ZhaoM(1), Zhi L(3), Venkatraman A(4), Haug JS(1), Parmely T(1), Li H(1), DobrowskyRT(5), Ding WX(6), Kono T(7), Ferguson-Smith AC(8), Li L(9).

The *Dlk1-Gtl2* Locus Preserves LT-HSC Function by Inhibiting the PI3K-mTOR Pathway to Restrict Mitochondrial Metabolism.

Cell Stem Cell. 2016 Feb 4;18(2):214-28. doi: 10.1016/j.stem.2015.11.001. Epub 2015 Nov 25.

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#### Comment in

Stem Cell Investig. 2016;3:29.

Cell Stem Cell. 2016 Feb 4;18(2):158-60.

The mammalian imprinted *Dlk1-Gtl2* locus produces multiple non-coding RNAs (ncRNAs) from the maternally inherited allele, including the largest miRNA cluster in the mammalian genome. This locus has characterized functions in some types of stem cell, but its role in hematopoietic stem cells (HSCs) is unknown. Here, we show that the *Dlk1-Gtl2* locus plays a critical role in preserving long-term repopulating HSCs (LT-

HSCs). Through transcriptome profiling in 17 hematopoietic cell types, we found that ncRNAs expressed from the *Dlk1-Gtl2* locus are predominantly enriched in fetal liver HSCs and the adult LT-HSC population and sustain long-term HSC functionality. Mechanistically, the miRNA mega-cluster within the *Dlk1-Gtl2* locus suppresses the entire PI3K-mTOR pathway. This regulation in turn inhibits mitochondrial biogenesis and metabolic activity and protects LT-HSCs from excessive reactive oxygen species (ROS) production. Our data therefore show that the imprinted *Dlk1-Gtl2* locus preserves LT-HSC function by restricting mitochondrial metabolism. Copyright © 2016 Elsevier Inc. All rights reserved. DOI: 10.1016/j.stem.2015.11.001

**INTL**

**PMID:**26627594

**BS**

Raj RR(1), Subramani S(1). Phenylephrine Decreases Vascular Tension in Goat Arteries in Specific Circumstances. *PLoS One*. 2016 Jun 30;11(6):e0158551. doi: 10.1371/journal.pone.0158551. eCollection 2016.

**Author information:**

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Phenylephrine (PE) causes vasoconstriction through alpha adrenergic receptors. PE-induced vasodilatation has also been reported earlier in pre-constricted vessels. Here we demonstrate in spiral strips of goat arteries that addition of PE can decrease tone even from base-line levels (i.e. not pre-constricted) and show that this process requires nitric oxide (NO) and alpha adrenergic stimulation, but is cGMP-independent. Under control conditions, PE caused vasoconstriction, but under conditions where NO levels are higher, as with L-Arginine or sodium nitroprusside, PE decreased vessel tension. L-Arginine/PE combination was not able to decrease tension when alpha adrenoceptors were blocked with Phentolamine or endothelial nitric oxide synthase (eNOS) was blocked with N $\omega$ -Nitro-L-arginine (L-NNA). Propranolol, a beta blocker, was unable to prevent the reduction in tension by the L-Arginine/PE combination. Adrenaline and noradrenaline (and not isoproterenol) also reduced vessel tension in the presence of L-Arginine. Even when NO levels were not enhanced, relieving NO from having to stimulate the enzyme soluble guanylyl cyclase (sGC) (either

by using sGC blockers, namely ODQ or methylene blue, or by enhancing cGMP levels (with sildenafil) which by negative feedback probably inhibits sGC) led to PE-induced reduction of vascular tension. PMA-phorbol myristate acetate-an agonist which stimulates Protein Kinase C was able to prevent the ability of PE to reduce vascular tension in a high NO environment. Our conclusion is that PE reduces vascular tension through alpha adrenoceptors if there is excess NO availability to activate a putative pathway. Though the reduction of vessel tone by PE is dependent on NO, it is independent of cGMP. Prior treatment with PMA or PE itself can prevent further PE-induced reduction of tension in a high NO environment. The results here suggest, counter-intuitively, that alpha blockers may be of help in the treatment of septic shock where nitric oxide levels are high. DOI: 10.1371/journal.pone.0158551

**INTL**

**PMCID:** PMC4928870 **PMID:**27362703

**BS**

**Ramasamy A(1)**, Das S(2), Mani V(3), Sengottuvelu S(4), Vinoth Prabhu V(1). Evaluation of Anti-diarrheal Potential of Hydro-alcoholic Extracts of Leaves of *Murraya koenigii* in Experimental Animals. *J Diet Suppl*. 2016;13(4):393-401. doi: 10.3109/19390211.2015.1101636. Epub 2015 Dec 2.

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**BACKGROUND:** The indigenous medical system of India mentions the use of *Murraya koenigii* leaves for the treatment of different types of diarrheas over ages. **OBJECTIVE:** To evaluate the anti-diarrheal activity of hydro-alcoholic extracts of leaves of *Murraya*

koenigii and to check its effects on intestinal transits in experimental rat model. MATERIALS AND METHODS: The hydro-alcoholic extract of *Murraya koenigii* leaves was obtained with Soxhlet extraction method. Animals were divided into four groups (n = 6) receiving daily for three consecutive days: vehicle, standard drug atropine (3mg/kg, i.p.), leaf extracts 200 & 400 mg/kg respectively in oral route. Effects of the drugs on normal defecation were noted and then castor oil induced diarrhea was used to measure the effects of leaf extract on stool frequency and consistency. Finally, charcoal meal test was used to evaluate the effect of the extract on intestinal transit. Statistical evaluation was done using SPSS version 17, one way ANOVA followed by Dunnett's t-test was done and P < 0.001 was considered as significant. RESULTS: *Murraya koenigii* leaf extracts in 200 and 400 mg/kg dose reduced stool frequency, increased stool consistency and increased small intestinal transit time. CONCLUSION: Hydro-alcoholic extract of *Murraya koenigii* leaves possesses significant anti-diarrheal activity due to its inhibitory effect on gastrointestinal motility, making it useful for a wide number of gastrointestinal diseases. DOI: 10.3109/19390211.2015.1101636

INTL

PMID:26631977

BS

**Rana D(1)**, Ramasamy K(1), Leena M(2), Jiménez C(3),(4), Campos J(3),(5), Ibarra P(3),(5), Haidar ZS(3),(5), Ramalingam M(1),(6).

Surface functionalization of nanobiomaterials for application in stem cell culture, tissue engineering, and regenerative medicine.

Biotechnol Prog. 2016 May;32(3):554-67. doi: 10.1002/btpr.2262. Epub 2016 Apr 14.

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Stem cell-based approaches offer great application potential in tissue engineering and regenerative medicine owing to their ability of sensing the microenvironment and respond accordingly (dynamic behavior). Recently, the combination of nanobiomaterials with stem cells has paved a great way for further exploration. Nanobiomaterials with engineered surfaces could mimic the native microenvironment to which the seeded stem cells could adhere and migrate. Surface functionalized nanobiomaterial-based scaffolds could then be used to regulate or control the cellular functions to culture stem cells and regenerate damage tissues or organs. Therefore, controlling the interactions between nanobiomaterials and stem cells is a critical factor. However, surface functionalization or modification techniques has provided an alternative approach for tailoring the nanobiomaterials surface in accordance to the physiological surrounding of a living cells; thereby, enhancing the structural and functional properties of the engineered tissues and organs. Currently, there are a variety of methods and technologies available to modify the surface of biomaterials according to the specific cell or tissue properties to be regenerated. This review highlights the trends in surface modification techniques for nanobiomaterials and the biological relevance in stem cell-based tissue engineering and regenerative medicine.

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INT

PMID: 27006260

BS

**Sabapathy V, Kumar S(1).**

Quest for alternate personalized clinical source of MSCs: Advancing toward hiPSCs derived iMSCs. Curr Stem Cell Res Ther. 2016;11(2):99-113.

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The Human mesenchymal stromal/stem cells (MSCs) have been isolated from various tissue sources. Yet, the lack of a distinctive marker for identifying in vivo MSCs in their tissue niche has hampered the MSC's in vivo behavior tracking and compared that to the in vitro expanded cultures. In this review, we present a comprehensive report on MSCs history, isolation from assorted tissue sources, classification, long-term cultures for comprehensively characterized MSCs, immunomodulation, regenerative medical applications, iMSCs as a novel source of patient-specific iPSCs and scaleup strategies for translational applications. We have emphasized on prenatal tissue-derived MSCs and iMSCs derived from hiPSCs as an effective alternative to adult MSCs. We also highlight the urgent requirement to revisit the initial criteria laid down by International Society for Cellular Therapy (ISCT) and propose more stringent criteria to define, identify and exclusively characterize the MSCs derived from various tissue sources using advanced molecular tools; also more international workshops are necessary for delineating unique features of MSCs. Unless the proposed goal is achieved, it is extremely difficult to realize the full potential of MSCs in translational applications. Although numerous patients have been tested with MSCs to date, no immediate adverse outcomes or infusion-related toxicity has been reported, suggesting MSCs infusion to be safe. However, rare adverse event and late complications of the treatment may be detected in large cohorts of patients with long-term follow-up.

**INTL**

**PMID:**26521972

**BS**

**Sachithanandham J**, Ramalingam VV, Raja J, Abraham OC, Pulimood SA, KannangaiR(1).

Expression of cytokine-mRNA in peripheral blood mononuclear cell of human immunodeficiency virus-1 subtype C infected individuals with opportunistic viral infections from India (South).

Indian J Med Microbiol. 2016 Jan-Mar;34(1):76-81. doi: 10.4103/0255-0857.174118.

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Human immunodeficiency virus (HIV) disease progression is associated with a marked change in the level of plasma cytokines. The study reported here investigated the level of mRNA expression of different

cytokines: Tumour necrosis factor-alpha (TNF- $\alpha$ ), interferon (INF)-gamma, interleukin-10 (IL-10) and IL-21 in the peripheral blood mononuclear cell among the antiretroviral therapy naïve subtype C HIV-1 infected individuals and normal healthy controls by real time polymerase chain reaction. The mRNA expressions of all the 4 cytokines in HIV-1 infected individuals were significantly higher compared to healthy controls (P value range 0.0004-0.01). The mean level of IL-10, INF-gamma and TNF- $\alpha$  were higher in HIV infected individuals with low CD4 counts (<300 cells/ $\mu$ l). The IL-10 expression showed a significant negative correlation with CD4 counts ( $r=-0.25$ ,  $P=0.04$ ) while IL-21 showed a positive correlation with CD4 counts ( $r=0.26$ ,  $P=0.03$ ). There was a significant negative correlation between the cytomegalovirus (CMV) viral load and IL-21 expression. Cytokine levels by mRNA detection avoids the inherent problem of measuring plasma level and this study also provide information on the cytokine levels and CD4+ T cell level among HIV-1 subtype C infected individuals with opportunistic viral infections like CMV. DOI: 10.4103/0255-0857.174118

**NAT**

**PMID:**26776123

**BS**

**Sandhya P(1)**, Danda D(1), Sharma D(2),(3), Scaria V(2),(3).

Does the buck stop with the bugs?: an overview of microbial dysbiosis in rheumatoid arthritis.

Int J Rheum Dis. 2016 Jan;19(1):8-20. doi: 10.1111/1756-185X.12728. Epub 2015 Sep 19.

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The human body is an environmental niche which is home to diverse co-habiting microbes collectively referred as the human microbiome. Recent years have seen the in-depth characterization of the human microbiome and associations with diseases. Linking of the composition or number of the human microbiota with diseases and traits date back to the original work of Elie Metchnikoff. Recent advances in genomic technologies have opened up finer details and dynamics of this new science with

higher precision. Microbe-rheumatoid arthritis connection, largely related to the gut and oral microbiomes, has showed up as a result - apart from several other earlier, well-studied candidate autoimmune diseases. Although evidence favouring roles of specific microbial species, including *Porphyromonas*, *Prevotella* and *Leptotricha*, has become clearer, mechanistic insights still continue to be enigmatic. Manipulating the microbes by traditional dietary modifications, probiotics, and antibiotics and by currently employed disease-modifying agents seems to modulate the disease process and its progression. In the present review, we appraise the existing information as well as the gaps in knowledge in this challenging field. We also discuss the future directions for potential clinical applications, including prevention and management of rheumatoid arthritis using microbial modifications. © 2015 Asia Pacific League of Associations for Rheumatology and Wiley Publishing Asia Pty Ltd. DOI: 10.1111/1756-185X.12728

INTL

PMID:26385261

BS

**Suzana S(1)**, Ninan MM(1), Gowri M(2), Venkatesh K(3), Rupali P(4), Michael JS(1).

Xpert MTB/Rif for the diagnosis of extrapulmonary tuberculosis--an experience from a tertiary care centre in South India.

Trop Med Int Health. 2016 Mar;21(3):385-92. doi: 10.1111/tmi.12655. Epub 2016 Jan 19.

#### Author information:

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**OBJECTIVE:** The Xpert MTB/Rif, with a detection limit of 131 CFU/ml, plays a valuable role in the diagnosis of extrapulmonary tuberculosis, both susceptible and resistant. This study aims at evaluating the Xpert MTB/Rif for the same, at a tertiary care centre in south India, assessing it against both culture and a composite gold standard (CGS). **METHODS:** We tested consecutive samples from patients suspected of extrapulmonary tuberculosis with Xpert MTB/Rif, evaluated its sensitivity and specificity against solid and/or liquid culture and CGS. An individual analysis of different sample types (tissue biopsies, fluids, pus, lymph node biopsies and CSF) given an adequate sample size, against both culture and CGS, was also performed. **RESULTS:** In total, 494 samples were analysed against culture. Compared to culture, the

sensitivity of Xpert MTB/Rif was 89% (95% CI 0.81-0.94) and its specificity was 74% (95% CI 0.70-0.78). When Xpert MTB/Rif was compared to the CGS, pooled sensitivity was 62% (95% CI 0.56-0.67) and specificity was 100% (95% CI 0.91-1.00). **CONCLUSION:** This assay performs better than the currently available conventional laboratory methods. The rapidity with which results are obtained is an added advantage, and its integration into a routine diagnostic protocol must be considered. © 2015 John Wiley & Sons Ltd. DOI: 10.1111/tmi.12655

INTL

PMID:26671654

BS

**Torunkuney D(1)**, Chaiwarith R(2), Reechaipichitkul W(3), Malatham K(4), Chareonphaibul V(5), Rodrigues C(6), Chitins DS(7), Dias M(8), Anandan S(9), Kanakapura S(10), Park YJ(11), Lee K(12), Lee H(13), Kim JY(13), Lee Y(14), LeeHK(15), Kim JH(16), Tan TY(17), Heng YX(17), Mukherjee P(18), Morrissey I(19).

Results from the Survey of Antibiotic Resistance (SOAR) 2012-14 in Thailand, India, South Korea and Singapore.

J Antimicrob Chemother. 2016 May;71 Suppl 1:i3-19. doi: 10.1093/jac/dkw073.

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**OBJECTIVES:** To provide susceptibility data for community-acquired respiratory tract isolates of *Streptococcus pneumoniae*, *Streptococcus pyogenes*, *Haemophilus influenzae* and *Moraxella catarrhalis* collected in 2012-14 from four Asian countries.

**METHODS:** MICs were determined using Etest® for all antibiotics except erythromycin, which was evaluated by disc diffusion. Susceptibility was assessed using CLSI, EUCAST and pharmacokinetic/pharmacodynamic (PK/PD) breakpoints. For macrolide/clindamycin interpretation, breakpoints were adjusted for incubation in CO<sub>2</sub> where available.

**RESULTS:** Susceptibility of *S. pneumoniae* was generally lower in South Korea than in other countries. Penicillin susceptibility assessed using CLSI oral or EUCAST breakpoints ranged from 21.2% in South Korea to 63.8% in Singapore. In contrast, susceptibility using CLSI intravenous breakpoints was much higher, at 79% in South Korea and ~95% or higher elsewhere. Macrolide susceptibility was ~20% in South Korea and ~50%-60% elsewhere. Among *S. pyogenes* isolates (India only), erythromycin susceptibility (~20%) was lowest of the antibiotics tested. In *H. influenzae* antibiotic susceptibility was high except for ampicillin, where susceptibility ranged from 16.7% in South Korea to 91.1% in India. South Korea also had a high percentage (18.1%) of  $\beta$ -lactamase-negative ampicillin-resistant isolates. Amoxicillin/clavulanic acid susceptibility for each pathogen (PK/PD high dose) was between 93% and 100% in all countries except for *H. influenzae* in South Korea (62.5%).

**CONCLUSIONS:** Use of EUCAST versus CLSI breakpoints had profound differences for cefaclor,

cefuroxime and ofloxacin, with EUCAST showing lower susceptibility. There was considerable variability in susceptibility among countries in the same region. Thus, continued surveillance is necessary to track future changes in antibiotic resistance.

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**INTL**

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**BS**

**Tuschl K(1),(2)**, Meyer E(3), Valdivia LE(2), Zhao N(4), Dadswell C(5), Abdul-SadaA(5), Hung CY(6), Simpson MA(7), Chong WK(8), Jacques TS(9), Woltjer RL(10), Eaton S(11), Gregory A(12), Sanford L(12), Kara E(13),(14), Houlden H(13), CunoSM(15),(16), Prokisch H(15),(16), Valletta L(17), Tiranti V(17), Younis R(18), Maher ER(19),(20), Spencer J(5), Straatman-Iwanowska A(21), GissenP(1),(21),(22), Selim LA(23), Pintos-Morell G(24), Coroleu-Lletget W(25), Mohammad SS(26), Yoganathan S(27), Dale RC(26), Thomas M(27), Rihel J(2), BodamerOA(6), Enns CA(4), Hayflick SJ(12),(28),(29), Clayton PT(1), Mills PB(1), KurianMA(3), Wilson SW(2).

Mutations in SLC39A14 disrupt manganese homeostasis and cause childhood-onset parkinsonism-dystonia.

*Nat Commun.* 2016 May 27;7:11601. doi: 10.1038/ncomms11601.

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Although manganese is an essential trace metal, little is known about its transport and homeostatic regulation. Here we have identified a cohort of patients with a novel autosomal recessive manganese transporter defect caused by mutations in SLC39A14. Excessive accumulation of manganese in these patients results in rapidly progressive childhood-onset parkinsonism-dystonia with distinctive brain magnetic resonance imaging appearances and neurodegenerative features on post-mortem examination. We show that mutations in SLC39A14 impair manganese transport in vitro and lead to manganese dyshomeostasis and altered locomotor activity in zebrafish with CRISPR-induced *slc39a14* null mutations. Chelation with disodium calcium edetate lowers blood manganese levels in patients and can lead to striking clinical improvement. Our results demonstrate that SLC39A14 functions as a pivotal manganese transporter in vertebrates.

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**INTL**

**PMCID: PMC4894980 PMID:27231142**

**BS**

**Ullah E(1)**, Nadeem Saqib MA(2), Sajid S(3), Shah N(3), Zubair M(4), Khan MA(5), Ahmed I(6), Ali G(7), Dutta AK(8), Danda S(8), Lao R(9), Ling-Fung Tang P(9), Kwok PY(9), Ansar M(10), Slavotinek A(11).

Genetic analysis of consanguineous families presenting with congenital ocular defects.

Exp Eye Res. 2016 May;146:163-71. doi: 10.1016/j.exer.2016.03.014. Epub 2016 Mar 16.

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Jammu & Kashmir, Pakistan. (8)Medical Genetics Unit, Christian Medical College, Vellore, India. (9)Cardiovascular Research Institute, University of California, San Francisco, CA, USA. (10)Department of Biochemistry, Quaid-i-Azam University, Islamabad, 45320, Pakistan. Electronic address: ansar@qau.edu.pk. (11)Department of Pediatrics, University of California, San Francisco, CA, USA. Electronic address: slavotia@peds.ucsf.edu.

Anophthalmia and microphthalmia (A/M) are a group of rare developmental disorders that affect the size of the ocular globe. A/M may present as the sole clinical feature, but are also frequently found in a variety of syndromes. A/M is genetically heterogeneous and can be caused by chromosomal aberrations, copy number variations and single gene mutations. To date, A/M has been caused by mutations in at least 20 genes that show different modes of inheritance. In this study, we enrolled eight consanguineous families with A/M, including seven from Pakistan and one from India. Sanger and exome sequencing of DNA samples from these families identified three novel mutations including two mutations in the Aldehyde Dehydrogenase 1 Family Member A3 (ALDH1A3) gene, [c.1310\_1311delAT; p.(Tyr437Trpfs\*44) and c.964G > A; p.(Val322Met)] and a single missense mutation in Forkhead Box E3 (FOXE3) gene, [c.289A > G p.(Ile97Val)]. Additionally two previously reported mutations were identified in FOXE3 and in Visual System Homeobox 2 (VSX2). This is the first comprehensive study on families with A/M from the Indian subcontinent which provides further evidence for the involvement of known genes with novel and recurrent mutations.

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**INTL**

**PMID:**26995144

**BS**

**Veeraraghavan B(1)**, Anandan S(2), Muthurandani Sethuvel DP(2), PuratchiveeranN(2), Walia K(3), Devanga Ragupathi NK(2).

Molecular Characterization of Intermediate Susceptible Typhoidal Salmonella to Ciprofloxacin, and its Impact.

Mol Diagn Ther. 2016 Jun;20(3):213-9. doi: 10.1007/s40291-016-0191-6.

#### Author information:

(1)Department of Clinical Microbiology, Christian Medical College, 8th Floor, Asha Building, Vellore, 632 004, Tamil Nadu, India. vbalaji@cmcvellore.ac.in. (2)Department of Clinical Microbiology, Christian Medical College, 8th Floor, Asha Building, Vellore, 632 004, Tamil Nadu, India. (3)Division of Epidemiology and Communicable Diseases, Indian

Council of Medical Research, Ansari Nagar, New Delhi, 110 029, India.

**BACKGROUND AND OBJECTIVE:** Extensive use of ciprofloxacin to treat Salmonella typhi infections has led to the emergence of resistance, resulting in clinical failure and delayed treatment response. Interpretative breakpoints for ciprofloxacin were revised by the Clinical and Laboratory Standards Institute (CLSI) and the European Committee on Antimicrobial Susceptibility Testing (EUCAST) in 2012. Since the majority of *S. typhi* isolates fall under the category of 'intermediate susceptible' as per CLSI criteria, we undertook molecular characterization to better define the susceptibility of these isolates. **METHODS:** Of 113 typhoidal Salmonella isolates collected during 2014, 33 (27 *S. typhi* and 6 *S. paratyphi A*) were randomly selected to determine the presence of chromosomal (*gyrA*, *gyrB* and *parC*), plasmid (*qnrA*, *qnrB*, *qnrS* and *aac(6')-Ib-cr*), and efflux-mediated fluoroquinolone resistance. **RESULTS:** To the best of our knowledge, the *parC* mutation Glu(84)-Gly was observed for the first time in *S. typhi* in India. Of 33 isolates, only one harbored the *qnrB* gene, which is responsible for plasmid-mediated resistance. No significant change in efflux pump activity was observed for ciprofloxacin, except one that showed a fivefold decrease. Ninety-six percent of isolates with intermediate minimum inhibitory concentration to ciprofloxacin (CLSI) had mutations in the *gyrA* and *parC* genes, which might translate to possible/probable clinical failure in patients if treated with ciprofloxacin. In contrast, the EUCAST criteria define these isolates as resistant and may result in appropriate therapy with reduced morbidity. **CONCLUSION:** It was clear that the molecular mechanism of ciprofloxacin resistance correlates better with the EUCAST criteria than the CLSI criteria, which is also in agreement with the pefloxacin results, suggesting it as a surrogate marker for identifying fluoroquinolone susceptibility. DOI: 10.1007/s40291-016-0191-6

**INTL**

**PMID:**26951258

**BS**

**Velay A(1)**, Jeulin H(1),(2), Eschlimann M(1), Malvé B(2), Goehringer F(3), Bensenane M(4), Fripiat JP(1), Abraham P(5), Ismail AM(5), Murray JM(6), Combet C(7), Zoulim F(7), Bronowicki JP(4), Schvoerer E(1),(2).

Characterization of hepatitis B virus surface antigen variability and impact on HBs antigen clearance under nucleos(t)ide analogue therapy.

J Viral Hepat. 2016 May;23(5):387-98. doi: 10.1111/jvh.12498. Epub 2016 Jan 6.

#### Author information:

(1)EA 7300 'Stress, Immunité, Pathogènes', Université de Lorraine, Vandoeuvre-les-Nancy, France. (2)Laboratoire de Virologie, Centre Hospitalier Universitaire de Nancy, Vandoeuvre-les-Nancy, France. (3)Service des Maladies Infectieuses et Tropicales, Centre Hospitalier Universitaire de Nancy, Vandoeuvre-les-Nancy, France. (4)Service d'Hépatogastroentérologie, Centre Hospitalier Universitaire de Nancy, Vandoeuvre-les-Nancy, France. (5)Department of Clinical Virology, Christian Medical College, Vellore, Tamil Nadu, India. (6)School of Mathematics and Statistics, UNSW Australia, Sydney, NSW, Australia. (7)Unité Inserm UI1052, Université de Lyon, Lyon, France.

For hepatitis B virus (HBV)-related chronic infection under treatment by nucleos(t)ide analogues (NUCs), HBsAg clearance is the ultimate therapeutic goal but very infrequent. We investigated how HBV envelope protein variability could lead to differential HBsAg clearance on NUCs. For 12 HBV genotype D patients receiving NUCs, six resolvers (HBsAg clearance) were compared to six matched nonresolvers (HBsAg persistence). PreS/S amino acid (aa) sequences were analysed with bioinformatics to predict HBV envelope antigenicity and aa covariance. To enrich our analyses on very rare resolvers, these were compared with other HBV genotype D strains in three characterized clinical cohorts including common chronically infected patients. The sT125M+sP127T combination was observed in four nonresolvers of six, corroborated by aa covariance analysis, associated with a lower predicted antigenicity than sT125T+sP127P. Concordant features within this HBV key functional domain, at positions 125 and 127, were reported from two of the three comparative cohorts. In our hands, a lower ELISA reactivity of HBV-vaccinated mice sera was observed against the sT125M mutant. In the S gene, 56 aa changes in minor variants were detected in non-resolvers, mainly in the major hydrophilic region, vs 28 aa changes in resolvers. Molecular features in patients showing HBsAg persistence on NUCs argue in favour of a different aa pattern in the HBV S gene compared to those showing HBsAg clearance. In nonresolvers, a decrease in HBs 'a' determinant antigenicity and more frequent mutations in the S gene suggest a role for the HBV envelope characteristics in HBsAg persistence. © 2016 John Wiley & Sons Ltd.

DOI: 10.1111/jvh.12498

**INTL**

**PMID:**26742490

**BS**

**Vijayakumar S(1)**, Rajenderan S(1), Laishram S(1), Anandan S(1), Balaji V(1), Biswas I(2).

Biofilm Formation and Motility Depend on the Nature of the *Acinetobacter baumannii* Clinical Isolates.

Front Public Health. 2016 May 24;4:105. doi: 10.3389/fpubh.2016.00105. eCollection 2016.

#### Author information:

(1)Department of Clinical Microbiology, Christian Medical College, Vellore, India. (2)Department of Microbiology, Molecular Genetics and Immunology, University of Kansas Medical Center, Kansas City, KS, USA.

*Acinetobacter baumannii* is a nosocomial pathogen involved in various infections ranging from minor soft-tissue infections to more severe infections such as ventilator-associated pneumonia and bacteremia. The severity and the type of infections depend on the genetic and phenotypic variations of the strains. In this study, we compared the extent of biofilm formation and motility displayed by 60 multidrug-resistant *A. baumannii* clinical strains isolated from blood and sputum samples from patients from Southern India. Our results showed that isolates from the sputum samples formed significantly more robust biofilm compared to the blood isolates. On the other hand, we observed that the blood isolates were more motile than the sputum isolates. To the best of our knowledge, this is the first study that systematically evaluated the correlation between these two phenotypic traits and the nature of the isolates. DOI: 10.3389/fpubh.2016.00105

**INTL**

**PMCID:** PMC4877508 **PMID:**27252939

**BS**

**Weiss DJ(1)**, Rasko JE(2), Cuende N(3), Ruiz MA(4), Ho HN(5), Nordon R(6), WiltonS(7), Dominici M(8), Srivastava A(9).

Part 2: Making the "unproven" "proven".

Cytotherapy. 2016 Jan;18(1):120-3. doi: 10.1016/j.jcyt.2015.11.005.

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(1)Department of Medicine, University of Vermont, Burlington, Vermont, USA. ISCT Chief Scientific Officer 2014-2016. Chair, ISCT Pulmonary Committee 2013-2015. Electronic address: dweiss@uvm.edu. (2)Department of Cell & Molecular Therapies, Royal Prince Alfred Hospital, Centenary Institute, Sydney Medical School, University of Sydney, Sydney, Australia. ISCT Australia & New Zealand, Past Regional Vice President 2008-2012. (3)Andalusian Initiative for

Advanced Therapies, Junta de Andalucía, Sevilla, Spain. Chair, ISCT EU LRA Committee, 2014-2016. (4) Bone Marrow Transplantation and Cell Therapy Unit, Associação Portuguesa de Beneficência, SJ Rio Preto, Sao Paulo, Brazil. ISCT South & Central America, Past Regional Vice President 2013-2015. (5) Department of Obstetrics and Gynecology, College of Medicine, National Taiwan University, Taipei, Taiwan. ISCT Asia, Past Regional Vice President 2013-2015. (6) Graduate School of Biomedical Engineering, University of New South Wales, Sydney, Australia. ISCT Australia & New Zealand, Regional Vice-President 2014-2016. (7) Western Australian Neuroscience Research Institute, Centre for Comparative Genomics, Murdoch University, Perth, Australia. Member at large of the ISCT Presidential Task Force on the Use of Unproven Cellular Therapies. (8) Division of Oncology, Laboratory of Cellular Therapy, University of Modena & Reggio Emilia, Modena, Italy. ISCT President 2014-2016. Chair of the ISCT Presidential Task Force on the Use of Unproven Cellular Therapies. (9) Center for Stem Cell Research (a unit of inStem, Bengaluru), Department of Hematology, Christian Medical College, Vellore, India. Member at large of the ISCT Presidential Task Force on the Use of Unproven Cellular Therapies. DOI: 10.1016/j.jcyt.2015.11.005

INTL

PMID:26719203

BS

**Wills SJ(1)**, Pandian GR(1), Bhanu TK(1), Kumar KS(2), Murugan Y(2), AbhilashKP(1).

Clinical profile of patients with traumatic cervical spine injury in the emergency department of a tertiary care hospital.

J Emerg Trauma Shock. 2016 Jan-Mar;9(1):43-4. doi: 10.4103/0974-2700.167668.

**Author information:**

(1) Department of Emergency, Christian Medical College, Vellore, Tamil Nadu, India. E-mail: drshaijuwills@rediffmail.com. (2) Department of Radiodiagnosis, Christian Medical College, Vellore, Tamil Nadu, India.

DOI: 10.4103/0974-2700.167668

INTL

PMCID: PMC4766768 PMID:26957830

BS

**Aalam SM(1)**, Manian KV(1),(2), Bharathan SP(1),(2), Mayuranathan T(2), Velayudhan SR(1),(2).

Identification of Stable OCT4(+)/NANOG(-) State in Somatic Cell Reprogramming.

Cell Reprogram. 2016 Nov;18(6):367-368. Epub 2016 Sep 13.

**Author information:**

(1) Centre for Stem Cell Research, Christian Medical College, Vellore, India (2) Department of Haematology, Christian Medical College, Vellore, India. DOI: 10.1089/cell.2016.0018

INTL

PMID:27622636

BS

**Abiramalatha T(1)**, Santhanam S(1), Mammen JJ(2), Rebekah G(3), Shabeer MP(1), Choudhury J(2), Nair SC(2).

Utility of neutrophil volume conductivity scatter (VCS) parameter changes as sepsis screen in neonates.

J Perinatol. 2016 Sep;36(9):733-8. doi: 10.1038/jp.2016.69. Epub 2016 Apr 28.

**Author information:**

(1) Department of Neonatology, Christian Medical College, Vellore, India. (2) Department of Transfusion medicine and Immunohematology, Christian Medical College, Vellore, India. (3) Department of Biostatistics, Christian Medical College, Vellore, India.

**OBJECTIVE:** The objective of this study was to determine changes in neutrophil volume conductivity scatter (VCS) parameters and their distribution widths (DW) in neonatal sepsis and to estimate their optimal cutoff levels using receiver operating characteristic (ROC) curves. **STUDY DESIGN:** In a cohort of neonates evaluated for sepsis, blood counts and blood culture were performed initially, with repeat counts and C-reactive protein (CRP) done after 24 to 48 h. Neutrophil VCS parameters from both the initial and repeat blood counts were analyzed. Babies were classified as having blood culture-positive sepsis, probable sepsis (clinical course consistent with sepsis and CRP-positive, but culture-negative) and no sepsis (clinical course not compatible with sepsis, culture- and CRP-negative). **RESULTS:** A total of 600 babies were included: 240 (40%) babies in the sepsis group and 360 (60%) babies in the control group. All the neutrophil VCS parameters and their DWs (except for low angle light scatter in the repeat counts) were significantly different between the two groups, with an area under curve in the ROC curve of >0.6 for most parameters. The five most significant VCS parameters (mean neutrophil volume (MNV), median angle light scatter (MALS), lower median angle light scatter (LMALS), MNV-DW and ALL-DW) had around 65 to 75% sensitivity and specificity. A combination of leukopenia, thrombocytopenia, MNV and LMALS

had a likelihood ratio (LR)+ of 15.3 and LR- of 0.17. With a pre-test probability of 40%, post-test probability increased to 91% for a positive test and decreased to 10% for a negative test. A prospective validation study was performed recruiting an additional 60 babies, which showed similar results, assuring that the cutoffs were robust. **CONCLUSION:** Neutrophil VCS parameters cannot be considered as stand-alone tests to diagnose or rule out neonatal sepsis, but can be used in combination with other hematological screening tests to improve the diagnostic accuracy of the neonatal sepsis screen. DOI: 10.1038/jp.2016.69

**INTL**

**PMID:**27123571

**BS**

**Adcock DM**(1), Mammen J(2), Nair SC(2), de Lima Montalvão SA(3).

Quality laboratory issues in bleeding disorders. *Haemophilia*. 2016 Jul;22 Suppl 5:84-9. doi: 10.1111/hae.12991.

**Author information:**

(1)Colorado Coagulation, Laboratory Corporation of America® Holdings, Englewood, CO, USA. (2)Department of Transfusion Medicine and Immunohaematology, Christian Medical College, Vellore, Tamil Nadu, India. (3)IHTC Hemophilia Unit "Cláudio L. P. Corrêa", Instituto Nacional de Ciência e Tecnologia do Sangue, Hemocentro Unicamp, University of Campinas, São Paulo, Brazil.

Selected quality issues pertinent to the determination of accurate results in the haemostasis laboratory are discussed. Specifically, the implementation of a successful external quality-assessment scheme is described, including its impact on result accuracy as well as the programme's unique challenges and opportunities. Errors in the preanalytical phase of laboratory testing represent the greatest source for reporting incorrect test results. Some of the most common preanalytical errors are described including those that necessitate sample rejection. Analytical means to identify potential sources of error and analytical means to overcome particular interferences are described. Representing the most important clinical complication in the treatment of patients with haemophilia, quality issues related to determination of the presence of inhibitory antibodies against factor VIII (FVIII) are reviewed. Heat treatment of patient plasma prior to testing, particularly in patients receiving replacement FVIII concentrate or during induction of immune tolerance to achieve more accurate results is recommended, while screening activated partial thromboplastin time-based mixing tests to rule out inhibitor presence is discouraged. The

initiatives presented in this review can be implemented in robust and resource restricted settings to improve the quality of laboratory testing in patients with bleeding disorders. © 2016 John Wiley & Sons Ltd. DOI: 10.1111/hae.12991

**INT**

**PMID:**27405682

**BS**

**Bakthavatchalam YD**(1), Veeraraghavan B(1), Mathur P(2), Purighalla S(3), RichardVS(3).

Polymyxin Nordmann/Poirel test for rapid detection of polymyxin resistance in Enterobacteriaceae: Indian experience.

*Indian J Med Microbiol*. 2016 Oct-Dec;34(4):564-565. doi:

**Author information:**

(1)Department of Clinical Microbiology, Christian Medical College, Vellore, TamilNadu, India. (2)Department of Pathology, All Institute of Medical Science, NewDelhi, India. (3)Department of Hospital Infection Control, Narayana HealthBengaluru, Karnataka, India

**NAT**

**PMID:**27934849

**BS**

**Basu P**(1), Banerjee D(1), Mittal S(1), Dutta S(1), Ghosh I(1), Chowdhury N(1), Abraham P(2), Chandna P(3), Ratnam S(4)

Sensitivity of APTIMA HPV E6/E7 mRNA test in comparison with hybrid capture 2 HPV DNA test for detection of high risk oncogenic human papillomavirus in 396 biopsyconfirmed cervical cancers

*J Med Virol*. 2016 Jul;88(7):1271-8. doi: 10.1002/jmv.24453. Epub 2016 Jan 6.

**Author information:**

(1)Chittaranjan National Cancer Institute, Kolkata, India. (2)Department of Clinical Virology, Christian Medical College, Vellore, India. (3)Department of Molecular Oncology, AceProbe Technologies (India) Pvt. Ltd, New Delhi, India. (4)Memorial University, St. John's, Newfoundland and Labrador, Canada.

The sensitivity of E6/E7 mRNA-based Aptima HPV test (AHPV; Hologic, Inc.) for detection of cervical cancer has been reported based on only a small number of cases. We determined the sensitivity of AHPV in comparison with the DNA-based Hybrid Capture 2 HPV test (HC2; Qiagen) for the detection of oncogenic HPV in a large number of cervical cancers at the time of diagnosis using cervical samples obtained in ThinPrep (Hologic). Samples

yielding discordant results were genotyped using Linear Array assay (LA; Roche). Of 396 cases tested, AHPV detected 377 (sensitivity, 95.2%; 95%CI: 93.1-97.3), and HC2 376 (sensitivity, 94.9%; 95%CI: 92.7-97.1) with an agreement of 97.2% ( $\kappa$  0.7; 95%CI: 0.54-0.87). Among six AHPV+/HC2- cases, LA identified oncogenic HPV types in four including a type 73 and was negative in two. Among five AHPV-/HC2+ cases, LA detected oncogenic HPV types in two including a type 73 and was negative in three. Of 14 AHPV-/HC2- cases, 13 were genotyped. LA detected oncogenic HPV types in six, non-oncogenic types in three, and was negative in four. This is the largest study to demonstrate the sensitivity of AHPV for the detection of invasive cervical cancer and this assay showed equal sensitivity to HC2. © 2015 Wiley Periodicals, Inc. DOI: 10.1002/jmv.24453

INTL

PMID:26693677

BS

**Chaudhuri B(1), Mondal B(2), Ray SK(3), Sarkar SC(4).**

A novel biocompatible conducting polyvinyl alcohol (PVA)-polyvinylpyrrolidone (PVP)-hydroxyapatite (HAP) composite scaffolds for probable biological application.

Colloids Surf B Biointerfaces. 2016 Jul 1;143:71-80. doi:10.1016/j.colsurfb.2016.03.027. Epub 2016 Mar 11.

#### Author information:

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(2)Central Scientific Service, Indian Association for the Cultivation of Science, Kolkata 700032, India.

(3)Centre for Bioseparation Technology (CBST), VIT-University, Vellore, Tamil Nadu 632014, India.

(4)Centre for Rural & Cryogenic Technologies, Jadavpur University, Kolkata 700032, India.

We have prepared biocompatible composites of 80wt% polyvinyl alcohol (PVA)-(20wt%) polyvinylpyrrolidone (PVP) blend with different concentrations of bioactive nanohydroxyapatite,  $\text{Ca}_{10}(\text{PO}_4)_6(\text{OH})_2$  (HAP). The composite films demonstrated maximum effective conductivity ( $\sigma \sim 1.64 \times 10^{-4} \text{ S/m}$ ) and effective dielectric constant ( $\epsilon \sim 290$ ) at percolation threshold concentration ( $\sim 10\text{wt\%}$  HAP) at room temperature. These values of  $\sigma$  and  $\epsilon$  are much higher than those of PVA, PVP or HAP. Our preliminary observation indicated excellent biocompatibility of the contents (8.5 and 5wt% within percolation threshold concentration) using NIH 3T3 fibroblast cell line. Cells viability on the well

characterized composite fibrous scaffolds was determined by MTT[3-(4,5-di-methylthiazol-2-yl)-2,5-diphenyltetrazolium bromide] assay analysis. Enhancement of  $\sigma$ , due to HAP addition, was found to show increased biocompatibility of the fibrous scaffold. Enhanced  $\sigma$  value of the PVA/PVP-HAP composite provided supporting cues for the increased cell viability and biocompatibility of the composite fibrous meshes. Excellent biocompatibility these electrospun composite scaffolds made them to plausible potential candidates for tissue engineering or other biomedical applications. Copyright © 2016 Elsevier B.V. All rights reserved.

INTL

PMID:26998868

BS

**Daniel HD(1), David J(1), Raghuraman S(1), Gnanamony M(1), Chandy GM(2), Sridharan G(1), Abraham P(1).**

Comparison of Three Different Hepatitis C Virus Genotyping Methods: 5'NCR PCR-RFLP, Core Type-Specific PCR, and NS5b Sequencing in a Tertiary Care Hospital in South India.

J Clin Lab Anal. 2016 Sep 1. doi: 10.1002/jcla.22045. [Epub ahead of print]

#### Author information:

(1)Department of Clinical Virology, Christian Medical College, Vellore, India. (2)Department of Gastrointestinal Sciences, Christian Medical College, Vellore, India.

**BACKGROUND:** Based on genetic heterogeneity, hepatitis C virus (HCV) is classified into seven major genotypes and 64 subtypes. In spite of the sequence heterogeneity, all genotypes share an identical complement of colinear genes within the large open reading frame. The genetic interrelationships between these genes are consistent among genotypes. Due to this property, complete sequencing of the HCV genome is not required. HCV genotypes along with subtypes are critical for planning antiviral therapy. Certain genotypes are also associated with higher progression to liver cirrhosis.

**METHODS:** In this study, 100 blood samples were collected from individuals who came for routine HCV genotype identification. These samples were used for the comparison of two different genotyping methods (5'NCR PCR-RFLP and HCV core type-specific PCR) with NS5b sequencing. **RESULTS:** Of the 100 samples genotyped using 5'NCR PCR-RFLP and HCV core type-specific PCR, 90% ( $\kappa = 0.913$ ,  $P < 0.00$ ) and 96% ( $\kappa = 0.794$ ,  $P <$

0.00) correlated with NS5b sequencing, respectively. Sixty percent and 75% of discordant samples by 5'NCR PCR-RFLP and HCV core type-specific PCR, respectively, belonged to genotype 6. All the HCV genotype 1 subtypes were classified accurately by both the methods.

**CONCLUSION:** This study shows that the 5'NCR-based PCR-RFLP and the HCV core type-specific PCR-based assays correctly identified HCV genotypes except genotype 6 from this region. Direct sequencing of the HCV core region was able to identify all the genotype 6 from this region and serves as an alternative to NS5b sequencing.

© 2016 Wiley Periodicals, Inc. DOI: 10.1002/jcla.22045

**INTL**

**PMID:**27580956

**BS**

**Das M(1)**, Chaitanya VS(2), Kanmani K(2), Rajan L(2), Ebenezer M(2).

Genomic diversity in *Mycobacterium leprae* isolates from leprosy cases in South India.

*Infect Genet Evol.* 2016 Nov;45:285-289. doi: 10.1016/j.meegid.2016.09.014. Epub 2016 Sep 15.

**Author information:**

(1)Molecular Biology Lab, Schieffelin Institute of Health-Research and Leprosy Center (SIH-R&LC), Karigiri, Vellore, Tamil Nadu 632106, India. Electronic address: madhusmitadas21@gmail.com. (2)Molecular Biology Lab, Schieffelin Institute of Health-Research and Leprosy Center (SIH-R&LC), Karigiri, Vellore, Tamil Nadu 632106, India.

**OBJECTIVE:** The Objective of this study was to identify the strain diversity of *Mycobacterium leprae* in terms of SNP types and subtypes stratified as per genomic single nucleotide polymorphisms, in clinical isolates of leprosy patients from a tertiary care leprosy center in South India. Further, the associations of SNP types with clinical outcomes in leprosy were also investigated. **METHODS:** DNA was extracted from excisional skin biopsies of a total of 172 newly diagnosed untreated leprosy patients from a clinic in Tamil Nadu, in south India, that also serves patients from neighboring states. All the leprosy patients were those who voluntarily reported at the clinic during the study period of one year i.e., 2015. Clinical and histopathological details were collected at diagnosis and leprosy was confirmed through bacteriological smear examination and PCR for *M. leprae* specific RLEP region. SNP types and subtypes were determined by PCR amplification and Sanger sequencing of PCR products. **RESULTS:** *M. leprae* specific RLEP gene amplification was achieved in 160 out of 172 patients. Among 160 specimens

118(73.75%) were type 1 and 42 (26.25%) were type 2 and on subtyping it was noted that 88/160 (55.00%) were 1D, 25/160 (15.62%) 1C, 5/160 (3.12%) 1A, 33/160 (20.62%) 2G and 9/160 (5.62%) were 2H. **CONCLUSION:** Our results indicated that subtype 1D is predominant in the south Indian population. We also noted 2G, 1C and 1A in the patient sample tested. Additionally we identified subtype 2H for the first time in India. Copyright © 2016. Published by Elsevier B.V. DOI: 10.1016/j.meegid.2016.09.014

**INTL**

**PMID:**27642139

**BS**

**David S(1)**, Abraham AM(1).

Epidemiological and clinical aspects on West Nile virus, a globally emerging pathogen.

*Infect Dis (Lond).* 2016 Aug;48(8):571-86. doi: 10.3109/23744235.2016.1164890. Epub 2016 May 20.

**Author information:**

(1)a Department of Clinical Virology, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND:** Since the isolation of West Nile virus (WNV) in 1937, in Uganda, it has spread globally, causing significant morbidity and mortality. While birds serve as amplifier hosts, mosquitoes of the *Culex* genus function as vectors. Humans and horses are dead end hosts. The clinical manifestations of West Nile infection in humans range from asymptomatic illness to West Nile encephalitis. **METHODS:** The laboratory offers an array of tests, the preferred method being detection of RNA and serum IgM for WNV, which, if detected, confirms the clinical diagnosis. Although no definitive antiviral therapy and vaccine are available for humans, many approaches are being studied. **STUDY:** This article will review the current literature of the natural cycle, geographical distribution, virology, replication cycle, molecular epidemiology, pathogenesis, laboratory diagnosis, clinical manifestations, blood donor screening for WNV, treatment, prevention and vaccines. DOI: 10.3109/23744235.2016.1164890

**INTL**

**PMID:**27207312

**BS**

**Deshpande PA(1)**, Srivastava VM(2), Mani S(1), Anandhan S(1), Meena J(1), Abraham A(1), Viswabandya A(1), George B(1), Srivastava A(1), Mathews V(1), Balasubramanian P(1).

Atypical BCR-ABL1 fusion transcripts in adult B-acute lymphoblastic leukemia, including a novel fusion transcript-e8a1.

Leuk Lymphoma. 2016 Oct;57(10):2481-4. doi: 10.3109/10428194.2016.1151512. Epub 2016 Mar 4.

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(1)a Department of Haematology, Christian Medical College, Vellore, Tamil Nadu, India; (2)b Cytogenetics Unit, Christian Medical College, Vellore, Tamil Nadu, India. DOI: 10.3109/10428194.2016.1151512

INTL

PMID:26942999

BS

**Devanga Ragupathi** NK(1), Muthuirulandi Sethuvel DP(1), Shankar BA(1), MunusamyE(1), Anandan S(1), Veeraraghavan B(2).

Draft genome sequence of blaTEM-1-mediated cephalosporin-resistant *Salmonella enterica* serovar Typhi from bloodstream infection.

J Glob Antimicrob Resist. 2016 Dec;7:11-12. doi: 10.1016/j.jgar.2016.06.003. Epub 2016 Jul 12.

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Enteric fever is a major cause of concern in developing countries across the globe. The primary choice of antibiotics remains fluoroquinolones, followed by cephalosporins. Resistance to third-generation cephalosporins is rarely reported in *Salmonella enterica* serovar Typhi. This study reports the whole genome sequence of an *S. Typhi* isolate resistant to cefixime [minimum inhibitory concentration (MIC)=512 µg/mL] by microbroth dilution. Interestingly, the isolate was negative for the cephalosporin resistance gene blaCTX-M by PCR, which is a known mechanism for higher cephalosporin resistance. The isolate was further subjected to next-generation sequencing that identified blaTEM-1B and blaDHA-1 genes in association with qnrB4 and sul1. blaTEM is a known gene coding for β-lactam resistance. In certain cases, overexpression of blaTEM was reported to result in cephalosporin resistance. This suggests that the high cefixime MIC would have been contributed by overexpression of blaTEM-1B. The blaTEM-1B gene was found to be associated with a promoter Px with -35 and -10 regions as TTAATA and TAAAGT, respectively. The promoter regions were unique, but the -10 region was similar to that found in Pa/Pb (previously reported promoter for blaTEM) with a single nucleotide change. In addition, an IncN

plasmid was identified, which is usually reported in association with the most prevalent extended-spectrum β-lactamase (ESBL), metallo- and non-metallo-carbapenemase, and plasmid-mediated quinolone resistance (PMQR) genes. Plasmids such as IncN might possibly confer resistance and enhance spread. It is imperative to continuously monitor the drug resistance profile and evolving genetic elements. Copyright © 2016 International Society for Chemotherapy of Infection and Cancer. Published by Elsevier Ltd. All rights reserved. DOI: 10.1016/j.jgar.2016.06.003

INTL

PMID:27530999

BS

**Dutta AK**(1), Paulose BK(2), Danda S(1), Alexander S(2), Tamilarasi V(2), Omprakash S(1).

Recurrent truncating mutations in alanine-glyoxylate aminotransferase gene in two South Indian families with primary hyperoxaluria type 1 causing later onset end-stage kidney disease.

Indian J Nephrol. 2016 Jul-Aug;26(4):288-90. doi: 10.4103/0971-4065.171244.

#### Author information:

(1)Department of Medical Genetics, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. (2)Department of Nephrology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

Primary hyperoxaluria type 1 is an autosomal recessive inborn error of metabolism due to liver-specific peroxisomal enzyme alanine-glyoxylate transaminase deficiency. Here, we describe two unrelated patients who were diagnosed to have primary hyperoxaluria. Homozygous c.445\_452delGTGCTGCT (p.L151Nfs\*14) (Transcript ID: ENST00000307503; human genome assembly GRCh38.p2) (HGMD ID CD073567) mutation was detected in both the patients and the parents were found to be heterozygous carriers. Our patients developed end-stage renal disease at 23 years and 35 years of age. However, in the largest series published from OxalEurope cohort, the median age of end-stage renal disease for null mutations carriers was 9.9 years, which is much earlier than our cases. Our patients had slower progressions as compared to three unrelated patients from North India and Pakistan, who had homozygous c.302T>C (p.L101P) (HGMD ID CM093792) mutation in exon 2. Further, patients need to be studied to find out if c.445\_452delGTGCTGCT mutation represents a founder mutation in Southern India. DOI: 10.4103/0971-4065.171244

NAT

PMCID: PMC4964691 PMID:27512303

BS

**Edison E**(1), Konkle BA(2), Goodeve AC(3),(4). Genetic analysis of bleeding disorders. *Haemophilia*. 2016 Jul;22 Suppl 5:79-83. doi: 10.1111/hae.13024.

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(1)Department of Haematology, Christian Medical College, Vellore, India. (2)Bloodworks Northwest and University of Washington, Seattle, WA, USA. (3)Sheffield Diagnostic Genetics Service, Sheffield Children's NHS Foundation Trust, heffield, UK. (4)Department of Infection, Immunity and Cardiovascular Disease, University of Sheffield, Sheffield, UK.

Molecular genetic analysis of inherited bleeding disorders has been practised for over 30 years. Technological changes have enabled advances, from analyses using extragenic linked markers to next-generation DNA sequencing and microarray analysis. Two approaches for genetic analysis are described, each suiting their environment. The Christian Medical Centre in Vellore, India, uses conformation-sensitive gel electrophoresis mutation screening of multiplexed PCR products to identify candidate mutations, followed by Sanger sequencing confirmation of variants identified. Specific analyses for F8 intron 1 and 22 inversions are also undertaken. The MyLifeOurFuture US project between the American Thrombosis and Hemostasis Network, the National Hemophilia Foundation, Bloodworks Northwest and Biogen uses molecular inversion probes (MIP) to capture target exons, splice sites plus 5' and 3' sequences and to detect F8 intron 1 and 22 inversions. This allows screening for all F8 and F9 variants in one sequencing run of multiple samples (196 or 392). Sequence variants identified are subsequently confirmed by a diagnostic laboratory. After having identified variants in genes of interest through these processes, a systematic procedure determining their likely pathogenicity should be applied. Several scientific societies have prepared guidelines. Systematic analysis of the available evidence facilitates reproducible scoring of likely pathogenicity. Documentation of frequency in population databases of variant prevalence and in locus-specific mutation databases can provide initial information on likely pathogenicity. Whereas null mutations are often pathogenic, missense and splice site variants often require in silico analyses to predict likely pathogenicity and using an

accepted suite of tools can help standardize their documentation. © 2016 John Wiley & Sons Ltd. DOI: 10.1111/hae.13024

INTL

PMID:27405681

BS

**Fenwick AL**(1), Kliszczak M(2), Cooper F(3), Murray J(3), Sanchez-Pulido L(3), Twigg SR(1), Goriely A(1), McGowan SJ(4), Miller KA(1), Taylor IB(1), Logan C(3);WGS500 Consortium, Bozdogan S(5), Danda S(6), Dixon J(7), Elsayed SM(8), ElsobkyE(8), Gardham A(9), Hoffer MJ(10), Koopmans M(10), McDonald-McGinn DM(11), SantenGW(10), Savarirayan R(12), de Silva D(13), Vanakker O(14), Wall SA(15), WilsonLC(9), Yuregir OO(16), Zackai EH(11), Ponting CP(3), Jackson AP(3), WilkieAO(17), Niedzwiedz W(18), Bicknell LS(19).

Mutations in CDC45, Encoding an Essential Component of the Pre-initiationComplex, Cause Meier-Gorlin Syndrome and Craniosynostosis. *Am J Hum Genet*. 2016 Jul 7;99(1):125-38. doi: 10.1016/j.ajhg.2016.05.019. Epub 2016 Jun 30.

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Clinical Genetics Services, Murdoch Children's Research Institute, University of Melbourne, Melbourne, VIC 3052, Australia. (13)Department of Physiology, Faculty of Medicine, University of Kelaniya, Ragama, Gampaha GQ 11010, Sri Lanka. (14)Center for Medical Genetics, Ghent University Hospital, 9000 Ghent, Belgium. (15)Craniofacial Unit, Department of Plastic and Reconstructive Surgery, Oxford University Hospitals NHS Foundation Trust, John Radcliffe Hospital, Oxford OX3 9DU, UK. (16)Genetic Diagnosis Center, Adana Numune Training and Research Hospital, Cukurova, Adana, 01170, Turkey. (17)Clinical Genetics Group, MRC Weatherall Institute of Molecular Medicine, University of Oxford, John Radcliffe Hospital, Oxford OX3 9DS, UK; Craniofacial Unit, Department of Plastic and Reconstructive Surgery, Oxford University Hospitals NHS Foundation Trust, John Radcliffe Hospital, Oxford OX3 9DU, UK. (18)Department of Oncology, MRC Weatherall Institute of Molecular Medicine, University of Oxford, Oxford OX3 9DS, UK. Electronic address: wojciech.niedzwiedz@imm.ox.ac.uk. (19)MRC Human Genetics Unit, IGMM, University of Edinburgh, Edinburgh EH4 2XU, UK; Department of Pathology, Dunedin School of Medicine, University of Otago, Dunedin, Otago 9016, New Zealand. Electronic address: [louise.bicknell@otago.ac.nz](mailto:louise.bicknell@otago.ac.nz).

DNA replication precisely duplicates the genome to ensure stable inheritance of genetic information. Impaired licensing of origins of replication during the G1 phase of the cell cycle has been implicated in Meier-Gorlin syndrome (MGS), a disorder defined by the triad of short stature, microtia, and a/hypoplastic patellae. Biallelic partial loss-of-function mutations in multiple components of the pre-replication complex (preRC; ORC1, ORC4, ORC6, CDT1, or CDC6) as well as de novo stabilizing mutations in the licensing inhibitor, GMNN, cause MGS. Here we report the identification of mutations in CDC45 in 15 affected individuals from 12 families with MGS and/or craniosynostosis. CDC45 encodes a component of both the pre-initiation (preIC) and CMG helicase complexes, required for initiation of DNA replication origin firing and ongoing DNA synthesis during S-phase itself, respectively, and hence is functionally distinct from previously identified MGS-associated genes. The phenotypes of affected individuals range from syndromic coronal craniosynostosis to severe growth restriction, fulfilling diagnostic criteria for Meier-Gorlin syndrome. All mutations identified were biallelic and included synonymous mutations altering splicing of physiological CDC45 transcripts, as well as amino acid substitutions expected to result in partial loss of function. Functionally, mutations reduce levels of full-length transcripts and protein in subject cells, consistent with partial loss of CDC45 function and a

predicted limited rate of DNA replication and cell proliferation. Our findings therefore implicate the preIC as an additional protein complex involved in the etiology of MGS and connect the core cellular machinery of genome replication with growth, chondrogenesis, and cranial suture homeostasis. Copyright © 2016 American Society of Human Genetics. Published by Elsevier Inc. All rights reserved. DOI: 10.1016/j.ajhg.2016.05.019

**INTL**

**PMCID:** PMC5005452 **PMID:** 27374770

**BS**

**Fletcher GJ(1), Anantharam R(1), Radhakrishnan K(1), Karunakaran A(1), Abraham P(2).**

Cost-Effective In-House Neutralization Assay for the Confirmation of HBeAg.

J Clin Lab Anal. 2016 Nov;30(6):1146-1149. doi: 10.1002/jcla.21995. Epub 2016 May 21.

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**BACKGROUND & AIM:** Hepatitis B virus-e-antigen (HBeAg) is an affordable viral marker to assess viral replication kinetics and response to antiviral therapy. In the absence of confirmatory assays, discrepant or false-positive HBeAg results are resolved by screening for other HBV markers. We standardized an in-house HBeAg neutralization assay (HBeAg-NT) to confirm HBeAg in clinical samples. **METHODS:** The performance and reliability of this assay were evaluated by first WHO International Standard for HBeAg (first WHO-IS HBeAg) from Paul Ehrlich Institute and clinical samples (n = 150) from chronic HBV carriers. Of these, 71 HBeAg-positive sera were used for HBeAg-NT. **RESULTS:** Concentrations spanning 0.25-10 U of first WHO-IS HBeAg and clinical samples (S/Co ranges from 1.00 to 10.00) were neutralized completely in the HBeAg-NT.

**CONCLUSIONS:** HBeAg-NT is a simple, cost-effective, and reliable direct approach to confirm HBeAg in clinical samples which precludes the need for screening additional HBV markers in low resource settings. © 2016 Wiley Periodicals, Inc. DOI: 10.1002/jcla.21995

**INTL**

**PMID:** 27207380

**BS**

**Ganesan S(1), Alex AA(1), Chendamarai E(1), Balasundaram N(1), Palani HK(1), David S(1), Kulkarni U(1), Aiyaz M(2), Mugasimangalam R(2),**

Korula A(1), Abraham A(1), Srivastava A(1), Padua RA(3),(4), Chomienne C(3),(4), George B(1), Balasubramanian P(1), Mathews V(1). Rationale and efficacy of proteasome inhibitor combined with arsenic trioxide in the treatment of acute promyelocytic leukemia. *Leukemia*. 2016 Nov;30(11):2169-2178. doi: 10.1038/leu.2016.227. Epub 2016 Aug 18.

#### Author information:

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Arsenic trioxide (ATO) mediates PML-RARA (promyelocytic leukemia-retinoic acid receptor- $\alpha$ ) oncoprotein degradation via the proteasome pathway and this degradation appears to be critical for achieving cure in acute promyelocytic leukemia (APL). We have previously demonstrated significant micro-environment-mediated drug resistance (EMDR) to ATO in APL. Here we demonstrate that this EMDR could be effectively overcome by combining a proteasome inhibitor (bortezomib) with ATO. A synergistic effect on combining these two agents in vitro was noted in both ATO-sensitive and ATO-resistant APL cell lines. The mechanism of this synergy involved downregulation of the nuclear factor- $\kappa$ B pathway, increase in unfolded protein response (UPR) and an increase in reactive oxygen species generation in the malignant cell. We also noted that PML-RARA oncoprotein is effectively cleared with this combination in spite of proteasome inhibition by bortezomib, and that this clearance is mediated through a p62-dependent autophagy pathway. We further demonstrated that proteasome inhibition along with ATO had an additive effect in inducing autophagy. The beneficial effect of this combination was further validated in an animal model and in an ongoing clinical trial. This study raises the potential of a non-myelotoxic proteasome inhibitor replacing anthracyclines in the management of high-risk and relapsed APL. DOI: 10.1038/leu.2016.227

#### INTL

PMCID: PMC5097069 PMID:27560113

#### BS

Gupta N(1), Chacko G(1), Chacko AG(2), Rajshekhar V(2), Jayprakash M(3).

Fluorescence in situ hybridization for chromosome 14q deletion in subsets of meningioma segregated by MIB-1 labelling index.

*Neurol India*. 2016 Nov-Dec;64(6):1256-1263. doi: 10.4103/0028-3886.193768.

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AIM: To correlate histopathological grading of meningiomas segregated into subgroups based on the MIB-1 labelling index (MIB-1 LI) with chromosomal loss of 14q using fluorescence in situ hybridization (FISH).

SETTINGS AND DESIGN: Retrospective study conducted in a tertiary hospital.

METHODS AND MATERIAL: Forty-six cases from January to December 2011 were segregated into 5 categories based on the MIB-1 LI. Slides were reviewed to ascertain the grade. Immunohistochemical staining for MIB-1 was performed using a Ventana Benchmark XT autostainer. Commercially available FISH paraffin pretreatment kit and SpectrumOrange fluorophore labelled probe were used. The Statistical Package for the Social Sciences version 16.0 for Windows was used for statistical analysis.

RESULTS: There were 21 World Health Organisation (WHO) grade I, 24 grade II, and 1 grade III meningiomas. There was a statistically significant difference between the mean duration of symptoms, maximum dimension, and the MIB-1 LI of grade I and grade II meningiomas. 33.3% grade I cases showed 14q deletion, compared to 84% of grade II and III meningiomas. Histologically, hypercellularity, small cell formation, prominent nucleoli, and sheet-like growth were significantly associated with 14q deletion. All brain invasive meningiomas had 14q deletion. As MIB-1% increased, the prevalence of deletions was significantly higher. The mean MIB-1 of the 7 grade I meningiomas that had 14q deletions was  $8.86 \pm 1.95\%$  when compared to  $4.14 \pm 1.35\%$  for those without 14q deletions.

CONCLUSIONS: A strong association existed between histologic grade, MIB-1 LI, and the presence of chromosome 14q deletion. Association of high MIB-1 LI with 14q deletions, even in meningiomas with a Grade I histology, defines a distinct subset of benign meningiomas.

DOI: 10.4103/0028-3886.193768

#### NAT

PMID:27841196

#### BS

Haanshuus CG(1), Chandy S(2), Manoharan A(2), Vivek R(2), Mathai D(2), Xena D(2), Singh A(3), Langeland N(1),(4), Blomberg B(1),(4), Vasanthan

G(2), Sitaram U(2), Appasamy J(5), Nesaraj J(6), Henry A(7), Patil S(8), Alvarez-Uria G(9), Armstrong L(10), Mørch K(1).

A High Malaria Prevalence Identified by PCR among Patients with Acute Undifferentiated Fever in India.

PLoS One. 2016 Jul 7;11(7):e0158816. doi: 10.1371/journal.pone.0158816. eCollection 2016.

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**BACKGROUND:** Approximately one million malaria cases were reported in India in 2015, based on microscopy. This study aims to assess the malaria prevalence among hospitalised fever patients in India identified by PCR, and to evaluate the performance of routine diagnostic methods. **METHODS:** During June 2011–December 2012, patients admitted with acute undifferentiated fever to seven secondary level community hospitals in Assam (Tezpur), Bihar (Raxaul), Chhattisgarh (Mungeli), Maharashtra (Ratnagiri), Andhra Pradesh (Anantapur) and Tamil Nadu (Oddanchatram and Ambur) were included. The malaria prevalence was assessed by polymerase chain reaction (PCR), routine microscopy, and a rapid diagnostic test (RDT) with PCR as a reference method. **RESULTS:** The malaria prevalence by PCR was 19% (268/1412) ranging from 6% (Oddanchatram, South India) to 35% (Ratnagiri, West India). Among malaria positive patients *P. falciparum* single infection was detected in 46%, while 38% had *P. vivax*, 11% mixed infections with *P. falciparum* and *P. vivax*, and 5% *P. malariae*. Compared to PCR, microscopy had sensitivity of 29% and specificity of 98%, while the RDT had sensitivity of 24% and specificity of 99%. **CONCLUSIONS:** High malaria prevalence was identified by PCR in this cohort. Routine diagnostic methods had low sensitivity compared to PCR. The results suggest that malaria is underdiagnosed in rural India. However, low parasitaemia controlled by immunity may constitute a proportion of PCR positive cases, which calls for awareness of the fact that other pathogens could be responsible for the febrile disease

in submicroscopic malaria. DOI: 10.1371/journal.pone.0158816

**INTL**

**PMCID:** PMC4936667 **PMID:** 27389396

**BS**

**Janardhanan J(1), Patole S(1), Varghese L(1), Rupa V(1), Tirkey AJ(1), Varghese GM(2).** Elusive treatment for human rhinosporidiosis. *Int J Infect Dis.* 2016 Jul;48:3-4. doi: 10.1016/j.ijid.2016.04.013. Epub 2016 Apr 21.

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**OBJECTIVES:** The aim of this study was to clarify the contentious taxonomic classification of *Rhinosporidium seeberi*, the cause of human rhinosporidiosis, which may have treatment implications. **METHODS:** PCR was used to amplify the internal transcribed spacer (ITS)-2 region from the genomic DNA of the aetiological agent obtained from a sample of human rhinosporidiosis lesions. The amplicon was sequenced and the organism identified using the Basic Local Alignment Search Tools (BLAST).

**RESULTS:** Phylogenetic analysis revealed that the aetiological agent clustered along with the *R. seeberi* isolated from humans and also with *Amphibiocystidium ranae* from frogs. This organism is a member of the order Dermocystida in the class Mesomycetozoa. A patient with disseminated rhinosporidiosis did not respond to conventional therapy with dapsone and surgical excision, and treatment with amphotericin B also proved futile. **CONCLUSION:** An effective treatment for *R. seeberi*—a eukaryote belonging to the class Mesomycetozoa—is still elusive. Copyright © 2016. Published by Elsevier Ltd.

DOI: 10.1016/j.ijid.2016.04.013

**INTL**

**PMID:** 27109109

**BS**

**Kabeerdoss J(1), Sandhya P(2), Mandal SK(2), Gowri M(3), Danda D(2).**

High salivary soluble L-selectin and interleukin-7 levels in Asian Indian patients with primary Sjögren's syndrome.

*Clin Rheumatol.* 2016 Dec;35(12):3063-3067. Epub 2016 Sep 12.

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In present study, we aimed to study salivary soluble L-selectin (sL-selectin), interleukin-7(IL-7), and lymphotoxin- $\alpha$  levels in primary Sjögren's syndrome (pSS) and their clinical as well as serological correlations. pSS patients fulfilling either the American European Consensus Group (AECG) and/or the American college of Rheumatology (ACR) criteria were recruited. Age- and sex-matched hospital staff were recruited as healthy controls. Unstimulated saliva was collected by the spitting method; sL-selectin, IL-7, and lymphotoxin- $\alpha$  were measured in the saliva using commercial ELISA kits. Forty-three patients with pSS and 31 healthy controls were included in the study. Increased levels of sL-selectin and IL-7 were found in the saliva of patients as compared to controls. lymphotoxin- $\alpha$  was undetectable in the saliva of pSS patients and controls. Salivary sL-selectin positively correlated with rheumatoid factor ( $r = 0.47$ ;  $p < 0.003$ ). No other variable including ESSDAI was significantly associated with salivary sL-selectin and IL-7 levels. Indian patients with primary Sjögren's syndrome have higher salivary sL-selectin and IL-7 levels than healthy controls. DOI: 10.1007/s10067-016-3406-7

**INTL****PMID:**27620619**BS**

**Kamath V**(1), Gnanasekaran KK(2), Mammen J(3). MYH9-related disorder, a probable May-Hegglin anomaly case series: A tertiary care experience. Hematol Oncol Stem Cell Ther. 2016 Dec;9(4):137-140. doi:10.1016/j.hemonc.2016.08.002. Epub 2016 Sep 2.

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**OBJECTIVE/BACKGROUND:** May-Hegglin anomaly (MHA) is a rare familial bleeding disorder

characterized by a triad of thrombocytopenia, giant platelets, and Döhle-like inclusion bodies within the leukocytes. The clinical spectrum as well as the pathophysiology of this entity is not well defined. The objective of this work is to present a series of three cases of MHA diagnosed in our hospital, where the patients presented with variable bleeding manifestations, thrombocytopenia, and giant platelets. **MATERIALS AND METHODS:** We studied three cases of possible MHA. In addition to the clinical examination, complete hemogram, and peripheral blood smear examination, these patients were also subjected to coagulation studies. Although bleeding symptoms varied among these patients, platelet aggregation tests with various agonists showed a normal response. **RESULTS:** Consistent findings of this entity noted in our patients were mild-to-moderate thrombocytopenia, giant platelets, and Döhle-like inclusions within the leukocytes. **CONCLUSION:** A diagnosis of MHA could be made based on a thorough peripheral blood smear examination, which also helps to avoid a misdiagnosis of immune thrombocytopenia. Copyright © 2016 King Faisal Specialist Hospital & Research Centre. Published by Elsevier Ltd. All rights reserved. DOI: 10.1016/j.hemonc.2016.08.002

**INTL****PMID:**27614228**BS**

**Laishram S**(1), Anandan S(1), Devi BY(1), Elakkiya M(1), Priyanka B(1), Bhuvaneshwari T(1), Peter JV(2), Subramani K(3), Balaji V(1). Determination of synergy between sulbactam, meropenem and colistin in carbapenem-resistant *Klebsiella pneumoniae* and *Acinetobacter baumannii* isolates and correlation with the molecular mechanism of resistance. J Chemother. 2016 Aug;28(4):297-303. doi: 10.1080/1120009X.2016.1143261.

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Treatment of infections with carbapenem-resistant Gram negative organism is a major challenge especially among intensive care patients. Combinations of sulbactam, meropenem and colistin was studied for its synergistic activity against 100 invasive isolates of carbapenem-

resistant *Klebsiella pneumoniae* and *Acinetobacter baumannii-calcoaceticus* complex by checkerboard assay and time kill assay (TKA). In addition, presence of carbapenemase production was determined by multiplex PCR. Time kill assay detected more synergy than checkerboard assay. Good bactericidal activity of 70-100% was noted with the combinations tested. Among *K. pneumoniae*, isolates producing NDM carbapenemase alone showed significantly more synergy than isolates producing OXA-48-like carbapenemases. In treatment of infection with carbapenem-resistant organisms, the site of infection and the type of carbapenemase produced may help to determine the most effective combination of antimicrobials.

DOI:

10.1080/1120009X.2016.1143261

INTL

PMID:27461479

BS

**Madan V**(1), Shyamsunder P(1), Han L(1),(2), Mayakonda A(1), Nagata Y(3), Sundaresan J(1), Kanojia D(1), Yoshida K(3), Ganesan S(4), Hattori N(1), Fulton N(5), Tan KT(1), Alpermann T(6), Kuo MC(7), Rostami S(8), Matthews J(9), Sanada M(3), Liu LZ(1), Shiraishi Y(10), Miyano S(10), Chendamalai E(4), Hou HA(11), Malnassy G(5), Ma T(12), Garg M(1), Ding LW(1), Sun QY(1), Chien W(1), Ikezoe T(13), Lill M(14), Biondi A(15), Larson RA(16), Powell BL(17), Lübbert M(12), Chng WJ(1),(2),(18), Tien HF(11), Heuser M(19), Ganser A(19), Koren-Michowitz M(20),(21), Kornblau SM(9), Kantarjian HM(9), Nowak D(22), Hofmann WK(22), Yang H(1), Stock W(5), Ghavamzadeh A(8), Alimoghaddam K(8), Haferlach T(6), Ogawa S(3), Shih LY(7), Mathews V(4), Koeffler HP(1),(14),(18).

Comprehensive mutational analysis of primary and relapse acute promyelocytic leukemia.

Leukemia. 2016 Aug;30(8):1672-81. doi: 10.1038/leu.2016.69. Epub 2016 Apr 11.

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Acute promyelocytic leukemia (APL) is a subtype of myeloid leukemia characterized by differentiation block at the promyelocyte stage. Besides the presence of chromosomal rearrangement t(15;17), leading to the formation of PML-RARA (promyelocytic leukemia-retinoic acid receptor alpha) fusion, other genetic alterations have also been implicated in APL. Here, we performed comprehensive mutational analysis of primary and relapse APL to identify somatic alterations, which cooperate with PML-RARA in the pathogenesis of APL. We explored the mutational landscape using whole-exome (n=12) and subsequent targeted sequencing of 398 genes

in 153 primary and 69 relapse APL. Both primary and relapse APL harbored an average of eight non-silent somatic mutations per exome. We observed recurrent alterations of FLT3, WT1, NRAS and KRAS in the newly diagnosed APL, whereas mutations in other genes commonly mutated in myeloid leukemia were rarely detected. The molecular signature of APL relapse was characterized by emergence of frequent mutations in PML and RARA genes. Our sequencing data also demonstrates incidence of loss-of-function mutations in previously unidentified genes, ARID1B and ARID1A, both of which encode for key components of the SWI/SNF complex. We show that knockdown of ARID1B in APL cell line, NB4, results in large-scale activation of gene expression and reduced in vitro differentiation potential. DOI: 10.1038/leu.2016.69

**INTL**

**PMCID: PMC4972641 PMID:27063598**

**BS**

**Madhuri V(1), Santhanam M(2), Rajagopal K(2), Sugumar LK(2), Balaji V(2).**

WISP3 mutational analysis in Indian patients diagnosed with progressive pseudorheumatoid dysplasia and report of a novel mutation at p.Y198. Bone Joint Res. 2016 Jul;5(7):301-6. doi: 10.1302/2046-3758.57.2000520.

**Author information:**

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**OBJECTIVES:** To determine the pattern of mutations of the WISP3 gene in clinically identified progressive pseudorheumatoid dysplasia (PPD) in an Indian population.**PATIENTS AND METHODS:** A total of 15 patients with clinical features of PPD were enrolled in this study. Genomic DNA was isolated and polymerase chain reaction performed to amplify the WISP3 gene. Screening for mutations was done by conformation-sensitive gel electrophoresis, beginning with the fifth exon and subsequently proceeding to the remaining exons. Sanger sequencing was performed for both forward and reverse strands to confirm the mutations.**RESULTS:** In all, two of the 15 patients had compound heterozygous mutations: one a nonsense mutation c.156C>A (p.C52\*) in exon 2, and the other a missense mutation c.677G>T (p.G226V) in exon 4. All others were homozygous, with three bearing a nonsense

mutation c.156C>A (p.C52\*) in exon 2, three a missense mutation c.233G>A (p.C78Y) in exon 2, five a missense mutation c.1010G>A (p.C337Y) in exon 5, one a nonsense mutation c.348C>A (p.Y116\*) in exon 3, and one with a novel deletion mutation c.593\_597delATAGA (p.Y198\*) in exon 4.**CONCLUSION:** We identified a novel mutation c.593\_597delATAGA (p.Y198\*) in the fourth exon of the WISP3 gene. We also confirmed c.1010G>A as one of the common mutations in an Indian population with progressive pseudorheumatoid dysplasia. Cite this article: V. Madhuri, M. Santhanam, K. Rajagopal, L. K. Sugumar, V. Balaji. WISP3 mutational analysis in Indian patients diagnosed with progressive pseudorheumatoid dysplasia and report of a novel mutation at p.Y198\* Bone Joint Res 2016;5:301-306. DOI: 10.1302/2046-3758.57.2000520. © 2016 Madhuri et al. DOI: 10.1302/2046-3758.57.2000520

**INTL**

**PMCID: PMC4957178 PMID:27436824**

**BS**

**Manesh A(1), Balaji V(2), Kumar DR(3), Rupali P(4).**

A case of clinical and microbiological failure of azithromycin therapy in Salmonella enterica serotype Typhi despite low azithromycin MIC. Int J Infect Dis. 2016 Nov 25;54:62-63. doi: 10.1016/j.ijid.2016.11.409. [Epub ahead of print]

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(1)Department of Infectious Diseases, Christian Medical College, Vellore, India. Electronic address: abimanesh@gmail.com. (2)Department of Clinical Microbiology, Christian Medical College, Vellore, India. Electronic address: vbalaji@cmcvellore.ac.in. (3)Department of Clinical Microbiology, Christian Medical College, Vellore, India. Electronic address: [speed.naveen1@gmail.com](mailto:speed.naveen1@gmail.com). (4)Department of Infectious Diseases, Christian Medical College, Vellore, India. Electronic address: [prisci@cmcvellore.ac.in](mailto:prisci@cmcvellore.ac.in).

Typhoid fever remains a serious problem in many developing countries. Due to resistance to multiple first line drugs, azithromycin has evolved as an important drug in the treatment of typhoid. While therapy with azithromycin is highly effective, no clinically validated mean inhibitory concentration (MIC) break points or disc diffusion cutoff guidelines are available so far. We describe an Indian adult with clinical and microbiological failure to azithromycin despite low azithromycin

MIC. Copyright © 2016. Published by Elsevier Ltd.  
DOI: 10.1016/j.ijid.2016.11.409

**INTL**

**PMID:**27894983

**BS**

**Manoharan A**(1), Barla GS(2), Peter R(2), Sugumar M(2), Mathai D(3).

Multidrug resistance mediated by co-carriage of extended-spectrum beta-lactamases, AmpC and New Delhi metallo-beta-lactamase-1 genes among carbapenem-resistant Enterobacteriaceae at five Indian medical centres.

Indian J Med Microbiol. 2016 Jul-Sep;34(3):359-61.  
doi: 10.4103/0255-0857.188350.

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In this study, we evaluated the coexistence of extended-spectrum beta-lactamases (ESBL), AmpC and New Delhi metallo-beta-lactamase-1 (NDM-1) genes among carbapenem-resistant Enterobacteriaceae (CRE) recovered prospectively from patients at multiple sites. The study included 285 CRE strains from 2782 Gram-negative Bacilli collected from multiple centres during 2007-2010, of which 87 were characterised. Standard and reference laboratory methods were used for resistance determination. Detection of blaNDM-1, blaAmpC, blaTEM, blaSHV and blaCTX-M was done by polymerase chain reaction. High levels of antimicrobial resistance observed among study isolates. Co-carriage of ESBLs, AmpC and NDM-1 was 26.3%. Nosocomial origin among the co-carriage isolates was 64.3%, with 9.2% associated mortality.  
DOI: 10.4103/0255-0857.188350

**NAT**

**PMID:**27514962

**BS**

**Mascarenhas M**(1), Thomas S(2), Kamath MS(3), Ramalingam R(4), Kongari AM(5), Yuvarani S(6), Srivastava VM(7), George K(5).

Prevalence of chromosomal abnormalities and Y chromosome microdeletion among men with severe semen abnormalities and its correlation with successful sperm retrieval. J Hum Reprod Sci. 2016 Jul-Sep;9(3):187-193.

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**AIM:** To estimate the prevalence of chromosomal abnormalities and Y chromosome microdeletion among men with azoospermia and severe oligozoospermia and its correlation with successful surgical sperm retrieval. **SETTING AND DESIGN:** A prospective study in a tertiary level infertility unit. **MATERIALS AND METHODS:** In a prospective observation study, men with azoospermia and severe oligozoospermia (concentration <5 million/ml) attending the infertility center underwent genetic screening. Peripheral blood karyotype was done by Giemsa banding. Y chromosome microdeletion study was performed by a multiplex polymerase chain reaction. **RESULTS:** The study group consisted of 220 men, 133 of whom had azoospermia and 87 had severe oligozoospermia. Overall, 21/220 (9.5%) men had chromosomal abnormalities and 13/220 (5.9%) men had Y chromosome microdeletions. Chromosomal abnormalities were seen in 14.3% (19/133) of azoospermic men and Y chromosome microdeletions in 8.3% (11/133). Of the 87 men with severe oligozoospermia, chromosomal abnormalities and Y chromosome microdeletions were each seen in 2.3% (2/87). Testicular sperm aspiration was done in 13 men and was successful in only one, who had a deletion of azoospermia factor c.

**CONCLUSIONS:** Our study found a fairly high prevalence of genetic abnormality in men with severe semen abnormalities and a correlation of genetic abnormalities with surgical sperm retrieval outcomes. These findings support the need for genetic screening of these men prior to embarking on surgical sperm retrieval and assisted reproductive technology intracytoplasmic sperm injection. DOI: 10.4103/0974-1208.192065

**INTL**

**PMCID:** PMC5070401 **PMID:**27803587

**BS**

**Murhekar MV**(1), Mittal M(2), Prakash JA(3), Pillai VM(4), Mittal M(5), GirishKumar CP(6),

Shinde S(6), Ranjan P(6), Oak C(6), Gupta N(7), Mehendale S(8), Arora R(7), Gupte M(7).

Acute encephalitis syndrome in Gorakhpur, Uttar Pradesh, India - Role of scrub typhus.

J Infect. 2016 Dec;73(6):623-626. doi: 10.1016/j.jinf.2016.08.014. Epub 2016 Sep 1.

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DOI: 10.1016/j.jinf.2016.08.014

INTL

PMID:27592263

BS

**Ninan MM**(1), George TK(2), Balaji V(1), Ramya I(2). Extended spectrum  $\beta$ -lactamase producing *Shigella flexneri* serotype-2 causing bacteremia in a patient with uncontrolled diabetes mellitus.

Indian J Pathol Microbiol. 2016 Jul-Sep;59(3):420-1. doi:10.4103/0377-4929.188120.

#### Author information:

(1)Department of Microbiology, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

We report a case of *Shigella flexneri* serotype-2 causing bacteremia in an elderly gentleman with uncontrolled diabetes mellitus, who had no other apparent risk factors. Antibiotic susceptibility testing revealed that the organism was a multidrug resistant extended spectrum beta-lactamase producing strain, which was confirmed by molecular characterization. This rare case alerts both the clinician and microbiologist to a previously unaddressed risk factor of *Shigella* spp. causing bacteremia, as well as emerging resistant strains that are on the rise in immunocompromised patients.

DOI: 10.4103/0377-4929.188120

NAT

PMID:27510696

BS

**Padaki PA**(1), Sachithanandham J(1), Isaac R(2), Ramalingam VV(1), Abraham OC(3), Pulimood SA(4), Kannangai R(1).

The performance of reverse transcriptase assay for the estimation of the plasmaviral load in HIV-1 and HIV-2 infections.

Infect Dis (Lond). 2016;48(6):467-71. doi: 10.3109/23744235.2015.1122832. Epub 2015 Dec 11.

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(1)a Departments of Clinical Virology ; (2)b Rural Unit for Health and Social Affairs (RUHSA) ; (3)c Internal Medicine ; (4)d Dermatology and Venereology , Christian Medical College , Vellore , India.

Viral load testing for human immunodeficiency virus 1 (HIV-1) in resource-poor settings continues to be a challenge. Although antiretroviral therapy (ART) is being made available in developing countries, monitoring of viral load is not being done on a regular basis. The purpose of this study was to assess the utility of CaviDi version 3.0, which measures the plasma reverse transcriptase (RT) activity and compare its performance with molecular HIV viral load assays. In all, 125 HIV-1 and 13 HIV-2 positive samples were analyzed. The overall sensitivity of the assay was 86.8% and 94.1% for viral load >1000 copies/ml measured by Qiagen Artus HIV-1 RG RT PCR and Abbott RealTime HIV-1 PCR assays, respectively. Compared with the routine molecular viral load assays, CaviDi version 3.0 is inexpensive, user-friendly, the expenditure on infrastructure is minimal, and it can be used for monitoring of both HIV types.

DOI: 10.3109/23744235.2015.1122832

INTL

PMID:26654354

BS

**Paramanandam M**(1), O'Byrne M(2), Ghosh B(3), Mammen JJ(4), Manipadam MT(5), Thamburaj R(1), Pakrashi V(2).

Automated Segmentation of Nuclei in Breast Cancer Histopathology Images.

PLoS One. 2016 Sep 20;11(9):e0162053. doi: 10.1371/journal.pone.0162053. eCollection 2016.

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The process of Nuclei detection in high-grade breast cancer images is quite challenging in the case of image processing techniques due to certain heterogeneous characteristics of cancer nuclei such as enlarged and irregularly shaped nuclei, highly coarse chromatin marginalized to the nuclei periphery and visible nucleoli. Recent reviews state that existing techniques show appreciable segmentation accuracy on breast histopathology images whose nuclei are dispersed and regular in texture and shape; however, typical cancer nuclei are often clustered and have irregular texture and shape properties. This paper proposes a novel segmentation algorithm for detecting individual nuclei from Hematoxylin and Eosin (H&E) stained breast histopathology images. This detection framework estimates a nuclei saliency map using tensor voting followed by boundary extraction of the nuclei on the saliency map using a Loopy Back Propagation (LBP) algorithm on a Markov Random Field (MRF). The method was tested on both whole-slide images and frames of breast cancer histopathology images. Experimental results demonstrate high segmentation performance with efficient precision, recall and dice-coefficient rates, upon testing high-grade breast cancer images containing several thousand nuclei. In addition to the optimal performance on the highly complex images presented in this paper, this method also gave appreciable results in comparison with two recently published methods-Wienert et al. (2012) and Veta et al. (2013), which were tested using their own datasets.

DOI: 10.1371/journal.pone.0162053

INTL

PMCID: PMC5029866 PMID:27649496

BS

**Paul A**(1), Babji S, Sarkar R, Lazarus RP, Kang G. Rotavirus specific Salivary and Fecal IgA in Indian Children and Adults.

Indian Pediatr. 2016 Jul 8;53(7):601-6.

#### Author information:

(1)Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, Christian Medical College, Vellore TN, India. Correspondence to: Dr Gagandeep Kang, The Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, Christian Medical College, Vellore Tamil Nadu 632 004, India. [gkang@cmcvellore.ac.in](mailto:gkang@cmcvellore.ac.in).

**OBJECTIVE:** To compare serum, salivary and fecal IgA responses in infants and adults following rotavirus vaccination.

**STUDY DESIGN:** Laboratory testing of samples from clinical trials.

**SETTING:** Medical College Hospital.

**PARTICIPANTS:** 13 healthy adult volunteers not given vaccine, 20 healthy adult volunteers given one dose of bovine rotavirus tetravalent vaccine (Shantha Biotechnics), and 88 infants given 3 or 5 doses of Rotarix.

**OUTCOME MEASURES:** Serum, salivary and fecal IgA at one or more time points.

**METHODS:** IgA antibodies were estimated in serum, saliva and fecal samples by enzyme-linked immunosorbent assay, and normalized to total IgA in saliva.

**RESULTS:** In naturally infected adult volunteers, comparing serum and salivary IgA showed significant positive correlation ( $r=0.759$ ;  $P=0.003$ ). Of 20 vaccinated adults, complete samples showing change were available for 10; among them there was a significant positive correlation ( $P<0.05$ ) between pre-vaccination serum and pre-vaccination salivary IgA but not between post-vaccination serum and post-vaccination salivary IgA. Of 88 infants given 3 or 5 doses of vaccine, 13 had more than 4-fold IgA response in serum, saliva and fecal samples, 6 had a 2-4 fold increases in all specimens. There was weak correlation between seroconversion rates measured by serum and salivary antibody responses. Salivary and stool assays were able to detect seroconversion in a few children in whom there was no detectable response in serum.

**CONCLUSIONS:** Evaluation of multiple samples is useful for intensive experimental study designs and may help improve our understanding of the induction and dynamics of immune responses to rotavirus vaccination.

NAT

PMID:27508537

BS

**Prabha R**(1), Mathew BS(1), Jeyaseelan V(2), Kumar TS(3), Agarwal I(3), FlemingDH(1).

Development and validation of limited sampling strategy equation formycophenolate mofetil in children with systemic lupus erythematosus.

Indian J Nephrol. 2016 Nov-Dec;26(6):408-412.

#### Author information:

(1)Department of Pharmacology, Clinical Pharmacology Unit, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Biostatistics, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Child Health,

Christian Medical College, Vellore, Tamil Nadu, India.

The aim of this study was to establish a limited sample strategy (LSS) to predict the mycophenolic acid (MPA) area under the curve (AUC)(0-12) in children with systemic lupus erythematosus (SLE). Three months after initiation of mycophenolate mofetil (MMF) 26 children with SLE presented for therapeutic drug monitoring of MPA. On the day of the test, 10 specimens were collected, analyzed, and MPA AUC(0-12) was calculated. Using step-wise regression analysis, LSS equations were developed. Using bootstrap validation, the predictive performance was calculated. The measured mean (standard deviation) for the trough concentration and AUC(0-12) were 2.55 (1.57) µg/ml and 62.6 (21.67) mg.h/L, respectively. The range of trough concentrations and AUC(0-12) were 0.7-5.54 µg/ml and 22.1-104.8 mg.h/L, respectively. The interindividual variability (%CV) for dose normalized AUC(0-12) and dose normalized C<sub>trough</sub> was 46.5% and 61.1%, respectively. The correlation between the concentrations at the different time points and MPA AUC(0-12) ranged from 0.05 (1.5 h) to 0.56 (4 h). Two LSS equations that included 4 or 5 time points up to 3 h were developed and validated. The 4 point LSS had a correlation (R(2)) of 0.88 and the 5 point LSS an R(2) of 0.87. With respect to the 4 point and 5 point MPA LSS AUC(0-12), the bias was 1.92% and 1.96%, respectively, and the imprecision was 11.24% and 11.28%, respectively. A 4 point LSS which concludes within 3 h after the administration of the MMF dose was developed and validated, to determine the MPA AUC(0-12) in children with SLE.

DOI: 10.4103/0971-4065.174242

NAT

PMCID: PMC5131378 PMID:27942171

BS

**Prabhu VV(1)**, Sathyamurthy D(1), Ramasamy A(1), Das S(2), Anuradha M(1), Pachiappan S(1).

Evaluation of protective effects of diosmin (a citrus flavonoid) in chemical-induced urolithiasis in experimental rats.

Pharm Biol. 2016 Sep;54(9):1513-21. doi: 10.3109/13880209.2015.1107105. Epub 2016 Jan 22.

#### Author information:

(1)a Department of Pharmacology, Swamy Vivekanandha College of Pharmacy, Namakkal, Tamil Nadu, India; (2)b Department of Pharmacology, Christian Medical College, Vellore, Tamil Nadu, India. Context

There have not been any conclusive studies of the effects of diosmin, a modified flavanone glycoside obtained from *Teucrium gnaphalodes* L'Her

(Lamiaceae), on urolithiasis. Objective To evaluate anti-urolithiatic effects of diosmin in ammonium chloride and ethylene glycol-induced renal stone in experimental animals. Materials and methods Thirty Sprague-Dawley were divided into five groups (n=6) receiving the following treatments, respectively, p.o. for 15 consecutive days: distilled water, 0.75% v/v ethylene glycol+2% w/v ammonium chloride, 0.75% v/v ethylene glycol+2% w/v ammonium chloride+cystone® 750 mg/kg, 0.75% v/v ethylene glycol+2% w/v ammonium chloride+diosmin 10 mg/kg or 0.75% v/v ethylene glycol+2% w/v ammonium chloride+diosmin 20 mg/kg. Different biomarkers of urolithiasis in urine and serum were evaluated and histopathological examination of kidney was done. Results Animals treated with diosmin (both 10 and 20 mg/kg) had significantly (p<0.005) decreased in kidney weight, urinary pH, total urinary protein, urinary calcium, phosphorus, serum potassium, sodium, magnesium, creatinine, uric acid and blood urea nitrogen levels and significantly (p<0.005) increased in urinary volume, urinary magnesium, potassium, sodium, creatinine, uric acid and serum calcium levels in comparison to animals treated with ethylene glycol and ammonium chloride. However, results were better with diosmin 20 mg/kg in comparison to the control group. Conclusion Diosmin (10 and 20 mg/kg) has very good anti-urolithiatic activity similar to the standard drug cystone®.

DOI: 10.3109/13880209.2015.1107105

INTL

PMID:26799954

BS

**Pragasam AK(1)**, Sahni RD(2), Anandan S(2), Sharma A(3), Gopi R(1), Hadibasha N(1), Gunasekaran P(1), Veeraraghavan B(4).

A Pilot Study on Carbapenemase Detection: Do We See the Same Level of Agreement with the CLSI Observations.

J Clin Diagn Res. 2016 Jul;10(7):DC09-13. doi: 10.7860/JCDR/2016/16417.8152. Epub 2016 Jul 1.

#### Author information:

(1)Research Associate, Department of Clinical Microbiology, Christian Medical College, Vellore, India. (2)Professor, Department of Clinical Microbiology, Christian Medical College, Vellore, India. (3)Registrar, Department of Clinical Microbiology, Christian Medical College, Vellore, India. (4)Professor & Head, Department of Clinical Microbiology, Christian Medical College, Vellore, India.

**INTRODUCTION:** Rapid identification of carbapenemase producing organisms is of great importance for timely detection, treatment and implementation of control measures to prevent the spread. The Modified Hodge Test (MHT) and Carba NP test is recommended by CLSI for the detection of carbapenemases in Enterobacteriaceae. However, MHT may give false positive results or fail to detect metallo  $\beta$ -lactamases (MBLs). In the US, MHT is the most widely used test for detection of carbapenemases and has been found to have a sensitivity and specificity of >90% for bla KPC producers. However, in India, the prevalence of bla NDM is higher than bla KPC producers.

**AIM:** To evaluate the usefulness of CarbaNP in an Indian setting.

**MATERIALS AND METHODS:** A total of 260 isolates of carbapenem resistant E.coli (n=57), Klebsiella spp. (n=85), Pseudomonas aeruginosa (n=60), and Acinetobacter baumannii (58) isolated from clinical specimens between 2012-2014 at the Christian Medical College, Vellore were included in the study. All the carbapenem resistant isolates were subjected to CarbaNP, MHT and multiplex PCR for detection of carbapenemase genes.

**RESULTS:** CarbaNP was found to be positive in 88% (n=50/57), 81% (n=69/85), 38% (n=23/60) and 81% (n=47/58) for E.coli, Klebsiella spp., P. aeruginosa, and A. baumannii respectively. While in MHT it showed, 89% (n=51/57) and 81% (n=69/85) for E.coli and Klebsiella spp. respectively. In P.aeruginosa, synergy testing of imipenem plus cloxacillin showed that, 65% of CarbaNP negatives were ampC producers. Overall, the sensitivity and specificity of CarbaNP was found to be 94% and 100 for bla NDM; 77% and 100% for bla OXA-48 like producers and 81% and 100% for CarbAcinetoNP respectively.

**CONCLUSION:** This observation was more than what was reported in CLSI guidelines. Therefore, it is advisable to evaluate an assay for better laboratory diagnosis at respective regions.

DOI: 10.7860/JCDR/2016/16417.8152

**NAT**

**PMC5020186 PMID:27630840**

**BS**

**Pragasam AK(1), Vijayakumar S(1), Bakthavatchalam YD(1), Kapil A(2), Das BK(2), Ray P(3), Gautam V(3), Sistla S(4), Parija SC(4), Walia K(5), Ohri VC(5), AnandanS(1), Veerarahavan B(1).**

Molecular characterisation of antimicrobial resistance in Pseudomonas aeruginosa and Acinetobacter baumannii during 2014 and 2015 collected across India.

Indian J Med Microbiol. 2016 Oct-Dec;34(4):433-441. doi:10.4103/0255-0857.195376.

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(1)Department of Clinical Microbiology, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Microbiology, All Institute of Medical Sciences, New Delhi, India. (3)Department of Medical Microbiology, Post Graduate Institute of Medical Education and Research, Chandigarh, India. (4)Department of Microbiology, Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry, India. (5)Division of Epidemiology and Communicable Diseases, National Council for Medical Research, New Delhi, India.

**BACKGROUND:** Surveillance of antimicrobial resistance (AMR) is of great importance. Pseudomonas aeruginosa and Acinetobacter baumannii are important pathogens and emergence of resistance in these have increased the morbidity and mortality rates. This surveillance study was initiated by the Government of India - Indian Council of Medical Research. The aim of this study is to determine the antimicrobial susceptibility profile and to characterise the enzyme mediated antimicrobial resistance such as extended spectrum beta-lactamases (ESBLs) and carbapenemases among multidrug-resistant (MDR) P. aeruginosa and A. baumannii.

**MATERIALS AND METHODS:** A multi-centric study was conducted from January 2014 to December 2015 with a total number of 240 MDR P. aeruginosa and 312 MDR A. baumannii isolated from blood, cerebrospinal fluid, respiratory, pus, urine and intra-abdominal infections. Kirby-Bauer disc diffusion was done to determine the antimicrobial susceptibility profile. Further, MDR isolates were characterised by multiplex polymerase chain reaction to determine the resistance genes for ESBLs and carbapenemases.

**RESULTS:** Among the ESBLs, blaVEB (23%), blaTEM (5%) and blaSHV (0.4%) in P. aeruginosa and blaPER (54%), blaTEM (16%) and blaSHV (1%) in A. baumannii were the most prevalent. Likewise, blaVIM (37%), blaNDM (14%), blaGES (8%) and blaIMP (2%) in P. aeruginosa and blaOXA-23like (98%), blaOXA-58like (2%), blaNDM (22%) and blaVIM (3%) in A. baumannii were found to be the most prevalent carbapenemases. blaOXA-51like gene, intrinsic to A. baumannii was present in all the isolates tested.

**CONCLUSION:** The data shown highlight the wide difference in the molecular mechanisms of AMR profile between P. aeruginosa and A. baumannii. In P. aeruginosa, plasmid-mediated mechanisms are much lesser than the chromosomal mediated mechanisms. In A. baumannii, class D oxacillinases are more common than other mechanisms.

Continuous surveillance to monitor the trends in AMR among MDR pathogens is important for implementation of infection control and to guide appropriate empirical antimicrobial therapy.

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**NAT**

**PMID:**27934820

**BS**

**Ramakrishna K(1)**, Premkumar K(2), Kabeerdoss J(2), John KR(3).

Impaired toll like receptor 9 response in pulmonary tuberculosis.

Cytokine. 2016 Oct 18;90:38-43. doi: 10.1016/j.cyto.2016.10.006. [Epub ahead of print]

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**BACKGROUND & AIM:** Innate immune responses are important in susceptibility to pulmonary tuberculosis (TB). In order to test the hypothesis that Toll-like receptor (TLR) 2 function would be abnormal in patients with active pulmonary TB we compared the cytokine responses of peripheral blood mononuclear cells (PBMC) to innate immune ligands in a case-control study.

**METHODS:** PBMC from 19 untreated pulmonary TB patients, 17 healthy controls, and 11 treated pulmonary TB patients, were cultured for 24h with TLR 2 ligand (PAM-CSK) and other TLR ligands (muramyl dipeptide, flagellin, lipopolysaccharide (LPS), CpG oligodeoxynucleotide (CpG-ODN)). Interleukin-8 (IL-8) was estimated in the supernatant by ELISA. Messenger RNA expression for inflammatory cytokines was quantitated using real time PCR.

**RESULTS:** The important findings were (1) reduced PBMC secretion of IL-8 in response to all ligands in active TB; (2) normal to increased PBMC secretion of IL-8 in response to all ligands except CpG ODN (TLR 9 ligand) in TB patients who had recovered; (3) absence of difference in mRNA expression for a consortium of inflammatory pathway genes between healthy controls, active pulmonary tuberculosis and treated pulmonary tuberculosis patients.

**CONCLUSION:** There was a generalized post-translational suppression of the IL-8 response to innate immune ligands in active TB. There appears to be a defect of TLR 9 signaling in patients with

tuberculosis, the nature of which needs to be further explored.

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**INTL**

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**BS**

**Ramamoorthy H(1)**, Abraham P(2), Isaac B(3), Selvakumar D(1).

Role for NF- $\kappa$ B inflammatory signalling pathway in tenofovir disoproxil fumarate(TDF) induced renal damage in rats.

Food Chem Toxicol. 2016 Nov 27;99:103-118. doi: 10.1016/j.fct.2016.11.029. [Epub ahead of print]

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Nephrotoxicity due to tenofovir treatment of HIV patients has been reported. However, the mechanism of tenofovir nephrotoxicity is not clear. NF $\kappa$ B is an important proinflammatory transcription factor that plays a pivotal role in oxidative stress-induced inflammation. We hypothesized that NF $\kappa$ B proinflammatory signalling pathway may play a role in tenofovir induced renal damage. Renal damage was induced in adult male Wistar rats by the oral administration of 600 mg/kg body wt. daily for 5 consecutive weeks. Kidneys were removed and used for histological and biochemical analysis. The protein and mRNA expressions of NF $\kappa$ B and its target genes namely iNOS, COX-2 and TNF $\alpha$ , and its inhibitor I $\kappa$ B-alpha were analysed by immunohistochemical methods, western blot and quantitative RT PCR. NF $\kappa$ Bp65 activity was determined by ELISA. The protein and mRNA expressions of NF $\kappa$ B p65, iNOS, COX-2 and TNF $\alpha$  were increased in the kidneys of TDF treated rats. The activity of NF $\kappa$ Bp65 was increased by 28 fold in the nuclear fractions of the TDF treated rat kidneys. Pretreatment with melatonin, a NF $\kappa$ B inhibitor attenuated TDF induced renal damage. It is concluded that the activation of NF $\kappa$ B and its downstream proinflammatory target genes iNOS, COX-2, and TNF- $\alpha$  may contribute to the pathophysiology of TDF induced renal damage.

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**INTL**

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**BS**

**Ranganath P**(1,)(2), Matta D(2), Bhavani GS(3), Wangnekar S(2), Jain JM(2), Verma IC(4), Kabra M(5), Puri RD(4), Danda S(6), Gupta N(5), Girisha KM(3), Sankar VH(7), Patil SJ(8), Ramadevi AR(9), Bhat M(10), Gowrishankar K(11), Mandal K(12), Aggarwal S(1,)(2), Tamhankar PM(13), Tilak P(14), Phadke SR(12), Dalal A(15).

Spectrum of SMPD1 mutations in Asian-Indian patients with acid sphingomyelinase(ASM)-deficient Niemann-Pick disease.

Am J Med Genet A. 2016 Oct;170(10):2719-30. doi: 10.1002/ajmg.a.37817. Epub 2016 Jun 24.

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Acid sphingomyelinase (ASM)-deficient Niemann-Pick disease is an autosomal recessive lysosomal storage disorder caused by biallelic mutations in the SMPD1

gene. To date, around 185 mutations have been reported in patients with ASM-deficient NPD world-wide, but the mutation spectrum of this disease in India has not yet been reported. The aim of this study was to ascertain the mutation profile in Indian patients with ASM-deficient NPD. We sequenced SMPD1 in 60 unrelated families affected with ASM-deficient NPD. A total of 45 distinct pathogenic sequence variants were found, of which 14 were known and 31 were novel. The variants included 30 missense, 4 nonsense, and 9 frameshift (7 single base deletions and 2 single base insertions) mutations, 1 indel, and 1 intronic duplication. The pathogenicity of the novel mutations was inferred with the help of the mutation prediction software MutationTaster, SIFT, Polyphen-2, PROVEAN, and HANSA. The effects of the identified sequence variants on the protein structure were studied using the structure modeled with the help of the SWISS-MODEL workspace program. The p. (Arg542\*) (c.1624C>T) mutation was the most commonly identified mutation, found in 22% (26 out of 120) of the alleles tested, but haplotype analysis for this mutation did not identify a founder effect for the Indian population. To the best of our knowledge, this is the largest study on mutation analysis of patients with ASM-deficient Niemann-Pick disease reported in literature and also the first study on the SMPD1 gene mutation spectrum in India. © 2016 Wiley Periodicals, Inc.

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**BS**

**Ranjan P**(1), Fletcher GJ(1), Radhakrishnan M(1), Sivakumar J(1), Premkumar PS(2), Goel A(3), Zachariah UG(3), Abraham P(1).

Association of interleukin-28B rs12979860 and rs8099917 polymorphisms with sustained viral response in hepatitis C virus genotype 1 and 3 infected patients from the Indian subcontinent.

Indian J Med Microbiol. 2016 Jul-Sep;34(3):335-41. doi: 10.4103/0255-0857.188329.

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BACKGROUND: Polymorphisms of the IL28B gene (rs12979860 and rs8099917) have been shown to

impact treatment responses in hepatitis C virus (HCV) infected patients. The association of these polymorphisms with sustained viral response (SVR) has been studied in HCV genotype 3 infected patients in India, but not in genotype 1.

**OBJECTIVES:** This study aimed to determine the association of IL28B gene polymorphisms and other host and viral factors with treatment response in patients with HCV genotype 1 and 3 infection.

**MATERIALS AND METHODS:** DNA from 42 HCV-infected patients on antiviral therapy was analysed for the IL28B polymorphisms using polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP). Bidirectional sequencing was performed on a subset of samples for verification of PCR-RFLP results. Information on age, weight, height, diabetic status, pre-treatment viral load and alanine aminotransferase (ALT) levels was obtained from clinical records. The IL28B genotypes and the other factors were analysed for their association with SVR.

**RESULTS:** The frequency distribution of rs12979860 CC/CT/TT genotypes was found to be 66.7%, 26.2% and 7.1%, respectively. For rs8099917 genotype, the TT/GT/GG distribution was 73.8%, 21.4% and 4.8%, respectively. SVR was seen in 61.9% of cases (55.6% in genotype 1 and 62.5% in genotype 3). CC genotype at rs12979860 and TT genotype at rs8099917 were significantly higher in responders ( $P = 0.013$  and  $0.042$ , respectively). Lower baseline ALT and rapid viral response were also found to be associated with SVR. On logistic regression analysis, CC genotype at rs12979860 emerged as the most powerful predictor of treatment response.

**CONCLUSION:** IL28B polymorphisms are strong predictors of SVR in patients from the Indian subcontinent infected with HCV genotype 3 and genotype 1.

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**NAT**

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**BS**

**Riddell A(1), Chuansumrit A(2), El-Ekiaby M(3), Nair SC(4).**

Diagnostic laboratory for bleeding disorders ensures efficient management of haemorrhagic disorders.

Haemophilia. 2016 Jul;22 Suppl 5:90-5. doi: 10.1111/hae.12988.

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Haemorrhagic disorders like Postpartum haemorrhage and Dengue haemorrhagic fever are life threatening and requires an active and efficient transfusion service that could provide the most appropriate blood product which could be effective in managing them. This would essentially require prompt identification of the coagulopathy so that the best available product can be given to the bleeding patient to correct the identified haemostatic defect which will help control the bleeding. This would only be possible if the transfusion service has a laboratory to correctly detect the haemostatic defect and that too with an accuracy and precision which is ensured by a good laboratory quality assurance practices. These same processes are necessary for the transfusion services to ensure the quality of the blood products manufactured by them and that it contains adequate amounts of haemostasis factors which will be good to be effective in the management of haemorrhagic disorders. These issues are discussed in detail individually in the management of postpartum haemorrhage and Dengue haemorrhagic fever including when these can help in the use of rFVIIa in Dengue haemorrhagic fever. The requirements to ensure good-quality blood products are made available for the management of these disorders and the same have also been described.

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**INTL**

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**BS**

**Sabapathy V(1), Kumar S(1).**

hiPSC-derived iMSCs: NextGen MSCs as an advanced therapeutically active cell resource for regenerative medicine.

J Cell Mol Med. 2016 Aug;20(8):1571-88. doi: 10.1111/jcmm.12839. Epub 2016 Apr 21.

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Mesenchymal stem cells (MSCs) are being assessed for ameliorating the severity of graft-versus-host disease, autoimmune conditions, musculoskeletal injuries and cardiovascular diseases. While most of these clinical therapeutic applications require substantial cell quantities, the number of MSCs that can be obtained initially from

a single donor remains limited. The utility of MSCs derived from human-induced pluripotent stem cells (hiPSCs) has been shown in recent pre-clinical studies. Since adult MSCs have limited capability regarding proliferation, the quantum of bioactive factor secretion and immunomodulation ability may be constrained. Hence, the alternate source of MSCs is being considered to replace the commonly used adult tissue-derived MSCs. The MSCs have been obtained from various adult and foetal tissues. The hiPSC-derived MSCs (iMSCs) are transpiring as an attractive source of MSCs because during reprogramming process, cells undergo rejuvenation, exhibiting better cellular vitality such as survival, proliferation and differentiations potentials. The autologous iMSCs could be considered as an inexhaustible source of MSCs that could be used to meet the unmet clinical needs. Human-induced PSC-derived MSCs are reported to be superior when compared to the adult MSCs regarding cell proliferation, immunomodulation, cytokines profiles, microenvironment modulating exosomes and bioactive paracrine factors secretion. Strategies such as derivation and propagation of iMSCs in chemically defined culture conditions and use of footprint-free safer reprogramming strategies have contributed towards the development of clinically relevant cell types. In this review, the role of iPSC-derived mesenchymal stromal cells (iMSCs) as an alternate source of therapeutically active MSCs has been described. Additionally, we also describe the role of iMSCs in regenerative medical applications, the necessary strategies, and the regulatory policies that have to be enforced to render iMSC's effectiveness in translational medicine.

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**BS**

**Sahni RD**(1), Amalanathan R(1), Devanga Ragupathi NK(1), Mathai J(2),Veeraraghavan B(1), Biswas I(3). Complete Genome Sequence of *Serratia marcescens* U36365, a Green Pigment-Producing Strain Isolated from a Patient with Urinary Tract Infection. *Genome Announc.* 2016 Aug 11;4(4). pii: e00837-16. doi: 10.1128/genomeA.00837-16.

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Microbiology, Molecular Genetics and Immunology, University of Kansas Medical Center, Kansas City, Kansas, USA [ibiswas@kumc.edu](mailto:ibiswas@kumc.edu).

*Serratia marcescens* is an emerging nosocomial pathogen associated with urinary and respiratory tract infections. In this study, we determined the genome of a green pigment-producing clinical strain, U36365, isolated from a hospital in Southern India. De novo assembly of PacBio long-read sequencing indicates that the U36365 genome consists of a chromosome of 5.12 Mbps and no plasmids.

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**INTL**

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**BS**

**Shankar C**(1), Santhanam S(2), Kumar M(2), Gupta V(2), Devanga Ragupathi NK(1),Veeraraghavan B(3).

Draft Genome Sequence of an Extended-Spectrum-β-Lactamase-Positive

Hypervirulent *Klebsiella pneumoniae* Strain with Novel Sequence Type 2318 Isolated from a Neonate.

*Genome Announc.* 2016 Nov 10;4(6). pii: e01273-16. doi: 10.1128/genomeA.01273-16.

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Antimicrobial resistance among hypervirulent *Klebsiella pneumoniae* is increasingly reported. Here, we report the draft genome sequence of a hypervirulent *K. pneumoniae* strain isolated from a neonate with sepsis belonging to novel sequence type 2318 (ST2318).

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**INTL**

**PMCID: PMC5105110 PMID:27834717**

**BS**

Sharma P(1), Dahiya S(1), Balaji V(2), Kanga A(3), Panda P(4), Das R(5), Dhanraju A(6), Mendiratta DK(7), Sood S(1), Das BK(1), Kapil A(1).

Typhoidal *Salmonellae*: Use of Multi-Locus Sequence Typing to Determine Population Structure.

PLoS One. 2016 Sep 12;11(9):e0162530. doi: 10.1371/journal.pone.0162530.eCollection 2016.

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Enteric fever is an invasive infection predominantly caused by *Salmonella enterica* serovars Typhi and Paratyphi A. The pathogens have evolved from other nontyphoidal salmonellae to become invasive and host restricted. Emergence of antimicrobial resistance in typhoidal salmonellae in some countries is a major therapeutic concern as the travelers returning from endemic countries carry resistant strains to non endemic areas. In order to understand the epidemiology and to design disease control strategies molecular typing of the pathogen is very important. We performed Multilocus Sequence Typing (MLST) of 251 *S. Typhi* and 18 *S. Paratyphi* strains isolated from enteric fever patients from seven centers across India during 2010-2013 to determine the population structure and prevalence of MLST sequence types in India. MLST analysis revealed the presence of five sequence types (STs) of typhoidal salmonellae in India namely ST1, ST2 and ST3 for *S. Typhi* and ST85 and ST129 for *S. Paratyphi A*. *S. Typhi* strains showed monophyletic lineage and clustered in to 3 Sequence Types-ST1, ST2 and ST3 and *S. Paratyphi A* isolates segregated in two sequence types ST85 and ST129 respectively. No association was found between antimicrobial susceptibility and sequence types. This study found ST1 as the most prevalent sequence type of *S. Typhi* in India followed by ST2, which is in concordance with previous studies and MLST database. In addition a rare sequence type ST3 has been found which is reported for the first time from the Indian subcontinent. Amongst *S. Paratyphi A*, the most common sequence type is ST129 as also reported from other parts of world. This distribution and prevalence suggest the common spread of the sequence types across the globe and these findings can help in understanding the disease distribution.

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INTL

PMCID: PMC5019401 PMID:27618626

BS

Srivastava A(1), Shaji RV(2).

Cure for thalassemia major: from allogeneic hematopoietic stem cell transplantation to gene therapy.

Haematologica. 2016 Dec 1. pii: haematol.2015.141200. [Epub ahead of print]

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Allogeneic hematopoietic stem cell transplantation has been established for several decades as a gene replacement therapy for patients with thalassemia major and now offers very high rates of cure to those who are able to access this therapy. Outcomes have improved tremendously over the last decade even in high-risk patients. The limited data available suggests that the long-term outcome is also excellent with >90% survival but for best results, hematopoietic stem cell transplantation should be offered early before any end organ damage occurs. However, access to this therapy is limited by lack of suitable donors in more than half the patients. Inadequate hematopoietic stem cell transplantation services and the cost of therapy are other reasons for the same, particularly in those parts of the world which have a high prevalence of this condition. As a result <10% of eligible patients are actually able to avail this therapy. Other options for curative therapies are therefore needed. Recently, gene correction in autologous hematopoietic stem cells has been successfully established using lentiviral vectors, and several clinical trials have been initiated. A gene editing approach to correct the  $\beta$  globin mutation or disrupt BCL11A to increase fetal hemoglobin production has also been reported and is expected to be introduced in clinical trials soon. Curative possibilities for the major hemoglobin disorders are expanding. Providing access to these therapies around the world would be the challenge.

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INTL

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Thangaraj KR(1), Priyadarshini SJ, Qureshi IN, Joseph AJ, Balasubramanian KA, Ramachandran A. Plasma Citrulline, Glycans, and Hydrogen Sulfide in Patients With Acute Pancreatitis: Possible Markers of Intestinal Damage.

Pancreas. 2016 Jul;45(6):e27-9. doi: 10.1097/MPA.0000000000000593.

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DOI: 10.1097/MPA.0000000000000593

**INTL**

**PMID:**27295536

**BS**

**Tharmalingam** J(1), Prabhakar AT(2), Gangadaran P(2), Dorny P(3),(4), VercruyseJ(3), Geldhof P(3), Rajshekhar V(2), Alexander M(2), Oommen A(2).

Host Th1/Th2 immune response to *Taenia solium* cyst antigens in relation to cystburden of neurocysticercosis.

Parasite Immunol. 2016 Oct;38(10):628-34. doi: 10.1111/pim.12351.

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Neurocysticercosis (NCC), *Taenia solium* larval infection of the brain, is an important cause of acquired seizures in endemic countries, which relate to number, location and degenerating cysts in the brain. Multicyst infections are common in endemic countries although single-cyst infection prevails in India. Single-cyst infections in an endemic country suggest a role for host immunity limiting the infection. This study examined ex vivo CD4(+) T cells and in vitro Th1 and Th2 cytokine responses to *T. solium* cyst antigens of peripheral blood mononuclear cells of healthy subjects from endemic and nonendemic regions and of single- and multicyst-infected patients for association with cyst burden of NCC. *T. solium* cyst antigens elicited a Th1 cytokine response in healthy subjects of *T. solium*-endemic and *T. solium*-non-endemic regions and those with single-cyst infections and a Th2 cytokine response from subjects with multicyst neurocysticercosis. Multicyst neurocysticercosis subjects also exhibited low levels of effector memory CD4(+) T cells. Th1 cytokine

response of *T. solium* exposure and low infectious loads may aid in limiting cyst number. Th2 cytokines and low effector T cells may enable multiple-cyst infections to establish and persist.

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**INTL**

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**BS**

**Uttarilli** A(1),(2), Ranganath P(1),(3), Matta D(1), Md Nurul Jain J(1), PrasadK(1), Babu AS(1), Girisha KM(4), Verma IC(5), Phadke SR(6), Mandal K(6), PuriRD(5), Aggarwal S(1),(3), Danda S(7), Sankar VH(8), Kapoor S(9), Bhat M(10),Gowrishankar K(11), Hasan AQ(12), Nair M(13), Nampoothiri S(14), Dalal A(1).

Identification and characterization of 20 novel pathogenic variants in 60unrelated Indian patients with mucopolysaccharidoses type I and type II.

Clin Genet. 2016 Dec;90(6):496-508. doi: 10.1111/cge.12795. Epub 2016 May 26.

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Mucopolysaccharidoses (MPS), a subgroup of lysosomal storage disorders, are caused due to deficiency of specific lysosomal enzyme involved in catabolism of glycosaminoglycans. To date more than 200 pathogenic variants in the alpha-L-iduronidase (IDUA) for MPS I and ~500 pathogenic variants in the iduronate-2-sulphatase (IDS) for MPS II have been reported worldwide.

The mutation spectrum of MPS type I and MPS type II disorders in Indian population is not characterized yet. In this study, we carried out clinical, biochemical, molecular and in silico analyses to establish the mutation spectrum of MPS I and MPS II in the Indian population. We conducted molecular analysis for 60 MPS-affected patients [MPS I (n=30) (Hurler syndrome = 17, Hurler-Scheie syndrome = 13), and MPS II (n=30) (severe = 18, attenuated = 12)] and identified a total of 44 [MPS I (n=22) and MPS II (n=22)] different pathogenic variants comprising missense, nonsense, frameshift, gross deletions and splice site variants. A total of 20 [MPS I (n=14), and MPS II (n=6)] novel pathogenic sequence variants were identified in our patient cohort. We found that 32% of pathogenic variants detected in IDUA were recurrent and 25% in MPS II. This is the first study revealing the mutation spectrum of MPS I and MPS II patients in the Indian population.

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INTL

PMID:27146977

**Varatharajan S**(1), Panetta JC(2), Abraham A(1), Karathedath S(1), Mohanan E(1), Lakshmi KM(1), Arthur N(1), Srivastava VM(3), Nemani S(1), George B(1), Srivastava A(1), Mathews V(1), Balasubramanian P(4).

Population pharmacokinetics of Daunorubicin in adult patients with acute myeloid leukemia.

Cancer Chemother Pharmacol. 2016 Nov;78(5):1051-1058. Epub 2016 Oct 13.

#### Author information:

(1)Department of Haematology, Christian Medical College, Vellore, Tamilnadu, 632004, India.

(2)Department of Pharmaceutical Sciences, St Jude Children's Research Hospital, Memphis, TN, USA.

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**PURPOSE:** Chemotherapy drug resistance and relapse of the disease have been the major factors limiting the success of acute myeloid leukemia (AML) therapy. Several factors, including the pharmacokinetics (PK) of Cytarabine (Ara-C) and Daunorubicin (Dnr), could contribute to difference in treatment outcome in AML.

**METHODS:** In the present study, we evaluated the plasma PK of Dnr, the influence of genetic polymorphisms of genes involved in transport and metabolism of Dnr on the PK, and also the influence of these factors on clinical outcome. Plasma levels of Dnr

and its major metabolite, Daunorubicinol (DOL), were available in 70 adult de novo AML patients. PK parameters (Area under curve (AUC) and clearance (CL)) of Dnr and DOL were calculated using nonlinear mixed-effects modeling analysis performed with Monolix. Genetic variants in ABCB1, ABCG2, CBR1, and CBR3 genes as well as RNA expression of CBR1, ABCB1, and ABCG2 were compared with Dnr PK parameters.

**RESULTS:** The AUC and CL of Dnr and DOL showed wide inter-individual variation. Patients with an exon1 variant of rs25678 in CBR1 had significantly higher plasma Dnr AUC [ $p = 0.05$ ] compared to patients with wild type. Patients who achieved complete remission (CR) had significantly lower plasma Dnr AUC, Cmax, and higher CL compared to patients who did not achieve CR.

**CONCLUSION:** Further validation of these findings in a larger cohort of AML patients is warranted before establishing a therapeutic window for plasma Dnr levels and targeted dose adjustment.

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INTL

PMID:27738808

BS

**Veeraraghavan B**(1), Anandan S(1), Ragupathi NK(1), Vijayakumar S(1), SethuvelDP(1), Biswas I(2).

Draft Genome Sequence of Colistin-Resistant *Acinetobacter baumannii* Strain VB22595 Isolated from a Central Line-Associated Bloodstream Infection.

Genome Announc. 2016 Aug 11;4(4). pii: e00835-16. doi: 10.1128/genomeA.00835-16.

#### Author information:

(1)Department of Clinical Microbiology, Christian Medical College, Vellore, Tamil Nadu, India.

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Department of Microbiology, Molecular Genetics and Immunology, University of Kansas Medical Center, Kansas City, Kansas, USA  
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*Acinetobacter baumannii* is an important emerging pathogen that causes health care-associated infections. In this study, we determined the genome of a multidrug-resistant clinical strain, VB22595, isolated from a hospital in Southern India. The draft genome indicates that strain VB22595 encodes a genome of ~3.92 Mb in size and does not contain plasmid derived MCR-1 for colistin resistance.

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DOI: 10.1128/genomeA.00835-16

**INTL****PMCID: PMC4982300 PMID:27516521****BS**

**Veeraraghavan B**(1), Anandan S(2), Rajamani Sekar SK(2), Gopi R(2), DevangaRagupathi NK(2), Ramesh S(2), Verghese VP(3), Korulla S(3), Mathai S(3), SangalL(4), Joshi S(4).

First Report on the Draft Genome Sequences of *Corynebacterium diphtheriae* Isolates from India.

Genome Announc. 2016 Nov 23;4(6). pii: e01316-16. doi: 10.1128/genomeA.01316-16.

**Author information:**

(1)Department of Clinical Microbiology, Christian Medical College, Vellore, Tamil Nadu, India vbalaji@cmcvellore.ac.in. (2)Department of Clinical Microbiology, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Child Health, Christian Medical College, Vellore, Tamil Nadu, India. (4)World Health Organisation, Country office, New Delhi, India.

We report here the draft genome sequences of five *Corynebacterium diphtheriae* isolates of Indian origin. The *C. diphtheriae* isolates TH1141, TH510, TH1526, TH1337, and TH2031 belong to sequence type ST-50, ST-295, ST-377, ST-405, and ST-405, with an average genome size of 2.5 Mbp.

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DOI: 10.1128/genomeA.01316-16

**INTL****PMCID: PMC5122685 PMID:27881543****BS**

**Veeraraghavan B**(1), Anandan S(2), Sethuvel DP(3), Ragupathi NK(4).

Pefloxacin as a Surrogate Marker for Fluoroquinolone Susceptibility for *Salmonella typhi*: Problems and Prospects.

J Clin Diagn Res. 2016 Aug;10(8):DL01-2. doi: 10.7860/JCDR/2016/17022.8306. Epub 2016 Aug 1.

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DOI: 10.7860/JCDR/2016/17022.8306

**NAT****PMCID: PMC5028453 PMID:27656439****BS**

**Veeraraghavan B**(1), Jayaraman R(2), John J(2), Varghese R(2), Neeravi A(2), Verghese VP(3), Thomas K(4).

Customized sequential multiplex PCR for accurate and early determination of invasive pneumococcal serotypes found in India.

J Microbiol Methods. 2016 Nov;130:133-135. doi: 10.1016/j.mimet.2016.09.007. Epub 2016 Sep 10.

**Author information:**

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(3)Department of Child Health, Christian Medical College and Hospital, Vellore, India.

(4)Department of General Medicine, Christian Medical College and Hospital, Vellore, India.

For accurate and earlier detection of invasive pneumococcal serogroup/serotypes from India, we have rearranged the African sequence of multiplex PCR provided by the Centers for Disease Control and Prevention, USA. This modified approach can successfully be adapted for earlier serotype detection of 95% of the pneumococcal strains prevalent in India.

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DOI: 10.1016/j.mimet.2016.09.007

**INTL****PMID:27623479****BS**

**Veeraraghavan B**(1), Neeravi AR(2), Devanga Ragupathi NK(2), Inbanathan FY(2), Pragasam AK(2), Verghese VP(3).

Whole-Genome Shotgun Sequencing of the First Observation of *Neisseriameningitidis* Sequence Type 6928 in India.

Genome Announc. 2016 Nov 3;4(6). pii: e01232-16. doi: 10.1128/genomeA.01232-16.

**Author information:**

(1)Department of Clinical Microbiology, Christian Medical College, Vellore, Tamil Nadu, India vbalaji@cmcvellore.ac.in. (2)Department of Clinical Microbiology, Christian Medical College, Vellore, Tamil Nadu, India.

(3)Department of Child Health, Christian Medical College, Vellore, Tamil Nadu, India.

(4)Senior Research Officer, Department of Clinical Microbiology, Christian Medical College, Vellore, Tamil Nadu, India.

*Neisseria meningitidis* is one of the leading global causes of bacterial meningitis. Here, we discuss the draft genome sequences of two *N. meningitidis* strains, isolated from bloodstream infections in two pediatric patients at a tertiary

care hospital in South India. The sequence data indicate that strains VB13856 and VB15548 encode genomes of ~2.09 Mb in size with no plasmids.

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DOI: 10.1128/genomeA.01232-16

**INTL**

**PMCID: PMC5095480 PMID:27811110**

**BS**

**Veeeraraghavan B(1)**, Perumalla SK(2), Devanga Ragupathi NK(2), Pragasam AK(2), Muthuirulandi Sethuvel DP(2), Inian S(2), Inbanathan FY(2).

Coexistence of Fosfomycin and Colistin Resistance in *Klebsiella pneumoniae*: Whole-Genome Shotgun Sequencing.

Genome Announc. 2016 Nov 23;4(6). pii: e01303-16. doi: 10.1128/genomeA.01303-16.

**Author information:**

(1)Department of Clinical Microbiology, Christian Medical College, Vellore, India vbalaji@cmcvellore.ac.in. (2)Department of Clinical Microbiology, Christian Medical College, Vellore, India.

Resistance to colistin is a major threat that limits therapeutic choices for treating carbapenem-resistant *Klebsiella pneumoniae* infections. Herein, we report the draft genome sequences of two colistin-resistant *K. pneumoniae* isolates (BA41763 and B6753). The sequence data indicate that BA41763 and B6753 contain genomes of ~5.9 and 5.7 Mb in size with several plasmids.

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DOI: 10.1128/genomeA.01303-16

**INTL**

**PMCID: PMC5122681 PMID:27881539**

**BS**

**Veeeraraghavan B(1)**, Shankar C(1), Vijayakumar S(1).

Can minocycline be a carbapenem sparing antibiotic? Current evidence.

Indian J Med Microbiol. 2016 Oct-Dec;34(4):513-515. doi:10.4103/0255-0857.195380.

**Author information:**

(1)Department of Clinical Microbiology, Christian Medical College, Vellore, Tamil Nadu, India.

With the increasing incidence of multidrug-resistant organisms, there is a need for newer antibiotics. However, due to the lack of new antimicrobial agents, it is necessary to re-evaluate the older agents like minocycline which is a second-line antimicrobial agent. In this study, minocycline susceptibility testing was performed for 693 *Escherichia coli*, 316 *Klebsiella* spp. and 89 *Acinetobacter* spp. Among extended

spectrum beta-lactamase producing *E. coli* and *Klebsiella* spp. percentage susceptibility to minocycline were 76 and 85, respectively. Among the carbapenem resistant *E. coli*, *Klebsiella* spp. And *Acinetobacter* spp. minocycline susceptibility were 52%, 55% and 42%, respectively. Based on the susceptibility profile, minocycline can be considered for treatment of infections by multidrug-resistant organisms.

DOI: 10.4103/0255-0857.195380

**NAT**

**PMID:27934833**

**BS**

**Viswanath V(1)**, Danda D(2).

Inflammation, metabolism and adipokines: toward a unified theory.

Int J Rheum Dis. 2016 Jul;19(7):633-6. doi: 10.1111/1756-185X.12958.

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(2)Department of Clinical Immunology and Rheumatology, Christian Medical College, Vellore, India.

DOI: 10.1111/1756-185X.12958

**INTL**

**PMID:27538673**

**BS**

**Aaron S**(1), Shyamkumar NK(2), Alexander S(2), Babu PS(1), Prabhakar AT(1), Moses V(2), Murthy TV(1), Alexander M(1).

Mechanical thrombectomy for acute ischemic stroke in pregnancy using the penumbra system.

Ann Indian Acad Neurol. 2016 Apr-Jun;19(2):261-3. doi: 10.4103/0972-2327.173302.

#### Author information:

(1)Department of Neurological Sciences, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. (2)Department of Radiology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

Even though intravenous thrombolysis with tissue plasminogen activator (IV tPA) is the standard of care in acute ischemic stroke, its use in pregnancy is not clearly defined. Mechanical thrombectomy devices can be an option; however, literature on the use of such mechanical devices in stroke in pregnancy is lacking. Here we describe two cases that developed acute embolic stroke during pregnancy who were successfully treated by mechanical clot retrieval using the Penumbra system 28 (Penumbra Inc., Alameda, California, USA). To the best of our knowledge, these are the only case reports on the use of the Penumbra device in pregnant patients with acute ischemic stroke. DOI: 10.4103/0972-2327.173302

**NAT**

**PMID:**27293343 **PMCID:** PMC4888695

**CS**

**Abhilash K**(1), Mannam PR(2), Rajendran K(1), John RA(2), Ramasami P(3).

Chest radiographic manifestations of scrub typhus.

J Postgrad Med. 2016 Jun 24. doi: 10.4103/0022-3859.184662. [Epub ahead of print]

#### Author information:

(1)Department of Emergency Medicine, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Radio Diagnosis, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Biostatistics, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND AND RATIONALE:** Respiratory system involvement in scrub typhus is seen in 20-72% of patients. In endemic areas, good understanding and familiarity with the various radiologic findings of scrub typhus are essential in identifying pulmonary complications. **MATERIALS AND METHODS:** Patients admitted to a tertiary care center with scrub typhus between October 2012 and September 2013 and had a chest X ray done were included in the analysis. Details and radiographic findings were noted and factors associated with abnormal X-rays were analyzed.

**RESULTS:** The study cohort contained 398 patients. Common presenting complaints included fever (100%), generalized myalgia (83%), headache (65%), dyspnea (54%), cough (24.3%), and altered sensorium (14%). Almost half of the patients (49.4%) had normal chest radiographs. Common radiological pulmonary abnormalities included pleural effusion (14.6%), acute respiratory distress syndrome (14%), airspace opacity (10.5%), reticulonodular opacities (10.3%), peribronchial thickening (5.8%), and pulmonary edema (2%). Cardiomegaly was noted in 3.5% of patients. Breathlessness, presence of an eschar, platelet counts of <20,000 cells/cumm, and total serum bilirubin >2 mg/dL had the highest odds of having an abnormal chest radiograph. Patients with an abnormal chest X-ray had a higher requirement of noninvasive ventilation (odds ratio [OR]: 13.98; 95% confidence interval CI: 5.89-33.16), invasive ventilation (OR: 18.07; 95% CI: 6.42-50.88), inotropes (OR: 8.76; 95% CI: 4.35-17.62), higher involvement of other organ systems, longer duration of hospital stay (3.18 ± 3 vs. 7.27 ± 5.58 days; P < 0.001), and higher mortality (OR: 4.63; 95% CI: 1.54-13.85). **CONCLUSION:** Almost half of the patients with scrub typhus have abnormal chest radiographs. Chest radiography should be included as part of basic evaluation at presentation in patients with scrub typhus, especially in those with breathlessness, eschar, jaundice, and severe thrombocytopenia.

**NAT**

**PMID:**27345037

**CS**

**Abiramalatha T**(1), Kumar M(1), Shabeer MP(1), Thomas N(1).

Advantages of being diligent: lessons learnt from umbilical venous catheterisation in neonates.

BMJ Case Rep. 2016 Feb 3;2016. pii: bcr2015214073. doi: 10.1136/bcr-2015-214073.

#### Author information:

(1)Department of Neonatology, Christian Medical College, Vellore, Tamilnadu, India.

Umbilical venous catheters (UVCs) are commonly used in neonatal units. Abdominal radiograph, taken soon after the insertion, is used to confirm the correct placement of the catheter. However, as demonstrated by our case series, complacency when an initial UVC is normally positioned can lead to detecting UVC-related complications very late. We describe cases of three neonates where, despite the initial UVC being confirmed to be well positioned, the patients developed life-threatening

complications, including liver haematoma, left atrial thrombus and pericardial effusion causing cardiac tamponade. The routine use of point of care echocardiography helped in the early diagnosis of these complications. We suggest repeated echocardiographic screening at regular intervals in all newborn babies requiring UVCs, to ensure that the catheter is maintained in the proper position and for the early detection of catheter-related complications. 2016 BMJ Publishing Group Ltd. DOI: 10.1136/bcr-2015-214073

INT

PMID:26843419

CS

**Abraham G**(1), Varughese S(2), Thandavan T(3), Iyengar A(4), Fernando E(5), Naqvi SA(6), Sheriff R(7), Ur-Rashid H(8), Gopalakrishnan N(9), Kafle RK(10).

Chronic kidney disease hotspots in developing countries in South Asia.

Clin Kidney J. 2016 Feb;9(1):135-41. doi: 10.1093/ckj/sfv109. Epub 2015 Nov 17.

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In many developing countries in the South Asian region, screening for chronic diseases in the community has shown a widely varying prevalence. However, certain geographical regions have shown a high prevalence of chronic kidney disease (CKD) of unknown etiology. This predominantly affects the young and middle-aged population with a lower socioeconomic status. Here, we describe the hotspots of CKD of undiagnosed etiology in South Asian countries including the North, Central and Eastern provinces of Sri Lanka and the coastal region of the state of Andhra Pradesh in India. Screening of these populations has revealed cases of CKD in various stages. Race has also been shown to be a factor, with a much lower prevalence of CKD in whites compared to Asians, which could be related to the known influence of ethnicity on CKD development as well as environmental factors. The difference between developed and developing nations is most stark in the realm of healthcare, which translates into CKD hotspots in many regions of South Asian countries.

Additionally, the burden of CKD stage G5 remains unknown due to the lack of registry reports, poor access to healthcare and lack of an organized chronic disease management program. The population receiving various forms of renal replacement therapy has dramatically increased in the last decade due to better access to point of care, despite the disproportionate increase in nephrology manpower. In this article we will discuss the nephrology care provided in various countries in South Asia, including India, Bangladesh, Pakistan, Nepal, Bhutan, Sri Lanka and Afghanistan. DOI: 10.1093/ckj/sfv109

INT

PMCID: PMC4720189 PMID:26798474

CS

**Adhikari DD**(1), Florence B(2), David SS(2).

Prehospital trauma care in South India: A glance through the last 15 years.

J Family Med Prim Care. 2016 Jan-Mar;5(1):195-6. doi: 10.4103/2249-4863.184669.

#### Author information:

(1)Department of Pediatrics, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Emergency Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

DOI: 10.4103/2249-4863.184669

NAT

PMCID: PMC4943141 PMID:27453878

CS

**Anuradha C**(1), Manipadam MT(2), Asha HS(3), Dukhabandhu N(3), Abraham D(4), PaulMJ(4).

Can New Ultrasound Signs Help in Identifying Follicular Variant of Papillary Carcinoma of Thyroid? - A Pilot Study.

Ultrasound Int Open. 2016 May;2(2):E47-53. doi: 10.1055/s-0036-1582304. Epub 2016 Apr 28.

#### Author information:

(1)Radiology, Christian Medical College, Vellore, India. (2)Pathology, Christian Medical College, Vellore, India. (3)Endocrinology, Christian Medical College, Vellore, India. (4)Endocrine Surgery, Christian Medical College, Vellore, India.

AIM: To describe two new ultrasound signs for thyroid nodules - "nodule innodule" and "hypoechoic internal septae" and assess their usefulness in differentiating follicular variant of papillary thyroid carcinoma (FVPTC) from benign thyroid nodules (BTN). METHODOLOGY: Ultrasound findings of 210 patients with histopathologically proven FVPTC (68 nodules, M:F=13:47 with mean age of 39.5±11.9 years) and

BTN (165 nodules, (M:F=41:109 with mean age of 44±11.3 years) were retrospectively reviewed from PACS by a single radiologist blinded to the final diagnosis. Logistic regression analysis was performed to identify the best predictors of FVPTC and their diagnostic performance was assessed. RESULTS: The "nodule in nodule" sign was seen in 80.9% of FVPTC and only 12.1% of BTN. The "hypoechoic internal septae" sign was seen in 44.1% of FVPTC and 17% of BTN. Younger patients, heterogeneous echotexture, nodule in nodule sign, thick incomplete non-uniform halo and presence of significant nodes were the best predictors of FVPTC ( $p < 0.05$ ). The sensitivity, specificity, positive predictive value, negative predictive value, accuracy and relative risk for FVPTC given as odds ratio (95% CI) for heterogeneous echotexture and nodule in nodule sign which were the best 2 predictors of FVPTC were 91.2%, 81.8%, 67.3%, 95.7%, 84.5%, 46.5 (18.5-117.4) and 80.9%, 87.7%, 74.3%, 91.2%, 86.2%, 32.5 (15.04-70.2), respectively. There was improvement in the specificity (91.5%) and accuracy (86.6%) when a combined criterion of heterogeneous echotexture and nodule in nodule sign was applied to predict FVPTC. CONCLUSION: The "nodule in nodule" sign is common in FVPTC and when combined with heterogeneous echotexture can differentiate FVPTC and BTN with high specificity. DOI: 10.1055/s-0036-1582304

INTL

PMCID: PMC5032849 PMID: 27689170

CS

**Bhavani GS**(1), Shah H(2), Shukla A(1), Gupta N(3), Gowrishankar K(4), Rao AP(5), Kabra M(3), Agarwal M(6), Ranganath P(7),(8), Ekbote AV(9), Phadke SR(6), Kamath A(10), Dalal A(8), Girisha KM(1).

Clinical and mutation profile of multicentric osteolysis nodulosis and arthropathy.

Am J Med Genet A. 2016 Feb;170A(2):410-7. doi: 10.1002/ajmg.a.37447. Epub 2015 Nov 24.

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(1)Department of Medical Genetics, Kasturba Medical College, Manipal University, Manipal, India. (2)Department of Orthopedics, Pediatric Orthopedics services, Kasturba Medical College, Manipal University, Manipal, India. (3)Division of Genetics, Department of Pediatrics, All India Institute of Medical Sciences, New Delhi, India. (4)Department of Medical Genetics, Kanchi Kamakoti Childs Trust Hospital, Chennai, Tamilnadu, India. (5)Manipal Hospital, Bangalore, India (6)Department of Medical Genetics, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India. (7)Department of Medical Genetics, Nizam's Institute of Medical Sciences, Hyderabad, India. (8)Division of Diagnostics, Centre for DNA Fingerprinting and Diagnostics, Hyderabad, India.

(9)Department of Clinical Genetics, Christian Medical College and Hospital, Vellore, India. (10)Department of Community Medicine, Kasturba Medical College, Manipal University, Manipal, Karnataka, India.

Multicentric osteolysis nodulosis and arthropathy (MONA) is an infrequently described autosomal recessive skeletal dysplasia characterized by progressive osteolysis and arthropathy. Inactivating mutations in MMP2, encoding matrix metalloproteinase-2, are known to cause this disorder. Fifteen families with mutations in MMP2 have been reported in literature. In this study we screened thirteen individuals from eleven families for MMP2 mutations and identified eight mutations (five novel and three known variants). We characterize the clinical, radiographic and molecular findings in all individuals with molecularly proven MONA from the present cohort and previous reports, and provide © 2015 Wiley Periodicals, Inc. I: 10.1002/ajmg.a.37447

INTL

PMID: 26601801

CS

**Boaz RJ**(1), Dangi AD(1), John NT(1).

Antiuro lithiatic effect of lithocare against ethylene glycol-induced urolithiasis

Indian J Pharmacol. 2016 May-Jun;48(3):340-1. doi: 10.4103/0253-7613.182897

**Author information:**

(1)Department of Urology, Christian Medical College, Vellore, Tamil Nadu, India. DOI: 10.4103/0253-7613.182897

NAT

PMCID: PMC4900018 PMID: 27298515

CS

**Bose A**(1), Isaac R, Balaji V, Rose W, Mohan V, Anandan S, Prasad JH, Abraham A, Krishna M, Viswanathan K.

Challenges in Implementation of ANISA Protocol at the Vellore Site, India.

Pediatr Infect Dis J. 2016 May;35(5 Suppl 1):S70-3. doi:

**Author information:**

(1)From the Christian Medical College, Vellore, India.

BACKGROUND: The Aetiology of Neonatal Infection in South Asia (ANISA) study aims to determine the population-based incidence, etiology, risk factors and antibiotic resistance profiles of community-acquired young infant infections in Bangladesh,

India and Pakistan using community-based surveillance and standard newer diagnostic tests. The data generated will help plan preventive and treatment strategies to reduce neonatal and infant mortality in this region. The aim of this article is to describe the site-specific characteristics, challenges and solutions in implementing the ANISA protocol at the Vellore site, India. **CHALLENGES:** Vellore joined the ANISA study 2 years after the sites in Bangladesh and Pakistan, and some challenges relate to the need for rapid implementation. The Vellore site differs primarily in the high rate of institutional deliveries, actively promoted by the Government of India's conditional cash transfer program. The Vellore site hospitals are regular care providers for the study population, which leads to very high rates of consent for enrollment and collection of samples. Keeping blood culture contamination rates low was a challenge the site team overcame by adhering strictly to the protocol. Issues related to incorporation of a large study into a busy clinical services laboratory were overcome by meticulously setting up algorithms related to receipt, processing and storage of samples.

**CONCLUSION:** ANISA is a complex study, but the challenges in implementation have been largely resolved and documented. DOI: 10.1097/INF.0000000000001111

**INTL**

PMID:27070070

**CS**

**Carcao M**(1), Srivastava A(2).

Factor VIII/factor IX prophylaxis for severe hemophilia.

Semin Hematol. 2016 Jan;53(1):3-9. doi: 10.1053/j.seminhematol.2015.10.006. Epub 2015 Oct 26.

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(2)Department of Haematology and Centre for Stem Cell Research (a unit of inStem, Bengaluru), Christian Medical College, Vellore, India. Electronic address: aloks@cmcvellore.ac.in

Experience with clotting factor concentrate (CFC) replacement products over several decades has shown that regular replacement (prophylaxis) is the only way to prevent musculoskeletal damage in hemophilia and impact the natural history of hemophilia. Yet there is a lack of data on the optimal age to start such replacement therapy and the regimens to be used.

While very early administration of high doses is certainly more effective in preventing bleeding, cost and compliance are major constraints all over the world. Starting prophylaxis with even lower doses comparable to that used in episodic therapies leads to major reduction in bleeding. Recognition of the clinical heterogeneity of hemophilia even among patients with a label of severe hemophilia in terms of their spontaneous bleeding has led to efforts aimed at individualizing CFC replacement, based on clinical responses or pharmacokinetic data of the CFC. The importance of long-term outcome assessment being combined with CFC replacement therapy cannot be overemphasized. Copyright © 2016 Elsevier Inc. All rights reserved. DOI: 10.1053/j.seminhematol.2015.10.006

**INTL**

PMID:26805901

**CS**

**Chandramohan A**(1), Khurana A(1), Pushpa BT(1), Manipadam MT(2), Naik D(3), Thomas N(3), Abraham D(4), Paul MJ(4).

Is TIRADS a practical and accurate system for use in daily clinical practice?

Indian J Radiol Imaging. 2016 Jan-Mar;26(1):145-52. doi:10.4103/0971-3026.178367.

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**AIM:** To assess the positive predictive value (PPV) and inter-observer agreement of Thyroid Imaging Reporting and Data System (TIRADS) as described by Kwak et al. **MATERIALS AND METHODS:** This was a prospective study wherein ultrasound was performed by two radiologists on patients with thyroid nodules >1 cm. The third radiologist interpreted archived images. Ultrasound features and TIRADS category were compared with cytology and surgical histopathology. PPV was calculated for all readers' combined assessment. Inter-observer agreement was calculated using linear weighted kappa. **RESULTS:** A total of 238 patients with 272 nodules of mean size 2.9 ± 1.7 cm were included. PPV for malignancy was 6.6%, 32%, 36%, 64%, 59%, and 91% for TIRADS 2, 3, 4a, 4b, 4c, and 5 categories, respectively. Inter-observer agreement was substantial [kappa (k) =

0.61-0.80] for assessment of nodule echogenicity, margins, calcification, and shape and good (k = 0.570, P < 0.001) for assessment of composition of the thyroid nodules. Overall agreement between observers was substantial for assigning TIRADS category [multi-rater weighted kappa coefficient (wt k) = 0.721, P < 0.001]. **CONCLUSIONS:** TIRADS is a simple and practical method of assessing thyroid nodules with high PPV and good inter-observer agreement. DOI: 10.4103/0971-3026.178367  
**NAT**  
**PMCID: PMC4813066 PMID: 27081240**  
**CS**

**Cherian AJ**(1), Gowri M(2), Ramakant P(3), Paul TV(4), Abraham DT(3), Paul MJ(3).

The Role of Magnesium in Post-thyroidectomy Hypocalcemia.

World J Surg. 2016 Apr;40(4):881-8. doi: 10.1007/s00268-015-3347-3.

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(1)Department of Endocrine Surgery, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. anish@cmcvellore.ac.in. (2)Department of Biostatistics, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. (3)Department of Endocrine Surgery, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. (4)Department of Endocrinology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

**BACKGROUND:** The purpose of this study was to determine the prevalence of hypomagnesemia in patients undergoing thyroidectomy and evaluate the relationship of hypomagnesemia with transient and severe hypocalcemia. **MATERIALS AND METHODS:** This was a prospective observational study of 50 patients undergoing thyroidectomy. Blood samples were collected pre- and postoperatively for calcium, albumin, magnesium, phosphorous and parathormone (PTH). Signs, symptoms of hypocalcemia and volume of intravenous fluids used perioperatively were documented. The statistical analysis was performed using STATA I/C 10.1. **RESULTS:** Preoperatively, twelve patients (24 %) had hypomagnesemia and one (2 %) hypocalcemia. On the first postoperative day, hypomagnesemia was seen in 70 % and hypocalcemia in 30 %. A similar trend was observed in the fall and rise of postoperative calcium and magnesium values (p = 0.41). Severe hypocalcemia was present in three patients (6 %). All three patients had a very low postoperative PTH (<2 pg/ml). Among them, two patients (66 %) had hypomagnesemia and their hypocalcemia responded to intravenous magnesium correction. Significant risk factors for postoperative hypocalcemia include a higher volume of fluid used

perioperatively and low postoperative PTH (<8 pg/ml) (p = 0.01 and 0.03, respectively). **CONCLUSION:** Preoperative hypomagnesemia (24 %) was prevalent in this cohort of patients. Postoperative hypomagnesemia is a common event (70 %) following total thyroidectomy, and magnesium levels tend to mimic the calcium levels postoperatively. The cause of hypocalcemia post-thyroidectomy in this study is mainly a factor of parathyroid function and fluid status. Severe hypocalcemia is a rare event, and hypomagnesemia is associated in the majority of these patients. The role of magnesium correction to alleviate severe hypocalcemia needs to be further studied. DOI: 10.1007/s00268-015-3347-3  
**INTL**

**PMID: 26578317**

**CS**

**Cherian AJ**(1), Ponraj S(2), Gowri S M(3), Ramakant P(4), Paul TV(5), Abraham DT(4), Paul MJ(4).

The role of vitamin D in post-thyroidectomy hypocalcemia: Still an enigma.

Surgery. 2016 Feb;159(2):532-8. doi: 10.1016/j.surg.2015.08.014. Epub 2015 Sep 11.

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**BACKGROUND:** There is conflicting evidence regarding the role of vitamin D deficiency in the development of post-thyroidectomy hypocalcemia. Recent reports show postoperative parathormone (PTH) is unreliable in predicting post-thyroidectomy hypocalcemia in vitamin D deficient patients. We conducted this study to analyze the role of vitamin D status in the development of post-thyroidectomy hypocalcemia and to evaluate its effect on the predictability of PTH as a marker for post-thyroidectomy hypocalcemia. **METHOD:** A retrospective review of prospectively collected data of patients undergoing thyroidectomy between August 2007 to September 2013 (n = 150) was performed. Results of preoperative calcium, albumin, vitamin D, PTH and postoperative calcium, albumin, and PTH were

collated. Patients were divided into 2 groups based on their vitamin D status: group A, vitamin D  $\geq$  20 ng/mL and group B, vitamin D  $<$  20 ng/mL. RESULTS: Vitamin D deficiency was present in 80 (53.3%) patients and post-thyroidectomy hypocalcemia developed in 67 (44.7%). The incidence of postoperative hypocalcemia was similar in both the groups (48.6% and 41.3%, respectively). Vitamin D status was not associated with the development of post-thyroidectomy hypocalcemia ( $P = .23$ ). Postoperative PTH of  $<8$  pg/mL was strongly associated with the development of hypocalcemia in both the groups ( $P = .0002$  and  $.0045$ , respectively). The area under the receiver operator characteristic curve in group B (0.68) was less than in group A (0.76;  $P = .41$ ). CONCLUSION: The majority of patients were vitamin D deficient in this cohort, but this did not increase the risk of post-thyroidectomy hypocalcemia, nor did it interfere with the predictability of PTH as a marker of post-thyroidectomy hypocalcemia. Copyright © 2016 Elsevier Inc. All rights reserved. DOI: 10.1016/j.surg.2015.08.014

INTL

PMID:26365947

CS

Das S(1), Barnwal P(2), Winston A B(3), Mondal S(4), Saha I(5).

Brexpiprazole: so far so good.

Ther Adv Psychopharmacol. 2016 Feb;6(1):39-54. doi: 10.1177/2045125315614739.

**Author information:**

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This article describes the role of a newly approved antipsychotic agent brexpiprazole in the treatment of schizophrenia and major depressive disorder. This drug has high affinity for 5-HT<sub>1A</sub>, 5-HT<sub>2A</sub>, D<sub>2</sub> and  $\alpha$ <sub>1B,2C</sub> receptors. It displays partial agonism at 5-HT<sub>1A</sub> and D<sub>2</sub> receptors and potent antagonism at 5-HT<sub>2A</sub> and  $\alpha$ <sub>1B,2C</sub> adrenergic receptors. It also has some affinity (antagonism) for D<sub>3</sub>, 5-HT<sub>2B</sub>, 5-HT<sub>7</sub> and  $\alpha$ <sub>1A,1D</sub> receptors, and moderate affinity for H<sub>1</sub> and low affinity for M<sub>1</sub> receptors. These all lead to a favorable antipsychotic profile in terms of improvement of cognitive performance and sleep patterns, as well as effects on affective states and potential to treat core symptoms in schizophrenia and major depressive disorder, including cognitive deficits with a low risk of adverse effects (extrapyramidal symptoms, metabolic complications, weight gain,

akathisia potential) that are commonly encountered with other typical and second-generation antipsychotic drugs. In our review, we have made an attempt to decipher the pharmacological profile of brexpiprazole from two major trials (VECTOR and BEACON). We have also tried to give a concise but detailed overview of brexpiprazole by head to head comparison of the pharmacological profile of brexpiprazole and its earlier congeners aripiprazole and prototype antipsychotic drug chlorpromazine by accessing individual summaries of product characteristics from the US Food and Drug Administration database, 2015. Relevant preclinical and clinical studies associated with this drug have been discussed with emphasis on efficacy and safety concerns. From the studies done so far, it can be concluded that brexpiprazole can be an effective monotherapy for schizophrenia and as an adjunct to other antidepressant medications in major depressive disorder. DOI: 10.1177/2045125315614739

INTL

PMCID: PMC4749739 PMID:26913177

CS

Das S(1), Winston A B(2), Sukumaran D(3), Kumar A(4), Fx MS(5), Prasad J(6).

Drug prescribing pattern in pregnancy in a secondary care hospital in south India: a retrospective study.

Trop Doct. 2016 Apr;46(2):86-90. doi: 10.1177/0049475515609841. Epub 2015 Oct 7.

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BACKGROUND: In pregnancy drug treatment presents a special concern due potential teratogenic effects and physiologic alterations in mother. This retrospective study was performed to evaluate the drug prescribing pattern in pregnancy among pregnant women in a secondary care hospital in India. MATERIALS AND METHODS: This cross-sectional retrospective

study was done for 3 months using pre-formatted forms and patient's records. RESULTS: A total of 326 drugs, including 46 different types of drugs, were prescribed to 606 gravid women. Eight different types of medications were started before being seen at the antenatal clinic. Most of these drugs fall under US FDA pregnancy categories B and C and few under categories A, X and N. CONCLUSION: This study reflects a good, safe and rational medication practice during pregnancy in various common disorders in a secondary care hospital and can be cited as an example to similar primary and secondary care hospitals. © The Author(s) 2015. DOI: 10.1177/0049475515609841

INTL

PMID:26450430

CS

**Devasia AJ(1), Joy B(2), Tarey SD(3).**

Serum homocysteine as a risk factor for carotid intimal thickening in acutestroke: A cross sectional observational study.

Ann Indian Acad Neurol. 2016 Jan-Mar;19(1):48-51. doi: 10.4103/0972-2327.168633.

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INTRODUCTION: The present study aimed to analyse if there is a correlation between carotid intima medial thickening (CIMT) and Hcy in stroke patients. METHODOLOGY: We studied 100 consecutive cases of acute anterior circulation strokes at St. John's Medical College, Bangalore, India. Fasting serum samples for homocysteine were sent within 24 hours of admission and all patients underwent a carotid Doppler scan and carotid intima-medial thickness (CIMT) was estimated on both sides. RESULTS: There was significant correlation between serum homocysteine levels and carotid intima-medial thickness ( $r = 0.409$ ,  $p = 0.000$ ). Also after controlling for other possible risk factors it was found that elevations in serum homocysteine levels would cause a variation of 60% in the carotid intima-medial thickening. CONCLUSION: Serum Hcy levels correlate well with CIMT and hence may predict atherothrombotic events. DOI: 10.4103/0972-2327.168633

NAT

PMCID: PMC4782552 PMID:27011628

CS

**Dinh DM(1,)(2), Ramadass B(3), Kattula D(3), Sarkar R(3), Braunstein P(4), TaiA(5), Wanke CA(1,)(2,)(3),**

Hassoun S(4), Kane AV(1), Naumova EN(2,)(3,)(6), KangG(2,)(5), Ward HD(1,)(2,)(3).

Longitudinal Analysis of the Intestinal Microbiota in Persistently Stunted YoungChildren in South India.

PLoS One. 2016 May 26;11(5):e0155405. doi: 10.1371/journal.pone.0155405.eCollection 2016.

**Author information:**

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Stunting or reduced linear growth is very prevalent in low-income countries. Recent studies have demonstrated a causal relationship between alterations in the gut microbiome and moderate or severe acute malnutrition in children in these countries. However, there have been no primary longitudinal studies comparing the intestinal microbiota of persistently stunted children to that of non-stunted children in the same community. In this pilot study, we characterized gut microbial community composition and diversity of the fecal microbiota of 10 children with low birth weight and persistent stunting (cases) and 10 children with normal birth weight and no stunting (controls) from a birth cohort every 3 months up to 2 years of age in a slum community in south India. There was an increase in diversity indices ( $P < 0.0001$ ) with increasing age in all children. However, there were no differences in diversity indices or in the rates of their increase with increasing age between cases and controls. The percent relative abundance of the Bacteroidetes phylum was higher in stunted compared to control children at 12 months of age ( $P = 0.043$ ). There was an increase in the relative abundance of this phylum with increasing age in all children ( $P = 0.0380$ ) with no difference in the rate of increase between cases and controls. There was a decrease in the relative abundance of Proteobacteria ( $P = 0.0004$ ) and Actinobacteria ( $P = 0.0489$ ) with increasing age in cases. The microbiota of control

children was enriched in probiotic species *Bifidobacterium longum* and *Lactobacillus mucosae*, whereas that of stunted children was enriched in inflammogenic taxa including those in the *Desulfovibrio* genus and *Campylobacterales* order. Larger, longitudinal studies on the compositional and functional maturation of the microbiome in children are needed. DOI: 10.1371/journal.pone.0155405

**INTL**

**PMCID: PMC4881907 PMID:27228122**

**CS**

**Dutta AK(1), Chacko A(1).**

Influence of environmental factors on the onset and course of inflammatory bowel disease.

World J Gastroenterol. 2016 Jan 21;22(3):1088-100. doi: 10.3748/wjg.v22.i3.1088.

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Numerous environmental factors have been linked with inflammatory bowel disease. These include smoking, diet, hygiene, drugs, geographical and psychosocial factors. These factors may either increase the risk of or protect against developing this condition and can also affect the course of illness in a positive or negative manner. A number of studies have examined the influence of environmental factors on inflammatory bowel diseases as a whole as well as on ulcerative colitis and Crohn's disease separately. As there are differences in the pathogenesis of ulcerative colitis and Crohn's disease, the effect of environmental factors on their onset and course is not always similar. Some factors have shown a consistent association, while reports on others have been conflicting. In this article we discuss the current evidence on the roles of these factors on inflammatory bowel disease, both as causative/protective agents and as modifiers of disease course. DOI: 10.3748/wjg.v22.i3.1088

**INTL**

**PMCID: PMC4716022 PMID:26811649**

**CS**

**Dutta AK(1), Danda S(2).**

Restrictive Dermopathy.

Pediatr Neonatol. 2016 Jun;57(3):259. doi: 10.1016/j.pedneo.2015.09.005. Epub 2015 Oct 28

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**INTL**

**PMID:26627141**

**CS**

**Ebenezer K(1), Job V(2), Antonisamy B(3), Dawodu A(4), Manivachagan MN(5),Steinhoff M(4).**

Serum Vitamin D Status and Outcome among Critically Ill Children Admitted to the Pediatric Intensive Care Unit in South India.

Indian J Pediatr. 2016 Feb;83(2):120-5. doi: 10.1007/s12098-015-1833-0. Epub 2015 Jul 19.

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**Comment in :** Indian J Pediatr. 2016 Feb;83(2):101-2.

**OBJECTIVES:** To determine the vitamin D status and the association between vitamin D status and the clinical outcome of critically ill children admitted to pediatric intensive care unit (PICU) in South India. **METHODS:** Fifty-four consecutive children with medical and surgical diagnoses were included with parental consent. Severity of illness was assessed using PIM-2 score; Sequential Organ Failure Assessment Cardiovascular Score (CV-SOFA) was used to describe vasopressor use. Serum for 25(OH) D levels was obtained as close as possible to the ICU admission. Vitamin D deficiency was defined as serum 25(OH) D level < 20 ng/ml (50 nmol/L). Primary outcome measures were serum 25(OH) D level and in-hospital all cause mortality. Secondary outcomes were illness severity, vasopressor requirement, use of mechanical ventilation and duration of ICU stay. **RESULTS:** Of the 54 children, two were excluded due to insufficient serum for vitamin D analysis. Median age was 17.5 mo (IQR = 4.5-78); 38.5 % were infants. Higher age was associated with low vitamin D levels ( $r_s = -0.34$ ;  $p 0.01$ ). Median serum 25(OH) D level was 25.1 ng/ml (IQR = 16.2-34.2). Shock (30.8 %), CNS conditions (23.1 %) and respiratory illnesses (21.2 %) were the three most common reasons for admission to the PICU. Vitamin D deficiency was seen in 40.3 % of the critically ill children. Higher PIM score or

SOFA score were associated with low vitamin levels ( $r_s = -0.29$ ,  $p = 0.04$  and  $r_s = -0.29$ ,  $p = 0.05$  respectively). Children who were mechanically ventilated had a significantly lower median serum 25(OH) D level than those who were not on ventilation [19.5 ng/ml (IQR = 14.6-27.7)] vs. 32.1 ng/ml [(IQR = 16.5-50.9),  $p = 0.01$ ]. Serum 25(OH) D level was also positively associated with serum calcium levels ( $r_s = 0.32$ ,  $p = 0.03$ ). The proportion of children who died or were discharged terminally at parental request was 23.8 % among those with serum 25(OH) D level < 20 ng/ml as compared to 16.1 % among those with serum 25(OH) D level > 20 ng/ml ( $p = 0.49$ ). **CONCLUSIONS:** Vitamin D deficiency is common among pediatric patients admitted to PICU in South India. Low serum 25(OH) D level was associated with higher severity of illness, need for mechanical ventilation, more vasopressor use and lower serum calcium levels. No association between vitamin D status and mortality was demonstrated. DOI: 10.1007/s12098-015-1833-0

**NAT**

**PMID:**26187509

**CS**

**Fischer K**(1),(2), Collins PW(3), Ozelo MC(4),(5), Srivastava A(6), Young G(7),(8), Blanchette VS(9),(10). When and how to start prophylaxis in boys with severe hemophilia without inhibitors: communication from the SSC of the ISTH. *J Thromb Haemost.* 2016 May;14(5):1105-9. doi: 10.1111/jth.13298. Epub 2016 Apr 4.

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DOI: 10.1111/jth.13298

**INTL**

**PMID:**27186714

**CS**

**Ganapule A**(1), Jain P, Nambiar FA, Korula A, Abraham A, Mammen J, George B, Mathews V, Srivastava A, Viswabandya A.

Surgical procedures in patients with Glanzmann's thrombasthenia: case series and literature review. *Blood Coagul Fibrinolysis.* 2016 Jun 6. [Epub ahead of print]

**Author information:**

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Glanzmann's thrombasthenia is a rare platelet function disorder with an autosomal recessive pattern of inheritance. Achieving haemostasis in such patients who undergo surgical procedures always poses a significant challenge. Herein we report six cases of Glanzmann's thrombasthenia, who underwent nine surgeries under the cover of platelet-rich concentrates with or without recombinant activated factor VII. Of these, five were major surgeries such as thyroidectomy, laparotomy, Hartmann's procedure, reversal of Hartmann's procedure and a complete dental extraction. All five procedures were successfully done without any major bleeding. The major cost incurred in these procedures is due to the large number of blood products used and recombinant activated factor VII if used. DOI: 10.1097/MBC.0000000000000524

**INTL**

**PMID:**27273143

**CS**

**Gandhi DJ**(1), Dhaded SM(2), Ravi MD(3), Dubey AP(4), Kundu R(5), Lalwani SK(6), Chhatwal J(7), Mathew LG(8), Gupta M(9), Sharma SD(10), Bavdekar SB(11), Jayanth MV(12), Ravinuthala S(12), Sil A(12), Dhingra MS(12).

Safety, immune lot-to-lot consistency and non-inferiority of a fully liquid pentavalent DTwp-HepB-Hib vaccine in healthy Indian toddlers and infants.

*Hum Vaccin Immunother.* 2016 Apr 2;12(4):946-54.

doi:10.1080/21645515.2015.1100779. Epub 2015 Nov 18.

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Delhi, India. (5)e Department of Pediatrics, Institute of Child Health, Kolkata, India. (6)f Department of Pediatrics, Bharati Vidyapeeth Deemed University Medical College, Pune, India. (7)g Department of Pediatrics, Christian Medical College, Ludhiana, India. (8)h Department of Pediatrics, Christian Medical College, Vellore, India. (9)i Department of Community Medicine, School of Public Health, Post Graduate Institute of Medical Education & Research, Chandigarh, India. (10)j Department of Pediatrics, Sawai Man Singh Medical College, Jaipur, India. (11)k Department of Pediatrics, Topiwala Nair Medical College, Mumbai, India. (12)l Shantha Biotechnics Private Limited, Hyderabad, India.

Pentavalent combination vaccines are important tools to strengthen the immunization programs in numerous countries throughout the world. A large number of countries have recognized the value of combination vaccines and have introduced whole cell pentavalent vaccines into their immunization programs. A phase III, multi-center, randomized, single blinded study of a fully liquid pentavalent DTwP-HepB-Hib investigational vaccine (Shan5™) was conducted across India in 2 cohorts: 15 toddlers were evaluated for safety and immunogenicity following a single booster dose (Cohort 1) followed by 1085 infants (Cohort 2) evaluated for immunogenicity and safety following 3-dose primary immunization of the investigational vaccine or a locally licensed comparator vaccine (Pentavac SD). Immune consistency analysis among 3 lots of the investigational vaccine, and immune non-inferiority analysis of pooled (3 lots) data of investigational vaccine vs. comparator vaccine were carried out in cohort 2. The vaccines demonstrated comparable safety and immune responses in cohort 1. In cohort 2, equivalent immune consistency among 3 lots was observed for all antigens except whole cell pertussis antigens, where a marginal variation was observed which was linked to the low power of the test and concluded to not have any clinical significance. Immune non-inferiority against the comparator vaccine was demonstrated for all 5 antigens. Safety results were comparable between vaccine groups. This investigational, fully-liquid, whole-cell pertussis (wP) containing new pentavalent vaccine was found to be safe and immunologically non-inferior to the licensed comparator vaccine. DOI: 10.1080/21645515.2015.1100779

**INTL**

**PMCID: PMC4962968 PMID:26580093**

**CS**

**George N(1), Alexander S(2), David VG(1), Basu G(1), Mohapatra A(1), ValsonAT(1), Jacob S(1), Pathak HK(1), Devasia A(3), Tamilarasi V(1), Varughese S(1).**

Comparison of Early Mechanical and Infective Complications in First Time Blind, Bedside, Midline Percutaneous Tenckhoff Catheter Insertion with Ultra-Short Break-In Period in Diabetics and Non-Diabetics: Setting New Standards. *Perit Dial Int.* 2016 11-12;36(6):655-661. Epub 2016 Apr 4.

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(1)Department of Nephrology, Christian Medical College, Vellore, India. (2)Department of Nephrology, Christian Medical College, Vellore, India [suceena@gmail.com](mailto:suceena@gmail.com). (3)Department of Urology, Christian Medical College, Vellore, India.

**BACKGROUND:** There are no large studies that have examined ultra-short break-in period with a blind, bedside, midline approach to Tenckhoff catheter insertion. ♦ **METHODS:** Observational cohort study of 245 consecutive adult patients who underwent percutaneous catheter insertion for chronic peritoneal dialysis (PD) at our center from January 2009 to December 2013. There were 132 (53.9%) diabetics and 113 (46.1%) non-diabetics in the cohort. ♦ **RESULTS:** The mean break-in period for the percutaneous group was  $2.68 \pm 2.6$  days. There were significantly more males among the diabetics (103 [78%] vs 66 [58.4%],  $p = 0.001$ ). Diabetics had a significantly higher body mass index (BMI) ( $23.9 \pm 3.7$  kg/m<sup>2</sup>) vs  $22.2 \pm 4$  kg/m<sup>2</sup>,  $p < 0.001$ ) and lower serum albumin ( $33.1 \pm 6.3$  g/L vs  $37 \pm 6$  g/L,  $p < 0.001$ ) compared with non-diabetics. Poor catheter outflow was present in 6 (4.5%) diabetics and 16 (14.2%) non-diabetics ( $p = 0.009$ ). Catheter migration was also significantly more common in the non-diabetic group (11 [9.7%] vs 2 [1.5%],  $p = 0.004$ ). Primary catheter non-function was present in 17 (15%) of the non-diabetics and in 7 (5.3%) of the diabetics ( $p = 0.01$ ). There were no mortality or major non-procedural complications during the catheter insertions. Among patients with 1 year of follow-up data, catheter survival (93/102 [91.2%] vs 71/82 [86.6%],  $p = 0.32$ ) and technique survival (93/102 [91.2%] vs 70/82 [85.4%],  $p = 0.22$ ) at 1 year was comparable between diabetics and non-diabetics, respectively. ♦ **CONCLUSIONS:** Percutaneous catheter insertion by practicing nephrologists provides a short break-in period with very low mechanical and infective complications. Non-diabetic status emerged as a significant risk factor for primary catheter non-function presumed to be due to more patients with lower BMI and thus smaller abdominal cavities. This is the first report that systematically compares diabetic and non-diabetic patients. Copyright © 2016 International Society

for Peritoneal Dialysis. DOI: 10.3747/pdi.2015.00097  
**INTL**  
**PMID:**27044797  
**CS**

**Ghosh GC**(1), Sharma B(2), Gupta BB(2).  
 CSF ADA Determination in Early Diagnosis of  
 Tuberculous Meningitis in HIV-Infected Patients.  
 Scientifica (Cairo). 2016;2016:5820823. doi:  
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Tuberculous and Cryptococcal meningitis are common  
 in HIV patients. A highly specific and sensitive rapid  
 test for diagnosis of Tuberculous meningitis especially  
 in setting of HIV is not available in developing  
 countries where the burden of disease is high. We  
 measured ADA (adenosine deaminase) levels using  
 spectrophotometric method in the CSF of HIV patients  
 with meningitis to differentiate Tuberculous  
 meningitis from meningitis due to other causes.  
 Kruskal-Wallis test was used to compare ADA values  
 between tuberculous meningitis (TBM) and  
 nontuberculous (non-TB) meningitis patients and a  
 receiver-operating characteristic (ROC) analysis curve  
 was drawn from these values. Levels of ADA in the CSF  
 of patients with TBM were significantly higher than  
 those in patients with meningitis due to other causes.  
 CSF ADA level determination with a cut-off value of  
 6 IU/L was found to be highly specific and fairly  
 sensitive test for the diagnosis of TBM in HIV positive  
 patients. DOI: 10.1155/2016/5820823

**INTL**

**PMCID:** PMC4837278 **PMID:**27144055

**CS**

**Girishan S**(1), Rajshekhar V(1).  
 Rapid-onset paraparesis and quadriparesis in patients  
 with intramedullary spinaldermoid cysts: report of 10  
 cases.  
 J Neurosurg Pediatr. 2016 Jan;17(1):86-93. doi:  
 10.3171/2015.5.PEDS1537. Epub 2015 Oct 2

**Author information:**

(1)Department of Neurological Sciences, Christian  
 Medical College, Vellore, India.

**OBJECT** Intramedullary dermoid cysts are rare tumors  
 of the spinal cord. Presentation with rapid onset of  
 paraparesis or quadriparesis (onset within 2 weeks) is  
 rarer still. The authors present their experience in the  
 management and outcome of patients with such a

presentation. **METHODS** Patient records between  
 2000 and 2014 were retrospectively reviewed to  
 identify those with intraspinal dermoid cysts who  
 presented with rapid-onset paraparesis or  
 quadriparesis. Their clinical, radiological,  
 operative, and follow-up data were analyzed.  
**RESULTS** Of a total of 50 patients with intraspinal  
 dermoid cysts managed during the study period,  
 10 (20%) presented with rapid-onset paraparesis  
 or quadriparesis; 9 patients ranged in age from 8  
 months to 2 years, and 1 patient was 25 years old.  
 A dermal sinus was seen in the lumbar region of 4  
 patients, the sacral region of 3, and the thoracic  
 region of 1, and in 1 patient no sinus was found.  
 All except 1 patient presented with rapid-onset  
 paraparesis secondary to infection of the  
 intramedullary dermoid cyst. One patient  
 presented with rupture of a dermoid cyst with  
 extension into the central canal up to the medulla.  
 Early surgery was done soon after presentation in  
 all except 2 patients. Among the 9 patients who  
 underwent surgery (1 patient did not undergo  
 surgery), total excision of the intramedullary  
 dermoid cyst was done in 3 patients, near-total  
 excision in 4 patients, and partial excision in 2  
 patients. Of the 9 patients who underwent surgery,  
 8 showed significant improvement in their  
 neurological status, and 1 patient remained stable.  
 The 1 patient who did not undergo surgery died as  
 a result of an uncontrolled infection after being  
 discharged to a local facility for management of  
 wound infection. **CONCLUSIONS** Early recognition  
 of a dermal sinus and the associated intraspinal  
 dermoid cyst and timely surgical intervention can  
 eliminate the chances of acute deterioration of  
 neurological function. Even after an acute onset of  
 paraparesis or quadriparesis, appropriate  
 antibiotic therapy and prompt surgery can provide  
 reasonably good outcomes in these patients. DOI:  
 10.3171/2015.5.PEDS1537

**INTL**

**PMID:**26431244

**CS**

**Goel A**(1), Christudoss P(2), George R(3),  
 Ramakrishna B(4), Amirtharaj GJ(5), Keshava  
 SN(6), Ramachandran A(5), Balasubramanian  
 KA(5), Mackie I(7), FlemingJJ(2), Elias E(1),(8),  
 Eapen CE(9).

Arsenicosis, possibly from contaminated  
 groundwater, associated with  
 noncirrhotic intrahepatic portal hypertension.  
 Indian J Gastroenterol. 2016 May;35(3):207-15.  
 doi: 10.1007/s12664-016-0660-1. Epub 2016 May  
 26.

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(1)Department of Hepatology, Christian Medical College, Vellore, 632 004, India. (2)Department of Clinical Biochemistry, Christian Medical College, Vellore, 632 004, India. (3)Department of Dermatology, Christian Medical College, Vellore, 632 004, India. (4)Department of Pathology, Christian Medical College, Vellore, 632 004, India. (5)Wellcome Trust Research Laboratory, Christian Medical College, Vellore, 632 004, India. (6)Department of Radiology, Christian Medical College, Vellore, 632 004, India. (7)Haemostasis Research Unit, Haematology Department, University College London, London, UK. (8)University Hospital Birmingham, Birmingham, UK. (9)Department of Hepatology, Christian Medical College, Vellore, 632 004, India. [eapen@cmcvellore.ac.in](mailto:eapen@cmcvellore.ac.in).

**BACKGROUND AND AIMS:** Idiopathic noncirrhotic intrahepatic portal hypertension (NCIPH), a chronic microangiopathy of the liver caused by arsenicosis from use of contaminated groundwater, was reported from Asia. This study aimed to see, if in the twenty-first century, arsenicosis was present in NCIPH patients at our hospital and, if present, to look for groundwater contamination by arsenic in their residential locality. **METHODS:** Twenty-seven liver biopsy proven NCIPH patients, 25 portal hypertensive controls with hepatitis B or C related cirrhosis and 25 healthy controls, matched for residential locality, were studied. Eighty-four percent to 96 % of study subjects belonged to middle or lower socioeconomic category. Arsenicosis was looked for by estimation of arsenic levels in finger/toe nails and by skin examination. Arsenic levels in nails and in ground water (in NCIPH patients with arsenicosis) was estimated by mass spectrometry. **RESULTS:** Nail arsenic levels were raised in five (10 %) portal hypertensive study subjects [two NCIPH patients (both had skin arsenicosis) and three portal hypertensive controls]. All of these five patients were residents of West Bengal or Bangladesh. Skin arsenicosis was noted in three NCIPH patients (11 %) compared to none of disease/healthy controls. Ground water from residential locality of one NCIPH patient with arsenicosis (from Bangladesh) showed extremely high level of arsenic (79.5 µg/L). **CONCLUSIONS:** Arsenicosis and microangiopathy of liver, possibly caused by environmental contamination continues in parts of Asia. Further studies are needed to understand the mechanisms of such 'poverty-linked thrombophilia'. DOI: 10.1007/s12664-016-0660-1

**NAT****PMID:**27225799**CS****Gupta A, Rajshekhar V(1).**

Functional and radiological outcome in patients undergoing three level corpectomy for multi-level cervical spondylotic myelopathy and ossified posterior longitudinal ligament.

Neurol India. 2016 Jan-Feb;64(1):90-6. doi: 10.4103/0028-3886.173654.

**Author information:**

(1)Department of Neurological Sciences, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

**BACKGROUND:** To review our experience with patients undergoing 3 level cervical central corpectomy (CC) with un-instrumented fibular autograft fusion. **MATERIALS AND METHODS:** This is a retrospective study, involving 33 patients with cervical spondylotic myelopathy (CSM) or ossified posterior longitudinal ligament (OPLL) who underwent a 3 level CC between 2002 and 2010. The patients were followed up clinically and radiologically. Their functional status was assessed using Nurick's grading system. Parameters such as intraoperative complications, segmental curvature of the cervical spine, graft subsidence, graft fusion and functional outcome of these patients were assessed. **RESULTS:** There was transient morbidity in 28.6% of patients, with no permanent morbidity or mortality. We obtained follow up in 29 patients (87.9%) with a mean duration of follow up of 65.1 months (range, 12 to 138 months). The mean difference of segmental cervical curvature on follow up was 3.600 and the average graft subsidence was 5.70 mm. We achieved a fusion rate of 90%. There was no instance of graft extrusion in our series. There was a significant improvement in the functional status of our patients (from Nurick grade 3.55 to 2.42; P = 0.0001), with no clinical deterioration in any patient. **CONCLUSIONS:** Three level cervical corpectomy with un-instrumented fusion is a relatively safe surgery in experienced hands, and can achieve excellent clinical and radiological outcomes. DOI: 10.4103/0028-3886.173654

**NAT****PMID:**26754998**CS**

**Isaac R(1), Paul B(2), Geethanjali FS(3), Kang G(4), Wanke C(5).**

Role of intestinal dysfunction in the nutritional compromise seen in human immunodeficiency virus-infected adults in rural India.

Trop Doct. 2017 Jan;47(1):44-48. Epub 2016 Jan 24.

**Author information:**

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Human immunodeficiency virus (HIV) disease progression is often marked by significant weight loss with or without chronic diarrhoea. We studied the extent of intestinal dysfunction using a D-xylose absorption test and association with nutritional compromise as measured by body mass index (BMI) and serum antioxidants levels in HIV-infected individuals through a cross-sectional survey of 45 ART naïve, HIV-positive and 45, age-socioeconomic status matched negative controls in a rural population in India. More than 40% of HIV-positive and HIV-negative participants had intestinal dysfunction (42.2% vs. 44.4%). However an increasing gradient of low D-xylose absorption was noted with decreasing CD4 counts (32%, 50% and 58.3% among those with >350, 200-350 and <200 cells/mm<sup>3</sup>, respectively). Multivariate analysis revealed a significant association between intestinal dysfunction and low BMI (P = 0.03) independent of HIV infection and calorie intake per day (P = 0.02). Weight loss in HIV-infected individuals should be investigated for intestinal dysfunction especially in low resource settings. © The Author(s) 2016. DOI: 10.1177/0049475515626338

**INTL**

**PMID:**26809467

**CS****Jacob KS(1).**

Insight in Psychosis: An Indicator of Severity of Psychosis, an Explanatory Model of Illness, and a Coping Strategy. *Indian J Psychol Med.* 2016 May-Jun;38(3):194-201. doi: 10.4103/0253-7176.183078.

**Author information:**

(1)Department of Psychiatry, Christian Medical College, Vellore, Tamil Nadu, India.

Recent studies related to insight, explanatory models (EMs) of illness and their relationship to outcome of psychosis are reviewed. The traditional argument that insight predicts outcome in psychosis is not supported by recent longitudinal data, which has been analyzed

using multivariable statistics that adjust for severity and quality of illness. While all cognition will have a neurobiological representation, if "insight" is related to the primary psychotic process, then insight cannot be seen as an independent predictor of outcome but a part of the progression of illness. The evidence suggests insight, like all EMs, is belief which interacts with the trajectory of the person's illness and the local culture to produce a unique understanding of the illness for the particular individual and his/her family. DOI: 10.4103/0253-7176.183078

**NAT**

**PMCID:** PMC4904754 **PMID:**27335513

**CS****Jacob KS(1).**

Robert Spitzer and psychiatric classification: technical challenges and ethical dilemmas. *Indian J Med Ethics.* 2016 Apr-Jun;1(2):95-100.

**Author information:**

(1)Professor of Psychiatry, Christian Medical College, Vellore, Tamil Nadu 632 002, India, [ksjacob@cmcvellore.ac.in](mailto:ksjacob@cmcvellore.ac.in).

Dr Robert Leopold Spitzer (May 22, 1932-December 25, 2015), the architect of modern psychiatric diagnostic criteria and classification, died recently at the age of 83 in Seattle. Under his leadership, the American Psychiatric Association's (APA) Diagnostic and Statistical Manuals (DSM) became the international standard.

**NAT**

**PMID:**27260820

**CS**

**Jeba J(1), Jacob A(1), Kandasamy R(1), George R(1).**

The patient who 'must not be told': demographic factors associated with collusion in a retrospective study in South India.

*Postgrad Med J.* 2016 Apr 20. pii: postgradmedj-2015-133850.

doi:10.1136/postgradmedj-2015-133850. [Epub ahead of print]

**Author information:**

(1)Palliative Care Unit, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

**BACKGROUND:** Patients with cancer need adequate information about diagnosis, treatment options, and possible outcomes and prognosis to make therapeutic decisions. In cultures where the family plays the dominant role in healthcare decisions, doctors are often requested to collude

in withholding distressing information from the patient. This challenging situation has not been well studied and there is limited knowledge on the different factors that may contribute to collusion. OBJECTIVE: To study the prevalence of collusion among adult cancer patients attending a palliative care outpatient clinic and the contributing factors. METHODS: The healthcare records of 306 adult cancer patients who had visited the palliative care outpatient clinic at least three times with follow-up until death were retrospectively reviewed. Details on information shared and why it was not shared were retrieved from the documentation in the communication sheet in the patient chart. The prevalence, sociodemographic and clinical factors that could contribute to collusion in doctor-patient communication were studied. RESULTS: Collusion was present in 40% of cases at the time of referral to the palliative care outpatient clinic (collusion regarding diagnosis in 18%; collusion regarding prognosis in 40%). Collusion was later addressed in 35%. Collusion was significantly higher among female patients ( $p=0.005$ ), manual workers ( $p=0.035$ ), those not accompanied by a spouse ( $p=0.000$ ) and with no oncological treatment ( $p=0.001$ ). CONCLUSIONS: Collusion regarding diagnosis or prognosis is common among cancer patients referred for palliative care. It was more prevalent among female patients, manual workers, patients who had not received oncological treatment, and patients not accompanied by a spouse. Published by the BMJ Publishing Group Limited. For permission to use (where not already granted under a licence) please go to <http://www.bmj.com/company/products-services/rights-and-licensing/>

DOI: 10.1136/postgradmedj-2015-133850  
NAT  
PMID:27099298  
CS

**Jegaraj MK**(1), Mitra S(2), Kumar S(2), Selva B(2), Pushparaj M(2), Yadav B(3), Prabhakar AK(2), Reginald A(2). Profile of deliberate self-harm patients presenting to Emergency Department: A retrospective study. *J Family Med Prim Care*. 2016 Jan-Mar;5(1):73-6. doi: 10.4103/2249-4863.184627.

#### Author information:

(1)Department of Family Medicine, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Emergency Medicine, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Biostatistics, Christian Medical College, Vellore, Tamil Nadu, India.

BACKGROUND: Deliberate self-harm (DSH) is a major under-recognized epidemic in the low- and middle-income countries. This is a large retrospective study from the Emergency Department (ED) of Tertiary Care Center of South India to describe the clinicodemographic features of DSH cases. MATERIALS AND METHODS: This is a retrospective study conducted at ED of Christian Medical College, Vellore, India from January 01, 2011 to December 31, 2013. All cases of DSH were included in the study. The demographic details, mode of DSH and clinical outcome were extracted from the electronic medical record. Descriptive statistics are presented. Chi-square test was used to compare categorical variables. For all tests, a two-sided  $P \leq 0.05$  was considered statistically significant. RESULTS: Total of 1228 patients were admitted to ED for DSH during the study period. Male and female occurred in equal ratio. More than half of the cases occurred among age group below 30 years. Consumption of pesticides (agricultural chemicals) was the single most common mode of DSH (46%), especially among men, followed by medication overdose (29.8%). Consumption of plant poison and tablet overdose was higher among women. Overall mortality due to DSH was low (1.5%) in our study. CONCLUSION: DSH is under-recognized major public health problem in low-middle income countries like India. Most cases occur among young and productive age group and in equal frequencies among men and women. Timely and the appropriate institution of treatment can decrease the morbidity and mortality due to DSH remarkably. DOI: 10.4103/2249-4863.184627  
NAT  
PMCID: PMC4943154 PMID:27453847  
CS

**Jehangir S**(1), Kurian JJ(1), Jacob TJ(1), Gurrum GM(1), Thomas RJ(1), Mathai(1), Karl S(1). Pneumonostomy in the Surgical Management of Hydatid Cyst of the Lung. *Eur J Pediatr Surg*. 2016 Mar 28. [Epub ahead of print]

#### Author information:

(1)Department of Paediatric Surgery, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

Pneumonostomy in the surgical treatment of bilateral hydatid cyst of Background the lung(HCL) was described by Anand et al. This study presents the comparative long-term results of pneumonostomy for simple and complicated HCL. Methods and PaThe pneumonostomy

technique was applied to both open and minimally invasive operations. The cyst was opened, endocyst removed, and any bronchial openings closed. The pericyst was closed over a 20-French Malecot tube, which was exteriorized and connected to an underwater seal. The tube was removed after 3 weeks by which time a well-established tract had formed. Hospital records of 26 children with 30 HCL who underwent pneumonostomy between 2001 and 2014 were reviewed and followed up. Patients were analyzed in two groups: group 1 comprised uncomplicated and group 2 complicated HCL. There was a statistically significant difference in the age at presentation in the two groups. The groups were comparable with respect to presenting symptoms, sex ratio, and side or size of Six(20%) children with surgical complications were graded by cyst. Results Clavien-Dindo classification. Three(10%) children qualified as grade 1 and did not require pharmacologic or surgical therapy. Three(10%) children had grade 3 complications; two developed empyema and one pneumothorax. There were no prolonged air leaks. Children with complicated cysts did not require longer hospitalization. Follow-up was possible in 80.76% of the children. The mean duration of follow-up was 21.3 months (interquartile range, 5-63 months). There were no postoperative recurrences or disease-related mortality. Pneumonostomy is a safe and effective technique for dealing with the Conclusion residual cavity in large complicated cysts and bilateral HCL. Georg Thieme Verlag KG Stuttgart · New York. DOI: 10.1055/s-0036-1580701

INTL

PMID:27019148

CS

**Jeyaseelan V(1), Jeyaseelan L(1), Yadav B(1).**  
INCIDENCE OF, AND RISK FACTORS FOR,  
MALNUTRITION AMONG CHILDREN AGED 5-7 YEARS  
INSOUTH INDIA.

J Biosoc Sci. 2016 May;48(3):289-305. doi:  
10.1017/S0021932015000309. Epub 2015 Oct 6.

**Author information:**

(1)Department of Biostatistics, Christian Medical College, Vellore, India.

Protein-energy malnutrition is a major health problem contributing to the burden of disease in developing countries. The aim of this study was to assess the incidence of, and risk factors for, malnutrition among school-going children in south India. A total of 2496 children aged 5-7 years from rural and urban areas of south India were recruited in 1982 and followed up for malnutrition over a period of 9 years. Their body heights and weights were measured every six months and socio-demographic factors such as mother's

education and father's education and relevant household characteristics and hygiene practices collected. Body mass index and height-for-age z-scores were used to determine children's levels of underweight and stunting, respectively, classified as normal, mild/moderate or severe. Risk factor analysis was done for pre-pubertal ages only using Generalized Estimating Equations with cumulative odds assumption. There was a significant difference between male and female children in the incidence of severe underweight and stunting (6.4% and 4.2% respectively). Children in households with no separate kitchen had 1.3 (1.0-1.6) times higher odds of being severely underweight (p=0.044) compared with those with a kitchen. Children without a toilet facility had significantly higher odds of severe underweight compared with those who did. Children with illiterate parents had higher odds of severe stunting than those with literate parents. In conclusion, the prevalence of malnutrition among these south Indian children has not changed over the years, and the incidence of severe malnutrition was highest in children when they were at pubertal age. The risk factors for stunting were mostly poverty-related, and those for underweight were mostly hygiene-related. Adolescent children in south India should be screened periodically at school for malnutrition and provided with nutritional intervention if necessary. DOI: 10.1017/S0021932015000309

INTL

PMID:26440753

CS

**John D(1), Muthusamy K(2), Bandla B(3),  
Sudhakar SV(4), Thomas M(5).**

Ocular Features and Visual Outcome in Children  
with Moyamoya Disease and  
Moyamoya Syndrome: A Case Series.

J Clin Diagn Res. 2016 May;10(5):NR01-4. doi:  
10.7860/JCDR/2016/19153.7744. Epub 2016 May  
1.

**Author information:**

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Moya Moya Disease (MMD) is characterised by idiopathic vasculopathy affecting the terminal internal carotid arteries resulting in the formation of extensive collaterals at the base of the brain, leptomeninges and parenchymal regions with resultant infarcts and bleeds. Four children presented with clinico-radiological features suggestive of Moyamoya disease/syndrome. This includes global developmental delay, recurrent seizures, transient ischaemic attacks and impaired vision. The first patient had vision of 6/15 in both eyes with bilateral optic disc pallor. Second case also had bilateral optic disc pallor with arteriolar attenuation, but had vision of perception of light only in both eyes. The third child had vision of 6/60 with alternate divergent squint and clinical features suggestive of Neurofibromatosis 1 (NF 1). Fourth patient presented with poor fixation in both eyes with bilateral total cataract. He underwent bilateral cataract surgery with intraocular lens implantation and vision improved to 2/60 with good fixation. We also describe their medical and neurosurgical interventions in this report. DOI: 10.7860/JCDR/2016/19153.7744

**NAT**

**PMCID: PMC4948435 PMID:27437259**

**CS**

**John J(1).**

Measles: A Canary in the Coal Mines?

Indian J Pediatr. 2016 Mar;83(3):195-6. doi: 10.1007/s12098-015-2004-z. Epub 2016Jan 26.

**Author information:**

(1)Department of Community Health, Christian Medical College, Vellore, Tamil Nadu, 632004, India. [jacob@cmcsph.org](mailto:jacob@cmcsph.org).

**Comment on**

Indian J Pediatr. 2016 Mar;83(3):200-8. DOI: 10.1007/s12098-015-2004-z

**NAT**

**PMID:26809769**

**CS**

**John M(1), Parsons A(2), Abraham S(3).**

The value of an ENT specialist outreach service in a Family Medicine Unit for the urban poor in India.

J Family Med Prim Care. 2016 Jan-Mar;5(1):67-72. doi: 10.4103/2249-4863.184626.

**Author information:**

(1)Department of Otorhinolaryngology, Christian Medical College, Vellore, Tamil Nadu, India. (2)Tufts University School of Medicine, Boston, USA. (3)Department of Family Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

**OBJECTIVES:** To assess the function of an otolaryngology (ENT) specialist outreach service in a Family Medicine (FM) Unit for the urban poor attached to a Tertiary Teaching Hospital in India.

**MATERIALS AND METHODS:** The study investigated the pattern of ENT diseases in patients who came to the FM Unit and the proportion of these patients who were referred to the ENT specialist clinic at the unit. The study also analyzed the ENT problems that were managed by the ENT specialist at the unit and the conditions, which needed referral to the Tertiary Hospital. Data was collected by chart review. **SETTING:** Weekly ENT specialist outreach service in an FM Unit for the urban poor in India attached to a Tertiary Teaching Hospital. **RESULTS:** Among the outpatients who attended the unit in 12 months, 12.89% had ENT-related problems, of which 23.9% were referred to the visiting ENT specialist, 88.30% of these patients were managed in the FM Unit with basic ENT facilities. **CONCLUSION:** This study demonstrated that majority of the patients with ENT-related problems who presented to an FM Unit could be managed by the FM specialists. Of those patients who required the expertise of a specialist in ENT, the majority could be managed in the FM Unit, with basic ENT examination and treatment facilities. Triage and management by the family physician and the visiting ENT surgeon in the FM Unit is a prudent use of resources and will improve the quality of care people receive for their ENT problems. DOI: 10.4103/2 249-4863.184626

**NAT**

**PMCID: PMC4943152 PMID:27453846**

**CS**

**Jose R(1), Chakravarthy K, Nair S, Joseph M, Jeyaseelan V, Korula G.**

A Randomized Controlled Trial Studying the Role of Dexamethasone in Scalp Nerve Blocks for Supratentorial Craniotomy.

J Neurosurg Anesthesiol. 2016 Jan 11. [Epub ahead of print]

**Author information:**

(1)Departments of \*Anaesthesiology †Neurological Sciences, Neuro Intensive Care Division ‡Biostatistics, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND:** The aim of this double-blinded randomized control study was to examine the role of the steroid dexamethasone as an adjuvant to lignocaine and ropivacaine in scalp nerve blocks in adults undergoing supratentorial craniotomy under general anesthesia. We compared the

intraoperative anesthetic and postoperative analgesic requirement with and without the addition of dexamethasone to the local anesthetics. **METHODS:** The consented 90 patients were randomized into 2 groups: one group received 8 mg (2 mL) of dexamethasone, whereas the other received 2 mL of normal saline along with the local anesthetics in the scalp nerve block administered soon after induction of general anesthesia. All patients received oral/intravenous dexamethasone perioperatively to decrease cerebral edema. The general anesthetic technique for induction, maintenance, and recovery was standardized in the 2 groups. The primary outcome assessed was the time to administration of the first dose of analgesic postoperatively. The secondary outcomes included intraoperative opioid requirement, time to emergence, and incidence of postoperative nausea and vomiting. **RESULTS:** There was no significant difference between the dexamethasone and saline groups with respect to time to first analgesic requirement, intraoperative fentanyl requirements, time to emergence from general anesthesia, and incidence of postoperative nausea and vomiting. **CONCLUSIONS:** Addition of dexamethasone as an adjuvant to local anesthetics in scalp nerve blocks in the setting of perioperative steroid therapy does not appear to provide any additional benefit with respect to prolongation of the duration of the block. DOI: 10.1097/ANA.0000000000000272

INT

PMID:26756502

CS

Joseph A(1), Sathyendra S(1).

Hemolytic uremic syndrome associated with snakebite envenomation- A retrospective case series.

J Assoc Physicians India. 2016 Jan;64(1):66.

**Author information:**

(1)Christian Medical College,Vellore.

NAT

PMID:27727880

CS

Joseph G(1), Premkumar P(2), Thomson V(3), Varghese M(3), Selvaraj D(2), Sahajanandan R(4).

Externalized Guidewires to Facilitate Fenestrated Endograft Deployment in the Aortic Arch.

J Endovasc Ther. 2016 Feb;23(1):160-71. doi: 10.1177/1526602815614557. Epub 2015 Oct 28.

**Author information:**

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(2)Department of Vascular Surgery, Christian Medical College, Vellore, India. (3)Department of Cardiology, Christian Medical College, Vellore, India.

(4)Department of Anesthesiology, Christian Medical College, Vellore, India.

**PURPOSE:** To describe a precannulated fenestrated endograft system utilizing externalized guidewires to facilitate aortic arch endovascular repair and to report its use in 2 patients with challenging anatomy. **TECHNIQUE:** For distal arch repair, a fenestration for the left subclavian artery (LSA) is made onsite in a standard thoracic endograft tailored to the patient anatomy; it is precannulated with a nitinol guidewire (NGw), which is passed from the femoral artery and externalized from the left brachial artery prior to endograft delivery system introduction over a parallel stiff guidewire. Steps are then taken to remove guidewire intertwining, prevent NGw wrapping around the delivery system, and orient the LSA fenestration superiorly when the delivery system moves into the arch. Gentle traction on the ends of the NGw during endograft deployment facilitates proper fenestration alignment. A covered stent is deployed in the LSA fenestration. The technique is illustrated in a patient with congenital coarctation of the aorta and descending aortic aneurysm. For total arch repair, endograft fenestrations are made for all 3 arch branches; the left common carotid artery (LCCA) and LSA fenestrations are each cannulated with NGws, which travel together from the femoral artery, pass through a LSA snare loop, and are exteriorized from the LCCA. After endograft deployment, the innominate artery fenestration is separately cannulated using right brachial access. Placement of a parallel externalized hydrophilic guidewire passing through the LCCA fenestration (but not the LSA snare loop) and removal of the LCCA fenestration NGw allows exteriorization of the LSA fenestration NGw from the left brachial artery by pulling the LSA snare. Covered stents are deployed in all 3 fenestrations. The technique is presented in a patient with type B aortic dissection.

**CONCLUSION:** Use of the precannulated fenestrated endograft system described is feasible and has the potential to make aortic arch endovascular repair simpler, more reliable, and safer. © The Author(s) 2015. DOI: 10.1177/1526602815614557

INTL

PMCID: PMC4712411

CS

Joy P(1), Simon B(2), Prithishkumar IJ(3), Isaac B(3).

Topography of inferior epigastric artery relevant to laparoscopy: a CT angiographic study.

Surg Radiol Anat. 2016 Apr;38(3):279-83. doi: 10.1007/s00276-015-1513-9. Epub 2015 Jul 19.

#### Author information:

(1)Department of Anatomy, All India Institute of Medical Sciences, Raipur, Chhattisgarh, 492099, India. drpraisjoy@gmail.com. (2)Department of Radiology, Christian Medical College, Vellore, Tamilnadu, 632004, India. (3)Department of Anatomy, Christian Medical College, Vellore, Tamilnadu, 632002, India.

**PURPOSE:** The incidence of inferior epigastric artery (IEA) injury is 0.2-2 %. The aim of this study was to trace the position and course of the inferior epigastric artery in the anterior abdominal wall above the inguinal ligament at three important landmarks, i.e., at the mid-inguinal point, Anterior Superior Iliac Spine (ASIS) and umbilicus in abdominal CT Angiograms. The study also correlates the relationship of body build and the position of the inferior epigastric artery. **METHODS:** In 50 CT Abdominal angiograms, the course of the inferior epigastric artery was traced and distance between the artery and midline was measured at the above landmarks using measurement tool on the picture archival and communication system. The measurements were analyzed using SPSS version 16 and expressed as mean and standard deviation. Mann-Whitney test was used to compare the mean values and ratios in males and females. Linear regression was done to derive formulas by which the position of the inferior epigastric artery could be found. **RESULTS:** The mean distance of the inferior epigastric artery from the midline was  $5.17 \pm 0.93$  cm at the level of mid-inguinal point,  $4.57 \pm 1.05$  cm at the level of ASIS and  $5.27 \pm 1.17$  cm at the level of umbilicus. There was a definitive predictive pattern in the course of the artery as seen in correlation and regression analysis. **CONCLUSION:** The security distance for safe trocar placement was 6 cm at the level of ASIS and 9 cm at the level of umbilicus. Preoperative IEA assessment is helpful in reducing injuries to IEA. DOI: 10.1007/s00276-015-1513-9

#### INTL

PMID:26188502

#### CS

**Kabeerdoss J**(1), Sandhya P(1), Danda D(2).

Gut inflammation and microbiome in spondyloarthritis.

Rheumatol Int. 2016 Apr;36(4):457-68. doi: 10.1007/s00296-015-3414-y. Epub 2015 Dec 30.

#### Author information:

(1)Department of Clinical Immunology and Rheumatology, Christian Medical College, Vellore, Tamil Nadu, 632004, India. (2)Department of Clinical

Immunology and Rheumatology, Christian Medical College, Vellore, Tamil Nadu, 632004, India. [debashisdandacmc@hotmail.com](mailto:debashisdandacmc@hotmail.com).

Spondyloarthritis (SpA) is chronic inflammatory disease involving joints and the spine. Bowel inflammation is common in SpA, which may be classified as acute or chronic. Chronic gut inflammation is most common in SpA patients with axial involvement as compared to those presenting with peripheral involvement alone. The pathogenesis of gut inflammation in SpA could be explained by two factors-over-activation of immunological cells and altered gut microbiome. This is exemplified by SpA animal models, namely HLA-B27-expressing transgenic animals and SKG mice models. Immunological mechanisms include homing of activated T cells from gut into synovium, excess pro-inflammatory cytokines secretion by immune cells such as IL-23 and genetic variations in immunological genes. The evidence for role of gut microbiome in SpA is gradually emerging. Recently, metagenomic study of gut microbiome by sequencing of microbial nucleic acids has enabled identification of new microbial taxa and their functions in gut of patients with SpA. In SpA, the gut microbiome could emerge as diagnostic and prognostic marker of disease. Modulation of gut microbiome is slated to have therapeutic potential as well. DOI: 10.1007/s00296-015-3414-y

#### INTL

PMID:26719306

#### CS

**Kalra S**(1), Zargar AH(2), Jain SM(3), Sethi B(4), Chowdhury S(5), Singh AK(6), Thomas N(7), Unnikrishnan AG(8), Thakkar PB(9), Malve H(10).

Diabetes insipidus: The other diabetes.

Indian J Endocrinol Metab. 2016 Jan-Feb;20(1):9-21. doi:10.4103/2230-8210.172273.

#### Author information:

(1)Bharti Hospital and BRIDE, Karnal, Haryana, India. (2)Department of Endocrinology, Sher-I-Kashmir Institute of Medical Sciences, Srinagar, Jammu and Kashmir, India. (3)Managing Director, TOTALL Diabetes Hormone Institute, Indore, Madhya Pradesh, India. (4)Consultant Endocrinologist, CARE Hospitals, Hyderabad, Telangana, India. (5)Department of Endocrinology, IPGMER and SSKM Hospital, Kolkata, West Bengal, India. (6)GD Diabetes Institute, Kolkata, West Bengal, India; Sun Valley Diabetes and Endocrine Research Centre, Guwahati, Assam, India. (7)Department of Endocrinology, Diabetes and Metabolism and Vice-Principal (Research),

Christian Medical College, Vellore, Tamil Nadu, India. (8)Chellaram Diabetes Institute, Pune, Maharashtra, India. (9)Bombay Hospital and Medical Research Centre, Mumbai, Maharashtra, India. (10)Lead Medical, Asia Pacific region, Ferring Pharmaceuticals Pvt. Ltd., Mumbai, Maharashtra, India.

Diabetes insipidus (DI) is a hereditary or acquired condition which disrupts normal life of persons with the condition; disruption is due to increased thirst and passing of large volumes of urine, even at night. A systematic search of literature for DI was carried out using the PubMed database for the purpose of this review. Central DI due to impaired secretion of arginine vasopressin (AVP) could result from traumatic brain injury, surgery, or tumors whereas nephrogenic DI due to failure of the kidney to respond to AVP is usually inherited. The earliest treatment was posterior pituitary extracts containing vasopressin and oxytocin. The synthetic analog of vasopressin, desmopressin has several benefits over vasopressin. Desmopressin was initially available as intranasal preparation, but now the oral tablet and melt formulations have gained significance, with benefits such as ease of administration and stability at room temperature. Other molecules used for treatment include chlorpropamide, carbamazepine, thiazide diuretics, indapamide, clofibrate, indomethacin, and amiloride. However, desmopressin remains the most widely used drug for the treatment of DI. This review covers the physiology of water balance, causes of DI and various treatment modalities available, with a special focus on desmopressin. DOI: 10.4103/2230-8210.172273

**NAT**

**PMCID: PMC4743391 PMID:26904464**

**CS**

**Kharkongor MA**(1), Mishra AK(1), Carey R(1), Handsdak S(1).

Ross syndrome - A case series.

J Assoc Physicians India. 2016 Jan;64(1):62.

**Author information:**

(1)Christian Medical College, Vellore.

**NAT**

**PMID:27727839**

**CS**

**Korah S**(1), Selvin SS, Pradhan ZS, Jacob P, Kuriakose T.

Tenons Patch Graft in the Management of Large Corneal Perforations.

Cornea. 2016 May;35(5):696-9. doi: 10.1097/ICO.0000000000000808.

**Author information:**

(1)\*Department of Ophthalmology, Christian Medical College and Hospital, Vellore, India; and†Narayana Nethralaya, Bangalore, India.

**PURPOSE:** To describe a technique to manage corneal perforations between 3 and 6 mm in size using autologous Tenons tissue with cyanoacrylate glue and a bandage contact lens.

**METHODS:** A thin layer of Tenons capsule harvested from the patient's own eye is used to seal the perforation and act as a scaffold. The Tenons patch graft is spread over the perforation and held in place by the application of cyanoacrylate glue. A bandage contact lens is then placed on the eye. **RESULTS:** A 6-year retrospective review of 28 patients who underwent this procedure was performed. One patient was lost to follow-up. Of the 27 patients who were followed up, 20 healed completely, with an adherent leucoma and preservation of the anterior chamber. The condition of one patient (with a perforated Pseudomonas corneal ulcer) progressively worsened despite maximum medical therapy and had to undergo evisceration.

**CONCLUSIONS:** This procedure makes use of easily available autologous Tenons tissue in patients with corneal perforations too large to be managed with cyanoacrylate glue alone, to preserve eyeball morphology. A corneal transplant can then be done when the cornea has healed.

DOI: 10.1097/ICO.0000000000000808

**INTL**

**PMID:26989954**

**CS**

**Kumar R**(1), Kimura F(2), Ahn KW(3), Hu ZH(3), Kuwatsuka Y(4), Klein JP(3), Pasquini M(3), Miyamura K(5), Kato K(6), Yoshimi A(7), Inamoto Y(8), Ichinohe T(9), Wood WA Jr(10), Wirk B(11), Seftel M(12), Rowlings P(13), Marks DI(14), Schultz KR(15), Gupta V(16), Dedeken L(17), George B(18), Cahn JY(19), Szer J(20), Lee JW(21), Ho AY(22), Fasth A(23), Hahn T(24), Khera N(25), Dalal J(26), Bonfim C(27), Aljurf M(28), Atsuta Y(29), Saber W(3).

Comparing Outcomes with Bone Marrow or Peripheral Blood Stem Cells as Graft Source for Matched Sibling Transplants in Severe Aplastic Anemia across Different Economic Regions.

Biol Blood Marrow Transplant. 2016 May;22(5):932-40.

doi:10.1016/j.bbmt.2016.01.012. Epub 2016 Jan 18.

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Ohio. (27)Hospital de Clinicas, Federal University of Parana, Curitiba, Brazil. (28)Department of Oncology, King Faisal Specialist Hospital Center & Research, Riyadh, Saudi Arabia. (29)Japanese Data Center for Hematopoietic Cell Transplantation and Nagoya University Graduate School of Medicine, Nagoya, Japan.

Bone marrow (BM) is the preferred graft source for hematopoietic stem cell transplantation (HSCT) in severe aplastic anemia (SAA) compared with mobilized peripheral blood stem cells (PBSCs). We hypothesized that this recommendation may not apply to those regions where patients present later in their disease course, with heavier transfusion load and with higher graft failure rates. Patients with SAA who received HSCT from an HLA-matched sibling donor from 1995 to 2009 and reported to the Center for International Blood and Marrow Transplant Research or the Japan Society for Hematopoietic Cell Transplantation were analyzed. The study population was categorized by gross national income per capita and region/countries into 4 groups. Groups analyzed were high-income countries (HIC), which were further divided into United States-Canada (n = 486) and other HIC (n = 1264); upper middle income (UMIC) (n = 482); and combined lower-middle, low-income countries (LM-LIC) (n = 142). In multivariate analysis, overall survival (OS) was highest with BM as graft source in HIC compared with PBSCs in all countries or BM in UMIC or LM-LIC (P < .001). There was no significant difference in OS between BM and PBSCs in UMIC (P = .32) or LM-LIC (P = .23). In LM-LIC the 28-day neutrophil engraftment was higher with PBSCs compared with B M (97% versus 77%, P = .002). Chronic graft-versus-host disease was significantly higher with PBSCs in all groups. Whereas BM should definitely be the preferred graft source for HLA-matched sibling HSCT in SAA, PBSCs may be an acceptable alternative in countries with limited resources when treating patients at high risk of graft failure and infective complications. Copyright © 2016 American Society for Blood and Marrow Transplantation. Published by Elsevier Inc. All rights reserved. DOI: 10.1016/j.bbmt.2016.01.012

**INTL****PMCID: PMC4826285 PMID:26797402****CS****Kumar S(1), Shubhalaksmi S(2).**

Clinical outcome following use of transconjunctival approach in reducingorbitalzygomaticomaxillary complex fractures.

Contemp Clin Dent. 2016 Apr-Jun;7(2):163-9. doi: 10.4103/0976-237X.183067.

#### Author information:

(1)Department of Dental and Oral Surgery Unit 1, CMC, Vellore, Tamil Nadu, India. (2)Department of Cranio-Maxillofacial Plastic and Reconstructive Surgery, College of Dental Sciences, Davangere, Karnataka, India.

**BACKGROUND:** The increasing emphasis on the open reduction and internal fixation of orbito-zygomaxillary complex fractures has led to a more critical appraisal of the various surgical approaches to the orbital and zygomatic skeleton. Transconjunctival approach popularized by Tessier although credited to Bourquet in 1924 offer excellent exposure of the orbito-zygomaxillary complex fracture especially the infra-orbital rim, frontozygomatic suture and the orbital floor. The argument against a transconjunctival access focuses primarily on concern about limited exposure that apparently makes accurate reduction and osteosynthesis of displaced fracture fragments difficult or impossible. Also, due to close association with eye and various ocular complications reported in the literature, most of the surgeons feel skeptical about using this approach.

**AIM:** The aim of this study is to analyze the efficacy of transconjunctival approach in the treatment of orbito-zygomaxillary complex fractures by evaluating the functional and esthetic results and its associated complications. **MATERIAL AND METHOD:** We report a series of eight patients who have undergone fracture repair of the orbito-zygomaxillary complex via a transconjunctival approach. Postoperative patient evaluation was performed with specific attention paid towards wound healing, functional stability, esthetic appearance and postoperative ocular complications. Postoperatively clinical examination along with radiographic examination was done to evaluate the position of the zygoma and determine the adequacy of fracture reduction. **RESULTS:** In all the patients excellent surgical exposure has been achieved for reduction and rigid fixation of the fracture fragments. None of the patients had any form of complication related to the approach. There were no postoperative ocular complications. Only one patient had postoperative chemosis which was transient and subsided subsequently. All the patients had excellent esthetic outcome, with symmetry of malar prominence restored and without any evident postoperative complications. **CONCLUSION:** Superior esthetic results and direct simultaneous access to the orbital rim, orbital floor and lateral orbital wall, support the use of the transconjunctival approach as a frontline approach to access the orbito-zygomaxillary complex. DOI: 10.4103/0976-237X.183067

**NAT**

**PMCID:** PMC4906857 **PMID:**27307661

**CS**

**Kumar S(1).**

Systemic Juvenile Idiopathic Arthritis: Diagnosis and Management.

Indian J Pediatr. 2016 Apr;83(4):322-7. doi: 10.1007/s12098-016-2060-z. Epub 2016Feb 26.

#### Author information:

(1)Department of Pediatrics, Christian Medical College, Vellore, Tamil Nadu, 632004, India. [sathishkumar\\_cmc@yahoo.com](mailto:sathishkumar_cmc@yahoo.com)

Systemic juvenile idiopathic arthritis (sJIA) is an inflammatory condition characterized by fever, lymphadenopathy, arthritis, rash and serositis. In sJIA, systemic inflammation has been associated with dysregulation of the innate immune system, suggesting that it is an autoinflammatory disorder. IL-1 and IL-6 play a major role in the pathogenesis of sJIA and treatment with IL-1 and IL-6 inhibitors has shown to be highly effective. Recent data suggests that early cytokine blockage might abrogate chronic, destructive, therapy resistant arthritis phase, reflecting a potential "window of opportunity" in the care of children with sJIA. DOI: 10.1007/s12098-016-2060-z

**NAT**

**PMID:**26916892

**CS**

**Kumar V(1), Yadav AK(1), Gang S(2), John O(3), Modi GK(4), Ojha JP(5), PandeyR(6), Parameswaran S(7), Prasad N(8), Sahay M(9), Varughese S(10), JhaV(1),(3),(11).**

The Indian Chronic Kidney Disease (ICKD) Study: Design and Methods.

Nephrology (Carlton). 2016 Apr 6. doi: 10.1111/nep.12789. [Epub ahead of print]

#### Author information:

(1)Department of Nephrology, Post Graduate Institute of Medical Education and Research, Chandigarh, India. (2)Muljibhai Patel Urological Hospital, Nadiad, India. (3)George Institute for Global Health, New Delhi, India. (4)Samarpan Kidney Institute and Research Center, Bhopal, India. (5)Department of Nephrology, Institute of Medical Science, Banaras Hindu University, Varanasi, India. (6)Department of Nephrology, Institute of Post Graduate Medical Education & Research, Kolkata, India. (7)Department of Nephrology, Jawaharlal Institute of Postgraduate Medical Education & Research, Pondicherry, India. (8)Department of Nephrology, Sanjay Gandhi

Postgraduate Institute of Medical Science, Lucknow, India. (9)Department of Nephrology, Osmania Medical College, Osmania General Hospital, Hyderabad, India. (10)Department of Nephrology, Christian Medical College, Vellore, India. (11)University of Oxford, Oxford, UK.

**BACKGROUND:** The rate and factors that influence progression of chronic kidney disease (CKD) in developing countries like India are unknown. A pan-country prospective, observational cohort study is needed to address these knowledge gaps. **METHODS:** The Indian Chronic Kidney Disease (ICKD) study will be a cohort study of approximately 5000 patients with mild to moderate CKD presenting to centers that represent different geographical regions in India. Time to 50% decline in baseline estimated glomerular filtration rate, need of renal replacement therapy or any new cardiovascular disease (CVD) event or death from CVD are the primary end points. **VALUE OF STUDY:** This study will provide the opportunity to determine risk factors for CKD progression and development of CVD in Indian subjects and perform international comparisons to determine ethnic and geographical differences. A bio-repository will provide a chance to discover biomarkers and explore genetic risk factors. This article is protected by copyright. All rights reserved. DOI: 10.1111/nep.12789

**INTL**

**PMID:**27062078

**CS**

**Livingstone RS**(1), Grunnet LG(2), Thomas N(3), Eapen A(1), Antonisamy B(4), MohanVR(5), Spurgeon R(3), Frank ID(3), Bygbjerg IC(6), Vaag A(2).

Are hepatic and soleus lipid content, assessed by magnetic resonance spectroscopy, associated with low birth weight or insulin resistance in a rural Indian population of healthy young men?

Diabet Med. 2016 Mar;33(3):365-70. doi: 10.1111/dme.12852. Epub 2015 Aug 18.

**Author information:**

(1)Department of Radiology, Christian Medical College and Hospital, Vellore, India. (2)Diabetes and Metabolism, Copenhagen University Hospital (Rigshospitalet), Denmark. (3)Department of Endocrinology, Diabetes and Metabolism, Christian Medical College and Hospital, Vellore, India. (4)Department of Biostatistics, Christian Medical College and Hospital, Vellore, India. (5)Department of Community Health, Christian Medical College and Hospital, Vellore, India. (6)Department of Public Health, University of Copenhagen, Copenhagen, Denmark.

**AIMS:** To assess young healthy men from rural India, who had normal or low birth weights, using magnetic resonance spectroscopy to determine the potential differences in ectopic fat storage between birth weight groups, and to determine if ectopic fat storage was associated with insulin resistance in this population. **METHODS:** A total of 54 lean men with normal birth weight and 49 lean men with low birth weight (age range 18-22 years) from rural India were recruited. All the men underwent anthropometry, magnetic resonance spectroscopy, a hyperinsulinaemic-euglycaemic clamp and a dual-energy X-ray absorptiometry. **RESULTS:** The median (interquartile range) values for hepatic cellular lipids, intramyocellular lipids and extramyocellular lipids, measured using magnetic resonance spectroscopy were 0.76 (0.1-1.8)%, 1.27 (1.0-2.3)% and 1.89 (1.3-3.2)%, respectively, for the normal birth weight group and 0.4 (0.1-1.3)%, 1.38 (0.9-2.2)% and 2.07 (1.2-2.8)%, respectively, for the low birth weight group ( $P > 0.05$ ). No difference in ectopic fat storage was observed between the low and normal birth weight groups, with or without adjustment for age and total fat percentage. Homeostatic model assessment of insulin resistance values were not associated with hepatic cellular, intramyocellular or extramyocellular lipid content in any of the groups. Total fat percentage was the only independent predictor of intramyocellular and extramyocellular lipid content. **CONCLUSION:** Young and lean men from rural India with low birth weight were not observed to have ectopic fat storage in the liver or muscle, and the amount of liver and muscle fat was unrelated to insulin resistance. Older age and/or an urban affluent lifestyle may be required to show a potential role of ectopic fat storage on insulin resistance in Indian people with low or normal birth weight. © 2015 The Authors. Diabetic Medicine © 2015 Diabetes UK. DOI: 10.1111/dme.12852

**INTL**

**PMID:**26172248

**CS**

**Long JB**(1), Joselyn AS, Bhalla T, Tobias JD, De Oliveira GS Jr, Suresh S; PRAN Investigators.

The Use of Neuraxial Catheters for Postoperative Analgesia in Neonates: A Multicenter Safety Analysis from the Pediatric Regional Anesthesia Network.

Anesth Analg. 2016 Jun;122(6):1965-70. doi: 10.1213/ANE.0000000000001322.

**Author information:**

(1)From the \*Department of Pediatric Anesthesiology, Ann & Robert H. Lurie Children's

Hospital of Chicago, Northwestern University, Chicago, Illinois; †Department of Anesthesia, Christian Medical College and Hospital, Vellore, Tamil Nadu, India; ‡Department of Pediatric Anesthesiology and Pain Medicine, Nationwide Children's Hospital, The Ohio State University, Columbus, Ohio; and §Department of Anesthesiology, Feinberg School of Medicine, Northwestern University, Chicago, Illinois.

**BACKGROUND:** Currently, there is limited evidence to support the safety of neuraxial catheters in neonates. Safety concerns have been cited as a major barrier to performing large randomized trials in this population. The main objective of this study is to examine the safety of neuraxial catheters in neonates across multiple institutions. Specifically, we sought to determine the incidence of overall and individual complications encountered when neuraxial catheters were used for postoperative analgesia in neonates. **METHODS:** This was an observational study that used the Pediatric Regional Anesthesia Network database. Complications and adverse events were defined by the presence of at least 1 of the following intraoperative and/or postoperative factors: catheter malfunction (dislodgment/occlusion), infection, block abandoned (unable to place), block failure (no evidence of block), vascular (blood aspiration/hematoma), local anesthetic systemic toxicity, excessive motor block, paresthesia, persistent neurologic deficit, and other (e.g., intra-abdominal misplacement, tremors). Additional analyses were performed to identify the use of potentially toxic doses of local anesthetics. **RESULTS:** The study cohort included 307 neonates with a neuraxial catheter. There were 41 adverse events and complications recorded, resulting in an overall incidence of complications of 13.3% (95% confidence interval, 9.8%-17.4%). Among the complications, catheter malfunction, catheter contamination, and vascular puncture were common. None of the complications resulted in long-term complications and/or sequelae, resulting in an estimated incidence of any serious complications of 0.3% (95% confidence interval, 0.08%-1.8%). There were 120 of 307 patients who received intraoperative and/or postoperative infusions consistent with a potentially toxic local anesthetic dose in neonates. The incidence of potentially toxic local anesthetic infusion rates increased over time ( $P = 0.008$ ). **CONCLUSIONS:** Neuraxial catheter techniques for intraoperative and postoperative analgesia appear to be safe in neonates. Further studies to confirm our results and to establish the efficacy of these techniques across different surgical procedures are required. We suggest that each center that uses neuraxial anesthesia techniques in neonates closely evaluate the dose limits for local anesthetic agents and develop rigorous quality

assurance methods to ensure potentially toxic doses are not used. DOI: 10.1213/ANE.0000000000001322

**INTL**

**PMID:**27195638

**CS**

**MAJ(1), Zachariah A(1).**

Changing profile of tetanus in a tertiary care centre in south India : A caseseries of 68 patients. J Assoc Physicians India. 2016 Jan;64(1):72.

**Author information:**

(1)Christian Medical College, Vellore.

**NAT**

**PMID:**27727943

**CS**

**Mahajan R(1), Simon EG(2), Chacko A(1), Reddy DV(1), Kalyan PR(1), Joseph AJ(1), Dutta AK(1), Chowdhury SD(1), Kurien RT(1).**

Endoscopic ultrasonography in pediatric patients- Experience from a tertiary carecenter in India.

Indian J Gastroenterol. 2016 Jan;35(1):14-9. doi: 10.1007/s12664-016-0619-2. Epub2016 Mar 5.

**Author information:**

(1)Department of Gastroenterology, Christian Medical College, Vellore, 632 004, Tamil Nadu, India. (2)Department of Gastroenterology, Christian Medical College, Vellore, 632 004, Tamil Nadu, India. [ebbysimon@gmail.com](mailto:ebbysimon@gmail.com).

**BACKGROUND AND AIMS:** Although endoscopic ultrasound (EUS) is used in the management of various gastrointestinal (GI) diseases in adults, data on its role in children is limited. This study evaluated the indications, safety, and impact of EUS in children. **METHODS:** Records of children (<18 years age) who underwent EUS between January 2006 and September 2014 were reviewed retrospectively and analyzed. **RESULTS:** One hundred and twenty-one children (70 males, 51 females) aged  $15.2 \pm 2.9$  years (mean  $\pm$  SD) underwent 123 diagnostic (including fine needle aspiration cytology (FNAC) in 7) and 2 therapeutic EUS procedures. Conscious sedation was used in 81 procedures (65%) and general anesthesia in 44 (35%). The pancreaticobiliary system was evaluated in 114 (118 procedures), mediastinum in 5, and stomach in 2 patients. EUS diagnosed chronic pancreatitis (21 patients), pancreatic necrosis (1), splenic artery pseudoaneurysm (1), gastric varix (1), pseudocysts (3), insulinomas (2), other pancreatic masses (2), choledocholithiasis (2), choledochal cysts (2), portal biliopathy (1), esophageal leiomyoma (1), gastric neuroendocrine

tumor (NET) (1), and GI stromal tumor in stomach (1). EUS-guided FNAC was positive in four of seven patients (two had tuberculosis, one pancreatic solid pseudopapillary tumor, and one gastric NET). Three patients had minor adverse events. EUS had a positive clinical impact in 43 (35.5%) patients. CONCLUSIONS: US is feasible and safe in children. It provides valuable information that helps in their clinical management. DOI: 10.1007/s12664-016-0619-2

**NAT**

PMID:26946134

**CS**

**Mathew AJ(1), Danda D, Conaghan PG.**

MRI and ultrasound in rheumatoid arthritis.

Curr Opin Rheumatol. 2016 May;28(3):323-9. doi: 10.1097/BOR.0000000000000282.

**Author information:**

(1)aDepartment of Clinical Immunology & Rheumatology, Christian Medical College, Vellore, India bLeeds Institute of Rheumatic and Musculoskeletal Medicine, University of Leeds & NIHR Leeds Musculoskeletal Biomedical Research Unit, Leeds, UK.

**PURPOSE OF REVIEW:** To overview the recent literature on the use of MRI and musculoskeletal ultrasonography (MSUS) in rheumatoid arthritis. **RECENT FINDINGS:** Subclinical inflammation has been widely confirmed, even in the earliest phases of rheumatoid arthritis. The presence of osteitis has added benefits to modern diagnostic criteria, and anticitrullinated peptide antibody positive patients have demonstrated higher osteitis scores. A model for prediction of rheumatoid arthritis onset employing usual clinical data and power Doppler ultrasonography has been reported. The presence of tenosynovitis may also be an early finding in rheumatoid arthritis. Modern imaging continues to inform our concept of pathogenesis with reports on the direct relationship of synovitis to cartilage proteoglycan loss using compositional MRI measures. Growing data on the validity of MRI as an important predictor of clinical and radiographic damage endpoints has been reported and reflected in the growing use of this outcome in many contemporary biologic therapy trials. Much work has been presented on improved and validated MSUS scores with reduced and feasible joint counts. The role of ultrasonography in making sensible decisions when monitoring biologic use, and in tapering, has been reported. **SUMMARY:** The recent literature demonstrates improved validity and utility for both MRI and MSUS in diagnosis, prognosis and monitoring of rheumatoid arthritis. DOI: 10.1097/BOR.0000000000000282

**INTL**

PMID:26927442

**CS**

**Mathew AJ(1), Goel R(1), Kumar S(2), Danda D(1).** Childhood-onset Takayasu arteritis: an update. Int J Rheum Dis. 2016 Feb;19(2):116-26. doi: 10.1111/1756-185X.12718. Epub 2015 Nov 20.

**Author information:**

(1)Department of Clinical Immunology and Rheumatology, Christian Medical College, Vellore, India. (2)Department of Child Health and Pediatric Rheumatology, Christian Medical College, Vellore, India.

Childhood-onset Takayasu arteritis (c-TA) is a distinct subset affecting a wide age group, ranging from young infants to adolescents and it differs from adult TA in many aspects. There is scarcity of data on c-TA worldwide. The disease is classified using the European League Against Rheumatism/Pediatric Rheumatology International Trials Organization/Pediatric Rheumatology European Society criteria. The non-specific nature of presenting complaints and lack of appropriate biomarkers delay the early diagnosis of this illness and many children present with complications, which become irreversible once they set in. One of the largest cohorts of 40 children with c-TA from our center reports hypertension as the commonest presenting feature. Systemic symptoms like headache, fever and weight loss are also described. Assessment of disease in c-TA is done by correlating clinical features with raised inflammatory markers. Advanced imaging plays an important role in diagnosis. In c-TA, the role of magnetic resonance angiography is advocated, taking into consideration the enormous amount of radiation exposure with other modalities. Complications of c-TA include cardiovascular, pulmonary, neurological and those arising secondary to long-term steroid and immunosuppression therapy. © 2015 Asia Pacific League of Associations for Rheumatology and Wiley Publishing Asia Pty Ltd. DOI: 10.1111/1756-185X.12718

**INTL**

PMID:26585174

**CS**

**Mehta Y(1), Jaggi N(2), Rosenthal VD(3), Kavathekar M(4), Sakle A(5), MunshiN(6), Chakravarthy M(7), Todi SK(8), Saini N(9), Rodrigues C(10), Varma K(11),Dubey R(12), Kazi MM(13), Udawadia FE(14), Myatra SN(15), Shah S(16), DwivedyA(17), Karlekar A(18), Singh S(19),**

Sen N(20), Limaye-Joshi K(21), RamachandranB(22), Sahu S(23), Pandya N(24), Mathur P(25), Sahu S(26), Singh SP(27), Bilolikar AK(28), Kumar S(29), Mehta P(30), Padbidri V(31), Gita N(32), PatnaikSK(33), Francis T(34), Warriar AR(35), Muralidharan S(36), Nair PK(37), SubhedarVR(38), Gopinath R(39), Azim A(40), Sood S(41).

Device-Associated Infection Rates in 20 Cities of India, Data Summary for 2004-2013: Findings of the International Nosocomial Infection Control Consortium.

Infect Control Hosp Epidemiol. 2016 Feb;37(2):172-81. doi: 10.1017/ice.2015.276. Epub 2015 Nov 26.

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(1)1Medanta the Medicity, New Delhi, India. (2)2Artemis Health Institute, New Delhi, India. (3)3International Nosocomial Infection Control Consortium, Buenos Aires, Argentina. (4)4Sahyadri Speciality Hospital, Pune, India. (5)5Bombay Hospital, Mumbai, India. (6)6Ruby Hall Clinic, Pune, India. (7)7Fortis Hospitals, Bangalore, India. (8)8Advanced Medicare Research Institute Hospitals, Kolkata, India. (9)9Pushpanjali Crosslay Hospital, Ghaziabad, India. (10)10PD Hinduja National Hospital & Medical Research Centre, Mumbai, India. (11)11Malabar Institute of Medical Sciences, Calicut, India. (12)12Aditya Birla Memorial Hospital, Pune, India. (13)13Noble Hospital, Pune, India. (14)14Breach Candy Hospital Trust, Mumbai, India. (15)15Tata Memorial Hospital, Mumbai, India. (16)16Kokilaben Dhirubhai Ambani Hospital, Mumbai, India. (17)17Dr. L. H. Hiranandani Hospital, Mumbai, India. (18)18Escorts Heart Institute & Research Centre, New Delhi, India. (19)19Amrita Institute of Medical Sciences & Research Center, Kochi, India. (20)20Christian Medical College, Vellore, India. (21)21Jupiter Hospital, Thane, India. (22)22Kanchi Kamakoti Childs Trust Hospital, Chennai, India. (23)23Apollo Hospitals, Bhubaneswar, India. (24)24Bhailal Amin General Hospital, Vadodara, India. (25)25JPNA Trauma Centre- All India Institute of Medical Sciences, New Delhi, India. (26)26Kalinga Hospital, Bhubaneswar, India. (27)27Shree Krishna Hospital, Karamsad, India. (28)28Krishna Institute of Medical Sciences, Secunderabad, India. (29)29Kovai Medical Center and Hospital, Coimbatore, India. (30)30Seth GS Medical College, Mumbai, India. (31)31Jehangir Hospital, Pune, India. (32)32Rao Nursing Home, Pune, India. (33)33Command Hospital Air Force, Bangalore, India. (34)34Frontier Lifeline Hospital, Chennai, India. (35)35Kerala Institute of Medical Sciences, Trivandrum, India. (36)36G Kuppuswami Naidu Memorial Hospital, Coimbatore, India. (37)37Holy Spirit Hospital, Mumbai, India. (38)38Bombay

Hospital, Indore, India. (39)39Nizam's Institute of Medical Sciences, Hyderabad, India. (40)40Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India. (41)41Military Hospital, Jodhpur, India.

**OBJECTIVE:** To report the International Nosocomial Infection Control Consortium surveillance data from 40 hospitals (20 cities) in India 2004-2013. **METHODS:** Surveillance using US National Healthcare Safety Network's criteria and definitions, and International Nosocomial Infection Control Consortium methodology. **RESULTS:** We collected data from 236,700 ICU patients for 970,713 bed-days. Pooled device-associated healthcare-associated infection rates for adult and pediatric ICUs were 5.1 central line-associated bloodstream infections (CLABSIs)/1,000 central line-days, 9.4 cases of ventilator-associated pneumonia (VAPs)/1,000 mechanical ventilator-days, and 2.1 catheter-associated urinary tract infections/1,000 urinary catheter-days. In neonatal ICUs (NICUs) pooled rates were 36.2 CLABSIs/1,000 central line-days and 1.9 VAPs/1,000 mechanical ventilator-days. Extra length of stay in adult and pediatric ICUs was 9.5 for CLABSI, 9.1 for VAP, and 10.0 for catheter-associated urinary tract infections. Extra length of stay in NICUs was 14.7 for CLABSI and 38.7 for VAP. Crude extra mortality was 16.3% for CLABSI, 22.7% for VAP, and 6.6% for catheter-associated urinary tract infections in adult and pediatric ICUs, and 1.2% for CLABSI and 8.3% for VAP in NICUs. Pooled device use ratios were 0.21 for mechanical ventilator, 0.39 for central line, and 0.53 for urinary catheter in adult and pediatric ICUs; and 0.07 for mechanical ventilator and 0.06 for central line in NICUs. **CONCLUSIONS:** Despite a lower device use ratio in our ICUs, our device-associated healthcare-associated infection rates are higher than National Healthcare Safety Network, but lower than International Nosocomial Infection Control Consortium Report. DOI: 10.1017/ice.2015.276

**INTL**

**PMID:**26607300

**CS**

**Miraclin TA**(1), Matthew A(1), Rupali P(2). Decreased response to artemisinin combination therapy in falciparum malaria: A preliminary report from South India. Trop Parasitol. 2016 Jan-Jun;6(1):85-6. doi: 10.4103/2229-5070.175125.

**Author information:**

(1)Department of Medicine, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Infectious Diseases, Christian Medical College, Vellore, Tamil Nadu, India. E-mail: [prisci@cmcvellore.ac.in](mailto:prisci@cmcvellore.ac.in). DOI: 10.4103/2229-5070.175125

**INTL****PMCID: PMC4778189 PMID:26998439****CS**

**Mishra AK**(1), Aaron S(2), Abhilash K(2), Iyadurai R(2), Shaikh A(2), LazarusE(2), Alexander V(2), George AA(2), Vishali P(2), Sudarsanam TD(2).

Simple telephone call a feasible, useful and acceptable method of following up patients with cerebrovascular accidents: Prospective Cohort study in South India.

Int J Stroke. 2016 Jun 15. pii: 1747493016654486. [Epub ahead of print]

**Author information:**

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DOI: 10.1177/1747493016654486

**INTL****PMID:27306362****CS**

**Mishra SK**(1), Mathew GA(2), Paul RR(2), Asif SK(2), John M(2), Varghese AM(2), Kurien M(2).

Endoscopic Repair of CSF Rhinorrhea: An Institutional Experience.

Iran J Otorhinolaryngol. 2016 Jan;28(84):39-43.

**Author information:**

(1)Department of Otorhinolaryngology, Indira Gandhi Institute of Medical Sciences, Patna, Bihar, India. (2)Department of Otorhinolaryngology, Christian Medical College, Vellore, Tamilnadu, India.

**INTRODUCTION:** Endoscopic repair is considered the treatment of choice in cerebrospinal fluid (CSF) rhinorrhea. The aim of our study was to analyze the etiopathogenesis of CSF rhinorrhea, the outcome of treatment and the causes of failure in a developing-country setting. **MATERIALS AND METHODS:** A retrospective review of patients treated with endoscopic repair for CSF rhinorrhea at a tertiary care hospital in southern India from January 2002 to December 2009 identified 36 patients, the majority of them being women. The defects were closed in three layers using fat, fascia lata and nasal mucosa along with a fibrin sealant in the majority of the patients. Per-operatively, a subarachnoid drain was placed in all patients. Patients were followed up for 1 year. **RESULTS:** Spontaneous onset of CSF rhinorrhea was

noted in 61% of patients. The most common site of leak was found to be the left cribriform plate area. Hence the most common cause of CSF rhinorrhea in our study was spontaneous and the second most common was post-traumatic. Our success rate on the first attempt at endoscopic repair was 100%, with a recurrence rate of 6%. A large defect, failure of localization of the defect, or other co-morbid conditions such as chronic cough may be the most likely causes of recurrence of leak. **CONCLUSION:** Accurate localization of the site of lesion using a high-resolution computed tomography (CT) scan with magnetic resonance imaging (MRI) and confirmation of the site of leak by intraoperative Valsalva maneuver along with multilayered closure of the dural defect and post-operative lumbar drain appear to be essential for the successful endoscopic repair of CSF rhinorrhea.

**INTL****PMCID: PMC4735615 PMID:26878002****CS**

**Nair V**(1), Madan H(1), Sofat S(1), Ganguli P(1), Jacob MJ(1), Datta R(2), Bharadwaj P(2), Sarkar RS(2), Pandit AJ(2), Nityanand S(3), Goel PK(3), Garg N(3), Gambhir S(3), George PV(4), Chandy S(4), Mathews V(4), George OK(4), Talwar KK(5), Bahl A(5), Marwah N(5), Bhattacharya A(5), Bhargava B(6), Airan B(6), Mohanty S(6), Patel CD(6), Sharma A(7), Bhatnagar S(6), Mondal A(8), Jose J(4), Srivastava A(4); for MI3 Trial.

Authors' response.

Indian J Med Res. 2016 Jun;143(6):833. doi: 10.4103/0971-5916.192081.

**Author information:**

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**NAT****PMID:27748312****CS**

**Paarel JP**(1), Singh G, Punnen GE, Prabhu K.

The Use of Intracranial Doppler as a Cause for Intraoperative Hyperthermia.

J Neurosurg Anesthesiol. 2016 Mar 18. [Epub ahead of print]

**Author information:**

(1)Christian Medical College and Hospital Vellore, Vellore, Tamil Nadu, India.

DOI: 10.1097/ANA.0000000000000298

**INTL**

**PMID:**26998651

**CS**

**Pal R**, Mariappan I, Velayudhan SR.

Editorial: Induced Pluripotent Stem Cell-Derived Mesenchymal Stem Cells: Ushering of a New Era in Personalized Cell Therapies.

**Curr Stem Cell Res Ther.** 2016;11(2):97-98.

**INT**

**PMID:**26592539

**CS**

**Pasquini MC**(1), Zhang MJ(2), Medeiros BC(3), Armand P(4), Hu ZH(5), Nishihori T(6), Aljurf MD(7), Akpek G(8), Cahn JY(9), Cairo MS(10), Cerny J(11), Copelan EA(12), Deol A(13), Freytes CO(14), Gale RP(15), Ganguly S(16), George B(17), Gupta V(18), Hale GA(19), Kamble RT(20), Klumpp TR(21), Lazarus HM(22), Luger SM(23), Liesveld JL(24), Litzow MR(25), Marks DI(26), Martino R(27), Norkin M(28), Olsson RF(29), Oran B(30), Pawarode A(31), Pulsipher MA(32), Ramanathan M(11), Reshef R(23), Saad AA(33), Saber W(5), Savani BN(34), Schouten HC(35), Ringdén O(36), Tallman MS(37), Uy GL(38), Wood WA Jr(39), Wirk B(40), Pérez WS(5), Batiwalla M(41), Weisdorf DJ(42).

Hematopoietic Cell Transplantation Outcomes in Monosomal Karyotype Myeloid Malignancies.

*Biol Blood Marrow Transplant.* 2016 Feb;22(2):248-57. doi:10.1016/j.bbmt.2015.08.024. Epub 2015 Aug 29.

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Wisconsin. (6)Department of Blood and Marrow Transplantation, H. Lee Moffitt Cancer Center and Research Institute, Tampa, Florida. (7)Department of Oncology, King Faisal Specialist Hospital Center and Research, Riyadh, Saudi Arabia. (8)Stem Cell Transplantation and Cellular Therapy Program, Banner MD Anderson Cancer Center, Gilbert, Arizona. (9)Department of Hematology, University Hospital, Grenoble, France. (10)Division of Pediatric Hematology, Oncology and Stem Cell Transplantation, Department of Pediatrics, New York Medical College, Valhalla, New York. (11)Department of Medicine, UMass Memorial Medical Center, Worcester, Massachusetts. (12)Department of Hematologic Oncology and Blood Disorders, Levine Cancer Institute, Carolinas HealthCare System, Charlotte, North Carolina. (13)Department of Oncology, Karmanos Cancer Institute, Wayne State University, Detroit, Michigan. (14)Division of Hematology & Oncology, South Texas Veterans Health Care System and University of Texas Health Science Center San Antonio, San Antonio, Texas. (15)Hematology Research Centre, Division of Experimental Medicine, Department of Medicine, Imperial College London, London, United Kingdom. (16)Blood and Marrow Transplantation, Division of Hematology and Oncology, University of Kansas Medical Center, Kansas City, Kansas. (17)Department of Haematology, Christian Medical College, Vellore, India. (18)Blood and Marrow Transplant Program, Princess Margaret Cancer Centre, University Health Network, Toronto, Ontario, Canada. (19)Department of Hematology/Oncology, All Children's Hospital, St. Petersburg, Florida. (20)Division of Hematology and Oncology, Center for Cell and Gene Therapy, Baylor College of Medicine, Houston, Texas. (21)Department of Medical Oncology, Thomas Jefferson University Hospital, Philadelphia, Pennsylvania. (22)Seidman Cancer Center, University Hospitals Case Medical Center, Cleveland, Ohio. (23)Department of Medicine, Abramson Cancer Center, University of Pennsylvania Medical Center, Philadelphia, Pennsylvania. (24)Department of Medicine, University of Rochester Medical Center, Rochester, New York. (25)Division of Hematology and Transplant Center, Mayo Clinic, Rochester, Minnesota. (26)Pediatric Bone Marrow Transplant, University Hospitals Bristol NHS Trust, Bristol, United Kingdom. (27)Division of Clinical Hematology, Hospital de la Santa Creu i Sant Pau, Barcelona, Spain. (28)Division of Hematology/Oncology, University of Florida College of Medicine, Gainesville, Florida. (29)Division of Therapeutic Immunology,

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### Comment in

Biol Blood Marrow Transplant. 2016 Feb;22(2):191-2. The presence of monosomal karyotype (MK+) in acute myeloid leukemia (AML) is associated with dismal outcomes. We evaluated the impact of MK+ in AML (MK+AML, n = 240) and in myelodysplastic syndrome (MDS) (MK+MDS, n = 221) on hematopoietic cell transplantation outcomes compared with other cytogenetically defined groups (AML, n = 3360; MDS, n = 1373) as reported to the Center for International Blood and Marrow Transplant Research from 1998 to 2011. MK+ AML was associated with higher disease relapse (hazard ratio, 1.98; P < .01), similar transplantation-related mortality (TRM) (hazard ratio, 1.01; P = .90), and worse survival (hazard ratio, 1.67; P < .01) compared with those outcomes for other cytogenetically defined AML. Among patients with MDS, MK+ MDS was associated with higher disease relapse (hazard ratio, 2.39; P < .01), higher TRM (hazard ratio, 1.80; P < .01), and worse survival (HR,

2.02; P < .01). Subset analyses comparing chromosome 7 abnormalities (del7/7q) with or without MK+ demonstrated higher mortality for MK+ disease in for both AML (hazard ratio, 1.72; P < .01) and MDS (hazard ratio, 1.79; P < .01). The strong negative impact of MK+ in myeloid malignancies was observed in all age groups and using either myeloablative or reduced-intensity conditioning regimens. Alternative approaches to mitigate disease relapse in this population are needed. Copyright © 2016 American Society for Blood and Marrow Transplantation. Published by Elsevier Inc. All rights reserved. DOI: 10.1016/j.bbmt.2015.08.024

**INTL**

**PMCID:** PMC4716890 **PMID:** 26327629

**CS**

**Paul RR(1), Varghese AM(1), Mathew J(1), Chandrasekharan R(1), Amalanathan S(2), Asif SK(1), Kurien M(1).**

Difficult Laryngeal Exposure in Microlaryngoscopy: Can it be Predicted Preoperatively?

Indian J Otolaryngol Head Neck Surg. 2016 Mar;68(1):65-70. doi:10.1007/s12070-015-0913-9. Epub 2015 Sep 21.

### Author information:

(1) Department of ENT, Christian Medical College, Vellore, 632004 Tamil Nadu India. (2) Department of ENT, Indira Gandhi Medical College and Research Institute, Pondicherry, India.

The aim of the present study was to identify preoperative clinical predictors for difficult laryngeal exposure (DLE) and to define a simple grading system for laryngeal exposure. This is a prospective descriptive study carried out in a tertiary teaching hospital in South India. Patients above 18 years undergoing microlaryngoscopy had presurgical evaluation of 11 physical parameters. Grading of Modified Cormack-Lehane Score (MCLS) and rigid laryngoscopy were done during procedure. On logistic regression analysis, with a 95 % confidence interval (CI) MCLS was found to be a statistically significant predictor (odds ratio 12). With 90 % CI, neck circumference, atlanto-occipital extension and MCLS were significant (odds ratio of 4, 4, 12 respectively). Neck circumference of more than 34.25 cm and limited atlanto-occipital extension of less than 19.50, predicts difficult laryngeal exposure. A simple grading system for laryngeal exposure during microlaryngoscopy is being proposed. MCLS grade more than 2a done intra operatively

correlates well with difficult intubation. DOI: 10.1007/s12070-015-0913-9

**NAT**

**PMCID: PMC4809832 PMID:27066414**

**CS**

**Peedicayil J(1).**

Epigenetic Drugs for Multiple Sclerosis.

Curr Neuropharmacol. 2016;14(1):3-9.

**Author information:**

(1)Department of Pharmacology and Clinical Pharmacology Christian Medical College Vellore India.

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

There is increasing evidence that abnormalities in epigenetic mechanisms of gene expression contribute to the development of multiple sclerosis (MS). Advances in epigenetics have given rise to a new class of drugs, epigenetic drugs. Although many classes of epigenetic drugs are being investigated, at present most attention is being paid to two classes of epigenetic drugs: drugs that inhibit DNA methyltransferase (DNMTi) and drugs that inhibit histone deacetylase (HDACi). This paper discusses the potential use of epigenetic drugs in the treatment of MS, focusing on DNMTi and HDACi. Preclinical drug trials of DNMTi and HDACi for the treatment of MS are showing promising results. Epigenetic drugs could improve the clinical management of patients with MS.

**INTL**

**PMCID: PMC4787283 PMID:26813117**

**CS**

**Peter JV(1),** Varghese GH, Alexander H, Tom NR, Swethalekshmi V, Truman C, KumarTR, Sivakumar T.

Patterns of Adverse Drug Reaction in the Medical Wards of a Teaching Hospital: A Prospective Observational Cohort Study.

Curr Drug Saf. 2016;11(2):164-71.

**Author information:**

(1)Christian Medical College Hospital, Vellore 632 004, India. [peterjohnvictor@yahoo.com.au](mailto:peterjohnvictor@yahoo.com.au).

**INTRODUCTION:** According to the World Health Organization (WHO) definition, an Adverse Drug Reaction (ADR) is a response to a drug that is noxious and unintended and occurs at doses normally used in humans for the prophylaxis, diagnosis, and treatment of disease. The risk factors of ADR are multi-factorial and include poly-pharmacy, age, gender, race, genetics and inter-current disease. **PATIENTS AND METHODS:** This was a hospital based, prospective, observational cohort study undertaken in a tertiary care hospital in south India to assess the different patterns of adverse drug reaction in medical wards over 6 months. The

severity of ADR was assessed using Hartwig Siegel scale and causality by Naranjo and WHO UMC Scale. Preventability was assessed using Schumock and Thornton scale and other parameters such as incidence, onset, duration, management and outcome were also assessed. Risk factors were assessed by bi-variate logistic regression analysis and length of hospital stay by T test. **RESULTS:** The incidence of ADR was 10.42% in medicine wards. The causality of ADR done by Naranjo scale showed that most of the ADRs were probable (7.38%). Anti-tubercular agents were the leading cause of ADR. Duration of hospitalization was significantly longer ( $7.18 \pm 2.64$  vs.  $5.06 \pm 2.13$  days) in patients with ADR (Odds ratio 1.38, 95% Confidence interval 1.26 to 1.51). 7.28% of ADRs were moderately severe. Seriousness criteria assessment showed that 0.33% were serious reactions. Most of the ADRs were definitely preventable. Most of the ADRs were managed by discontinuing the suspected drug. The present study showed female gender predominance over males for ADRs and no relationship with age. **CONCLUSION:** Adverse drug reactions impose significant burden on hospitals through prolonging patient stay and by increasing admission rates. The occurrence of ADR in this study was higher when compared to that reported in previous studies. This study highlights the importance of ADR reporting among ADR reporting among health care professionals in hospital.

**INTL**

**PMID:26916785**

**CS**

**Pradhan ZS(1),** Braganza A, Abraham LM.

Does the ISNT Rule Apply to the Retinal Nerve Fiber Layer?

J Glaucoma. 2016 Jan;25(1):e1-4. doi: 10.1097/IJG.0000000000000064.

**Author information:**

(1)Christian Medical College, Vellore, Tamil Nadu, India.

**PURPOSE:** To determine whether the ISNT rule (Inferior>Superior>Nasal>Temporal) or the "IST" rule (Inferior>Superior>Temporal) can be applied to the peripapillary retinal nerve fiber layer (RNFL) thickness as measured using Heidelberg Retinal Tomography (HRT) and Optical Coherence Tomography (OCT). **MATERIALS AND METHODS:** This was a cross-sectional study of 189 normal and 42 glaucomatous eyes. RNFL thicknesses measured in different quadrants using HRT and OCT were compared to determine the percentage

of eyes obeying the ISNT and IST rule. RESULTS: The HRT-measured mean RNFL thickness in normal eyes showed that 25.9% obeyed the ISNT rule and 70.4% conformed to the "IST" rule. The "IST" rule was able to identify normal eyes better ( $P=0.040$ ), but had a poor sensitivity (45%) and specificity (70%) to diagnose glaucoma. The OCT-measured average RNFL thickness showed that 47.1% of normal eyes obeyed the ISNT rule and 58.7% conformed to the "IST" rule. Exclusion of the nasal sector also increased the number of glaucomatous eyes conforming to the IST rule (31% obeyed the ISNT rule and 50% obeyed the IST rule). Sensitivities and specificities of the ISNT and the IST rules for OCT-quantified RNFL ranged from 42% to 77%. CONCLUSIONS: A larger number of normal eyes obeyed the IST rule compared with the ISNT rule for the RNFL thickness measured by HRT and OCT. Exclusion of the nasal sector from the analysis (IST rule) marginally improved the specificity in diagnosing glaucoma at the cost of the sensitivity, making neither of these parameters (ISNT and IST) likely to be useful clinically. DOI: 10.1097/IJG.0000000000000064

INTL

PMID:24777047

CS

**Rab C(1), Vignesh(1), S S(1), T D(1).**  
Varicella encephalitis - Case series.  
J Assoc Physicians India. 2016 Jan;64(1):57.

**Author information:**

(1)Christian Medical College, Vellore.

NAT

PMID:27727781

CS

**Rajamani B(1), Kumar Y(2), Rahman SM(2).**  
Neuroleptic malignant syndrome.  
J Family Med Prim Care. 2016 Jan-Mar;5(1):178-80.  
doi: 10.4103/2249-4863.184660.

**Author information:**

(1)Low-Cost Effective Care Unit, CMC, Vellore, Tamil Nadu, India. (2)Department of Family Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

Neuroleptic malignant syndrome (NMS) is a life-threatening emergency that is often seen as a complication of antipsychotic agents. It is characterized by a tetrad of motor, behavioral, autonomic, and laboratory abnormalities. We report a case of a 34-year-old man with a history of newly diagnosed Type 2 diabetes mellitus, mental retardation, and behavioral abnormalities who developed NMS after starting on antipsychotic agents. He presented with high temperature, muscle rigidity, tachycardia, and elevated blood pressure. After a week

of hospital treatment in the general ward of a secondary care unit, he was discharged in a hemodynamically and mentally stable state. DOI: 10.4103/2249-4863.184660

NAT

PMCID: PMC4943133 PMID:27453870

CS

**Rajshekhhar V(1).**

History of neurosurgery at Christian Medical College, Vellore: A pioneer's tale.  
Neurol India. 2016 Mar-Apr;64(2):297-310. doi: 10.4103/0028-3886.177625.

**Author information:**

(1)Department of Neurological Sciences, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

The Department of Neurological Sciences at Christian Medical College (CMC), Vellore was the first department to start neurosurgical and neurological services in India. Jacob Chandy started the department in 1949 against several odds. He started a formal training program in neurosurgery in 1958, for the first time in India, and went on to qualify several neurosurgeons, who in turn pioneered neurosurgical departments all over India. After 1970, K V Mathai and Jacob Abraham guided the department through some difficult times when there was a severe shortage of personnel and no faculty in the neurology section. Through their commitment and hard work, they continued not only the neurosurgery service but also looked after patients with neurological disorders. Mathew J Chandy, son of Jacob Chandy, joined them in 1980 and introduced micro-neurosurgery and several other neurosurgical techniques. Training of residents in micro-neurosurgery began in the early 1980s. The last quarter of a century has been a period of rapid progress for neurosurgery at CMC. There has been an exponential rise in the number of surgeries, number of residents and number of publications. Research has always been an integral part of the activities of the department and several high impact articles have been published by the faculty and residents. The neurosurgical faculty at CMC has also contributed significantly to organized neurosurgery in India and internationally, with five of them serving as President of the Neurological Society of India, a society which had Jacob Chandy as its founder President. With this heritage, the neurosurgery section at CMC, Vellore is likely to continue to provide high quality ethical neurosurgical care to patients from all over India and overseas. DOI: 10.4103/0028-3886.177625

NAT

PMID:26954810

CS

**Reji KK(1)**, Mathew V(1), Zachariah A(2), Patil AK(1), Hansdak SG(2), Ralph R(2), Peter JV(3).

Extrapyramidal effects of acute organophosphate poisoning.

Clin Toxicol (Phila). 2016 Mar;54(3):259-65. doi: 10.3109/15563650.2015.1126841. Epub 2016 Jan 6.

#### Author information:

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**BACKGROUND:** There is limited information on extrapyramidal symptoms in acute organophosphate (OP) poisoning. We describe the course and outcome of severely poisoned patients who develop extrapyramidal manifestations. **METHODS:** In this prospective observational study, spanning 8 months (Apr-Nov 2013) adult patients (>18 years) admitted with OP poisoning were enrolled. Patients on anti-psychotic therapy, those refusing consent or presenting with co-ingestions were excluded. Treatment included atropine and supportive care (e.g. ventilation and inotropes as indicated); oximes were not administered. The presence of rigidity, tremors, dystonia and chorea were assessed daily till discharge using modifications of the Unified Parkinson's Disease rating scale and the Tremor rating scale. The presence of extrapyramidal manifestations was correlated with length of ventilation and hospital stay and mortality. **RESULTS:** Of the 77 patients admitted with OP poisoning, 32 were enrolled; 17 (53.1%) developed extrapyramidal manifestations which included rigidity (94.1%), tremors (58.8%) and dystonia (58.8%). None developed chorea. The median (inter-quartile range) time of symptom onset was 8 (5-11) days; extrapyramidal features resolved in 11 (6-17) days. The median duration of intensive care stay in patients not developing extrapyramidal symptoms was 6 (2-8) days, indicating that most of these patients had recovered even before symptom onset in patients who developed extrapyramidal manifestations. Overall, 27/32 (84%) were ventilated. Hospital mortality was 6.25% (2/32). When compared with patients not developing extrapyramidal signs, those with extrapyramidal manifestations had significantly prolonged ventilation (5 versus 16 median days;  $p = 0.001$ ) and hospitalization (8 versus 21 days;  $p < 0.001$ ), reduced ventilator-free days (23 versus 12 days;  $p = 0.023$ ) and increased infections ( $p = 0.03$ ). The need for ventilation and mortality

were not significantly different ( $p > 0.6$ ). Extrapyramidal symptoms were not observed in non-OP poisoned patients with prolonged ICU stay. **CONCLUSION:** In this small series of acute OP poisoning, extrapyramidal manifestations were common after 1 week of intensive care but self-limiting. They are significantly associated with longer duration of ventilation and hospital stay. DOI: 10.3109/15563650.2015.1126841

INTL

PMID:26735571

CS

**Rekha BM(1)**, Chandramohan A(2), Chandran BS(3), Jayaseelan V(4), Suganthy J(5).

Contrast Enhanced Computed Tomographic Study on the Prevalence of Duodenal Diverticulum in Indian Population.

J Clin Diagn Res. 2016 Apr;10(4):AC12-5. doi: 10.7860/JCDR/2016/17582.7649. Epub 2016 Apr 1.

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**INTRODUCTION:** Duodenal diverticulum (DD) is the second most common diverticulum, yet its incidence varies widely from 1-22% based on the mode of investigation. Computed Tomography (CT) of abdomen is the preferred modality to diagnose acute abdomen including those of complications of DD. Moreover, the prevalence of DD in Indian population is not yet been studied using CT. **AIM:** The current study aim to look for the prevalence of DD in Indian population using Contrast Enhanced Computed Tomography (CECT) abdomen. **MATERIALS AND METHODS:** A retrospective study was done to assess the presence of DD using the CECT abdomen of 565 patients. The number, size, location, wall thickness and the contents of the diverticulum were noted. The data obtained was analysed using SPSS version 17.0. The mean, percentage of frequency of each variable and the association of DD with pancreatitis, cholelithiasis and colonic diverticulum were also looked for. Frequencies and percentages were calculated for all categorical variables. Spearman's rho correlation was done

for age, diameter and content of DD. RESULTS: The prevalence of DD in Indian population was 8.3% with the mean diameter of 17.13mm+7.26. The prevalence increased with age with no sex predilection. 89.3% were solitary and 10.64% were multiple. It was predominantly seen in the second part of duodenum (90.38%) and juxtapapillary type was the commonest. As the diameter of DD increased, fluid became its content. No significant association was observed between the presence of DD with pancreatitis, cholelithiasis or colonic diverticulum. A case of periampullary carcinoma arising from DD, a rare entity is being reported in this study. CONCLUSION: The prevalence of DD in Indian population is high compared to western population. DD has been attributed to the cases of acute abdomen and fluid alone as a content of DD with an incidence of 1.92% can be mistaken for a cystic neoplasm of pancreas. Rarely, a periampullary carcinoma can also arise from the wall of the pre-existing DD. This knowledge should be emphasised upon by the radiologist, surgeons and gastroenterologist who will be dealing with cases of acute abdomen and periampullary carcinoma. DOI: 10.7860/JCDR/2016/17582.7649

**NAT**

**PMCID: PMC4866084 PMID:27190786**

**CS**

**Rouhani S**, Peñataro Yori P, Paredes Olortegui M, Siguan Salas M, Rengifo Trigos D, Mondal D, Bodhidatta L, Platts-Mills J, Samie A, Kabir F, Lima A, Babji S, Mason CJ, Kalam A, Bessong P, Ahmed T, Mduma E, Bhutta ZA, Lima I, Ramdass R, Lang D, George A, Zaidi AK, Kang G, Houpt E, Kosek MN; Etiology, Risk Factors, and Interactions of Enteric Infections and Malnutrition and the Consequences for Child Health and Development Project (MAL-ED) Network Investigators.

Collaborators: Olotegui MP, Chavez CB, Trigos DR, Flores JT, Vasquez AO, Pinedo SR, Acosta AM, Ahmed I, Alam D, Ali A, Bhutta ZA, Qureshi S, Rasheed M, Soofi S, Turab A, Yousafzai AK, Zaidi AK, Bodhidatta L, Mason CJ, Babji S, Bose A, Jennifer MS, John S, Kang G, Kaki S, Koshy B, Muliylil J, Raghava MV, Ramachandran A, Rose A, Sharma SL, Thomas RJ, Pan W, Ambikapathi R, Carreon D, Charu V, Dabo L, Doan V, Graham J, Hoest C, Knobler S, Lang D, McCormick B, McGrath M, Miller M, Mohale A, Nayyar G, Psaki S, Rasmussen Z, Richard SA, Seidman JC, Wang V, Blank R, Gottlieb M, Tountas KH, Amour C, Mduma E, Swema BM, Yarrot L, Nshama R, Ahmed T, Ahmed AM, Tofail F, Haque R, Hossain I, Islam M, Mahfuz M, Mondal D, Chandyo RK, Shrestha PS, Shrestha R, Ulak M, Black R, Caulfield L, Checkley W, Chen P, Kosek M, Lee G, Yori PP, Murray-Kolb LE, Schaefer B, Pendergast L, Abreu C, Havt A, Costa H, Di Moura A, Filho JQ, Leite Á, Lima A,

Lima N, Lima I, Maciel B, Moraes M, Mota F, Oriá R, Quetz J, Soares A, Patil CL, Bessong P, Mahopo C, Maphula A, Nesamvuni C, Nyathi E, Samie A, Barrett L, Gratz J, Guerrant R, Houpt E, Petri W, Scharf R, Platts-Mills J, Shrestha B, Shrestha SK, Strand T, Svensen E.

Norovirus Infection and Acquired Immunity in 8 Countries: Results From the MAL-ED Study.

*Clin Infect Dis.* 2016 May 15;62(10):1210-7. doi: 10.1093/cid/ciw072. Epub 2016 Mar 24.

Johns Hopkins School of Public Health, and 2 Johns Hopkins University, Baltimore, Maryland; 3 A.B. PRISMA, Iquitos, Peru; 4 International Centre for Diarrhoeal Disease Research, Bangladesh (icDDR), Dhaka; 5 Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand; 6 University of Virginia, Charlottesville; 7 University of Venda, Thohoyandou, South Africa; 8 Aga Khan University, Naushahro Feroze, Pakistan; 9 Universidade Federal do Ceará, Fortaleza, Brazil; 10 Christian Medical College, Vellore, India; 11 Haydom Lutheran Hospital, Haydom, Tanzania; and 12 Foundation for the National Institutes of Health, Bethesda, Maryland

**BACKGROUND:** Norovirus is an important cause of childhood diarrhea. We present data from a longitudinal, multicountry study describing norovirus epidemiology during the first 2 years of life. **METHODS:** A birth cohort of 1457 children across 8 countries contributed 7077 diarrheal stools for norovirus testing. A subset of 199 children contributed additional asymptomatic samples (2307) and diarrheal stools (770), which were used to derive incidence rates and evaluate evidence for acquired immunity. **RESULTS:** Across sites, 89% of children experienced at least 1 norovirus infection before 24 months, and 22.7% of all diarrheal stools were norovirus positive. Severity of norovirus-positive diarrhea was comparable to other enteropathogens, with the exception of rotavirus. Incidence of genogroup II (GII) infection was higher than genogroup I and peaked at 6-11 months across sites. Undernutrition was a risk factor for symptomatic norovirus infection, with an increase in 1 standard deviation of length-for-age z score associated with a 17% reduction (odds ratio, 0.83 [95% confidence interval, .72-.97];  $P = .011$ ) in the odds of experiencing diarrhea when norovirus was present, after accounting for genogroup, rotavirus vaccine, and age. Evidence of acquired immunity was observed among GII infections only: Children with prior GII infection were found to have a 27% reduction in the hazard of subsequent infection (hazard ratio, 0.727;  $P = .010$ ). **CONCLUSIONS:** The high prevalence of norovirus across 8 sites in

highly variable epidemiologic settings and demonstration of protective immunity for GII infections provide support for investment in vaccine development. © The Author 2016. Published by Oxford University Press for the Infectious Diseases Society of America. DOI: 10.1093/cid/ciw072

**INTL**

**PMCID: PMC4845786 PMID:27013692**

**CS**

**Roy AC(1), Albert S(2), Gouse M(1), Inja DB(1).**

Functional outcome of knee arthrodesis with a monorail external fixator.

Strategies Trauma Limb Reconstr. 2016 Apr;11(1):31-5. doi:10.1007/s11751-016-0247-5. Epub 2016 Feb 20.

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Several methods for obtaining knee arthrodesis have been described in the literature and world; over, the commonest cause for arthrodesis is a failed arthroplasty. Less commonly, as in this series, post-infective or traumatic causes may also require a knee fusion wherein arthroplasty may not be indicated. We present salient advantages along with the radiological and functional outcome of twenty four patients treated with a single monorail external fixator. All patients went on develop fusion at an average of 5.4 months with an average limb length discrepancy of 3 cm (1.5-6 cm). Improvements in functional outcome as assessed by the lower extremity functional score (LEFS), and the SF-36 was significant ( $p = 0.000$ ). Knee arthrodesis with a single monorail external fixator is a reasonable single-staged salvage option in patients wherein arthroplasty may not be the ideal choice. The outcome, though far from ideal, is definitely positive and predictable. DOI: 10.1007/s11751-016-0247-5

**INTL**

**PMCID: PMC4814381 PMID:26897382**

**CS**

**Sarkar S(1), Nair BR(1), Rajshekhar V(1).**

Complications following central corpectomy in 468 consecutive patients with degenerative cervical spine disease.

Neurosurg Focus. 2016 Jun;40(6):E10. doi: 10.3171/2016.3.FOCUS1638.

**Author information:**

(1)Department of Neurological Sciences, Christian Medical College, Vellore, India.

**OBJECTIVE** This study was performed to describe the incidence and predictors of perioperative complications following central corpectomy (CC) in 468 consecutive patients with cervical spondylotic myelopathy (CSM) or ossification of the posterior longitudinal ligament (OPLL). **METHODS** The authors performed a retrospective review of a cohort of patients who had undergone surgery for CSM ( $n = 338$ ) or OPLL ( $n = 130$ ) performed by a single surgeon over a 15-year period. All patients underwent uninstrumented CC with autologous iliac crest or fibular strut grafting. Preoperative clinical and imaging details were collected, and the type and incidence of complications were studied. Univariate and multivariate analyses were performed to establish risk factors for the development of perioperative complications. **RESULTS** Overall, 12.4% of patients suffered at least 1 complication following CC. The incidence of major complications was as follows: C-5 radiculopathy, 1.3%; recurrent laryngeal nerve injury, 0.4%; dysphagia, 0.8%; surgical-site infection, 3.4%; and dural tear, 4.3%. There was 1 postoperative death (0.2%). On multivariate analysis, patients in whom the corpectomy involved the C-4 vertebral body (alone or as part of multilevel CC) were significantly more likely to suffer complications ( $p = 0.004$ ). OPLL and skip corpectomy were risk factors for dural tear ( $p = 0.015$  and  $p = 0.001$ , respectively). No factors were found to be significantly associated with postoperative C-5 palsy, dysphagia, or acute graft extrusion on univariate or multivariate analysis. Patients who underwent multilevel CC were predisposed to surgical-site infections, with a slight trend toward statistical significance ( $p = 0.094$ ). The occurrence of a complication after surgery significantly increased the mean duration of postoperative hospital stay from  $5.0 \pm 2.3$  days to  $8.9 \pm 6$  days ( $p < 0.001$ ). **CONCLUSIONS** Complications following CC for CSM or OPLL are infrequent, but they significantly prolong hospital stay. The most frequent complication following CC is dural tear, for which a diagnosis of OPLL and a skip corpectomy are significant risk factors. DOI: 10.3171/2016.3.FOCUS1638

**INTL**

**PMID:27246480**

**CS**

**Sarkar S(1), Rajaratnam S(2), Chacko G(3), Mani S(4), Hesargatta AS(2), ChackoAG(5).**

Pure endoscopic transsphenoidal surgery for functional pituitary adenomas: outcomes with Cushing's disease. Acta Neurochir (Wien). 2016 Jan;158(1):77-86; discussion 86.

doi:10.1007/s00701-015-2638-7. Epub 2015 Nov 17.

#### Author information:

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**BACKGROUND:** This study was performed to examine patient outcomes following pure endoscopic transsphenoidal surgery (ETS) for Cushing's disease (CD). **METHOD:** We studied 64 consecutive patients who underwent 69 endoscopic transsphenoidal procedures. Radiological evaluation comprised detailed examination of preoperative magnetic resonance images (MRI), including positron emission tomography (PET) for select cases. Inferior petrosal sinus sampling (IPSS) was not performed for any patient. Remission was defined by the presence of hypocortisolemia with requirement for steroid replacement therapy or eucortisolemia with suppression to  $<1.8 \mu\text{g}/\text{dl}$  after 1 mg dexamethasone on evaluation at least 3 months after surgery. **RESULTS:** Preoperative MRI was abnormal in 87.5 % of cases and included 11 macroadenomas (17.2 %). PET was used to localize the adenoma in four cases. For microadenomas, operative procedures executed were as follows: selective adenomectomy (n = 15), enlarged adenomectomy (n = 21) and subtotal/hemihypophysectomy (n = 17). Overall, pathological confirmation of an adenoma was possible in 58 patients (90.6 %). Forty-nine patients (76.6 %) developed hypocortisolemia ( $<5 \mu\text{g}/\text{dl}$ ) in the early postoperative period. Mean follow-up was 20 months (range 6-18 months). Remission was confirmed in 79.7 % of the 59 cases followed up for  $>3$  months and was superior for microadenomas (86.4 %) versus macroadenomas (55.6 %) and equivocal MRI adenomas (66.7 %). Postoperative CSF rhinorrhea occurred in five patients, and new endocrine deficits were noted in 17.1 % patients. A nadir postoperative cortisol  $<2 \mu\text{g}/\text{dl}$  in the 1st week after surgery was highly predictive of remission ( $p = 0.001$ ). **CONCLUSION:** ETS allows for enhanced intrasellar identification of adenomatous tissue, providing remission rates that are comparable to traditional microsurgery for CD. The best predictor of remission remains induction of profound Hypocortisolemia in the early postoperative period. DOI: 10.1007/s00701-015-2638-7

**INTL**

**PMID:**26577636

**CS**

**Sasi PK(1), Mahapatra S(1), Raj Pallapati SC(1), Thomas BP(1).**

Acute Traumatic Musculotendinous Avulsion of the Flexor Pollicis Longus Tendon Treated with Primary Flexor Digitorum Superficialis Transfer: A Novel Technique of Management.

Case Rep Orthop. 2016;2016:2106203. doi: 10.1155/2016/2106203. Epub 2016 Feb 25.

#### Author information:

(1)Dr. Paul Brand Center for Hand Surgery, Christian Medical College and Hospital, Vellore 632004, India.

Traumatic musculotendinous junction avulsions are rare injuries except in avulsion amputations. They pose a significant challenge to the treating surgeon. We present a 24-year-old male who sustained an open musculotendinous avulsion of the flexor pollicis longus tendon. He was treated with primary tendon transfer using the flexor digitorum superficialis of ring finger, in flexor zone 3. The functional result at 10 months following surgery was excellent. DOI: 10.1155/2016/2106203

**INTL**

**PMCID:** PMC4785255 **PMID:**27019757

**CS**

**Sathyakumar K(1), Chandramohan A(1), Masih D(2), Jesudasan MR(3), Pulimood A(2), Eapen A(1).** Best MRI predictors of complete response to neoadjuvant chemoradiation in locally advanced rectal cancer.

Br J Radiol. 2016;89(1060):20150328. doi: 10.1259/bjr.20150328. Epub 2016 Feb 1.

#### Author information:

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**OBJECTIVE:** To identify the MRI parameters which best predict complete response (CR) to neoadjuvant chemoradiotherapy (CRT) in patients with locally advanced rectal cancer (LARC) and to assess their diagnostic performance. **METHODS:** This was a prospective study of pre- and post-CRT MRI and diffusion-weighted imaging (DWI) of 64

patients with LARC who underwent neoadjuvant CRT and subsequent surgery. Histopathological tumour regression grade was the reference standard. Multivariate regression analysis was performed to identify the best MRI predictors of CR to neoadjuvant CRT, and their diagnostic performance was assessed. RESULTS: The study cohort comprised 48 males and 16 females (n = 64), with mean age of 49.48 ± 14.3 years, range of 23-74 years. 11 patients had pathological complete response. The following factors predicted CR on univariate analysis: low initial (pre-CRT) tumour volume on T2 weighted high-resolution (HR) images and DWI, tumour volume-reduction rate (TVRR) of >95% on DWI and CR on post-CRT DWI (ydwIT0) as assessed by the radiologist. However, the best MRI predictors of CR on multivariate regression analysis were CR on post-CRT DWI (ydwIT0) as assessed by the radiologist and TVRR of >95% on DWI, and these parameters had an area under the curve (95% confidence interval) of 0.881 (0.74-1.0) and 0.843 (0.7-0.98), respectively. The sensitivity, specificity, positive-predictive value, negative-predictive value and accuracy of DWI in predicting CR was 81.8%, 94.3%, 75%, 96.1% and 76%; the sensitivity, specificity and accuracy of TVRR of >95% as a predictor of CR was 80%, 84.1% and 64.1%, respectively; however, this difference was not statistically significant. The interobserver agreement was substantial for ydwIT0. CONCLUSION: Visual assessment of CR on post-CRT DWI and TVRR of >95% on DWI were the best predictors of CR after neoadjuvant CRT in patients with LARC, and the former being more practical can be used in daily practice. ADVANCES IN KNOWLEDGE: In rectal cancer, ydwIT0 as assessed by the radiologist was the best and most practical imaging predictor of CR and scores over standard T2W HR images. DOI: 10.1259/bjr.20150328

**INTL****PMCID: PMC4846192 PMID:26828967****CS****Sekharappa V(1), Sait A(1).**

Simple and Economical Method to Create Thoracolumbar Burst Fracture in a Calf Spine Model.

Asian Spine J. 2016 Feb;10(1):6-13. doi: 10.4184/asj.2016.10.1.6. Epub 2016 Feb 16.

**Author information:**

(1)Spinal Disorder Surgery Unit, Department of Orthopaedics, Christian Medical College, Vellore, India.

STUDY DESIGN: Calf spine model study. PURPOSE: To describe a technique of creating thoracolumbar burst fractures in calf spine model by low weight drop weight. OVERVIEW OF LITERATURE: Burst fractures are one of the commonest types of thoracolumbar

fractures and their treatment is controversial. Biomechanical studies aid in the decision of treatment of these fractures. A simple method of creation of burst fractures would help these biomechanical studies. METHODS: Ten specimens of thoracolumbar spines harvested from 6-8 week old calves were weakened at the target vertebra by standardized osteotomy cuts. Burst fractures were created by dropping a 5-kg of weight from a height of 1.2 m using an in-house device. An accelerometer attached to the weight measured the acceleration at the point of impact. RESULTS: Average weight and bone mineral density of the specimens was 390 g and 0.67 g/cm<sup>2</sup>, respectively. Computed tomography scan analysis of the fractures revealed McCormack grade 2 and grade 3 fractures in 5 and 3 specimens, respectively, Dennis type 2B in 4, type 2A burst fractures in 5 specimens and fracture dislocation in 1 specimen, AO type A3.1.1 in 4 specimens, type A3.2.2 in 4 and type A3.3.3 in 2 specimens. Vertical laminar split fracture was seen in 6 specimens. Average acceleration and energy at impact was 9.04 m/sec and 54.24 Nm, respectively. CONCLUSIONS: We describe a technique to create thoracolumbar burst fractures in calf spine by a drop weight method using a device that is simple to operate and easy to construct. The method is consistent and produces fractures similar to those occurring naturally, and can be considered as an alternative method for creating burst fractures in biomechanical studies. DOI: 10.4184/asj.2016.10.1.6

**INTL****PMCID: PMC4764542 PMID:26949452****CS****Shekhar S(1), Gupta N(2), Kirubakaran R(3), Pareek P(4).**

Oral nifedipine versus intravenous labetalol for severe hypertension during pregnancy: a systematic review and meta-analysis.

BJOG. 2016 Jan;123(1):40-7. doi: 10.1111/1471-0528.13463. Epub 2015 Jun 26.

**Author information:**

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STUDY DESIGN: Calf spine model study. PURPOSE: To describe a technique of creating thoracolumbar burst fractures in calf spine model by low weight drop weight. OVERVIEW OF LITERATURE: Burst fractures are one of the commonest types of thoracolumbar

**Comment in**

BJOG. 2016 Jan;123(1):48.

**BACKGROUND:** Oral nifedipine is recommended along with labetalol and hydralazine for treatment of severe hypertension during pregnancy by most authorities. Although nifedipine is cheap and easily administered, the usage pattern among health care providers suggests a strong preference for labetalol despite lack of evidence for the same. **OBJECTIVES:** To determine the efficacy and safety of oral nifedipine for treatment of severe hypertension of pregnancy compared with intravenous labetalol. **SEARCH STRATEGY:** We systematically searched for articles comparing oral nifedipine with intravenous labetalol for the treatment of severe hypertension during pregnancy in any language, over Medline, Cochrane Central Register of Clinical Trials and Google Scholar from inception till February 2014. **SELECTION CRITERIA:** We included all RCTs that compared intravenous labetalol with oral nifedipine for treatment of severe hypertension during pregnancy, addressing relevant efficacy and safety outcomes. **DATA COLLECTION AND ANALYSIS:** Eligible studies were reviewed, and data were extracted onto a standard form. We used Cochrane review manager software for quantitative analysis. Data were analysed using a fixed effect model. **MAIN RESULTS:** The pooled analysis of seven trials (four from developing countries) consisting of 363 woman-infant pairs showed that oral nifedipine was associated with less risk of persistent hypertension (RR 0.42, 95% CI 0.18-0.96) and reported maternal side effects (RR 0.57, 95% CI 0.35-0.94). However, on sensitivity analysis the outcome 'persistent hypertension' was no longer significant. Other outcomes did not reach statistical significance. **CONCLUSION:** Oral nifedipine is as efficacious and safe as intravenous labetalol and may have an edge in low resource settings. **TWEETABLE ABSTRACT:** Although studies to date are few in number and small, nifedipine shows promise for severe hypertension in pregnancy. © 2015 Royal College of Obstetricians and Gynaecologists. DOI: 10.1111/1471-0528.13463

INTL

PMID:26113232

CS

**Simon EG(1), Ghosh S(2), Iacucci M(2), Moran GW(3).** Ustekinumab for the treatment of Crohn's disease: can it find its niche? *Therap Adv Gastroenterol.* 2016 Jan;9(1):26-36. doi: 10.1177/1756283X15618130.

**Author information:**

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Calgary, Alberta, Canada. (3)NIHR Biomedical Research Unit in Gastrointestinal and Liver Diseases, Nottingham University Hospitals NHS Trust and The University of Nottingham, Nottingham, UK.

Crohn's disease is an immune-mediated disease that results in panenteric chronic inflammation in genetically predisposed individuals exposed to an appropriate environment. The past two decades have witnessed the emergence of an important class of drugs known as anti-tumour necrosis factor (TNF) agents in the treatment of Crohn's disease. Unfortunately, the utility of these agents have been hampered by primary and secondary nonresponse in a significant proportion of patients. Ustekinumab, a monoclonal antibody to the p40 subunit of interleukin (IL) 12 and 23, is a novel pharmacotherapy for this patient cohort that offers an out-of-class option. It is approved for use in psoriasis and psoriatic arthritis, and has now been evaluated in phase II trials for moderate-to-severe Crohn's disease. We here review the published literature and describe a potential clinical role for its use in this disease cohort. DOI: 10.1177/1756283X15618130

INTL

PMCID: PMC4699281 PMID:26770265

CS

**Simon SS(1), Charlu AP(1), Chacko RK(2), Kumar S(3).**

A Novel Technique To Correct Multiplanar Maxillary Hypoplasia.

*J Clin Diagn Res.* 2016 Apr;10(4):ZD09-11. doi: 10.7860/JCDR/2016/16599.7639. Epub2016 Apr 1.

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Dental malocclusion and facial deformity are frequent observations in patients with clefts of the orofacial region. These patients have a low self perception secondary to their aesthetic appearance. Cleft palate patients are further affected in their speech and oral function with direct impediment to their quality of life. Early identification and treatment in cleft lip and palate patients may directly enhance their overall well being and productivity with sustainable prognosis

when managed by skilled and evidence informed operators. We present a successful case management of a patient with a cleft palate and dentofacial deformity with a past surgical history, treated with an anterior maxillary advancement osteotomy, stabilized with an interpositional non vascular iliac bone graft. The posterior open bite was corrected using overlay full coverage crowns. Both these techniques are rarely reported in the literature. The procedure positively improved the quality of life in our patient with regards to her aesthetics, speech and function. This treatment approach could be considered in similar cases to achieve predictable outcomes. DOI: 10.7860/JCDR/2016/16599.7639

**NAT**

**PMCID: PMC4866264 PMID:27190966**

**CS**

**Sivadasan A(1), Muthusamy K(1), Patil AK(1), Mathew V(1), Alexander M(2).**

**Pearls & Oy-sters: Mitochondrial neurogastrointestinal encephalomyopathy:Diagnosis and response to peritoneal dialysis.**

**Neurology. 2016 Apr 5;86(14):e147-50. doi: 10.1212/WNL.0000000000002536.**

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DOI: 10.1212/WNL.0000000000002536

**INTL**

**PMID:27044617**

**CS**

**Sivaraju L(1), Mani S(2), Prabhu K(3), Daniel RT(3), Chacko AG(3).**

**Three-dimensional computed tomography angiographic study of the vertebral artery in patients with congenital craniovertebral junction anomalies.**

**Eur Spine J. 2016 May 2. [Epub ahead of print]**

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**PURPOSE:** To describe vertebral artery (VA) course at the C0-C1-C2 complex in patients with congenital bony craniovertebral junction (CVJ) anomalies. **METHODS:** We studied the course of 169 VAs in 86 patients with congenital bony CVJ anomalies [basilar

invagination (42), os odontoideum (33), and irreducible atlantoaxial dislocation (11)]. Occipitalized atlas occurred in 41 patients (30 complete and 11 partial). Using axial, coronal and sagittal three-dimensional computed tomography (3D-CT) angiograms, we traced the VA bilaterally at the CVJ and correlated the course to the presence or absence of occipitalization of the atlas. **RESULTS:** Of the 73 arteries associated with occipitalization of atlas, all had an abnormal course-58 (78.4 %) coursed through a canal within the C0-C1 fused complex and 15 (20.3 %) coursed below the C1 posterior arch, and it was absent unilaterally in one patient. There were 96 arteries associated with a non-occipitalized atlas and only 15 (15.3 %) were abnormal-eight coursed below the C1 posterior arch, four coursed above the C1 arch in the absence of a C1 foramen transversarium, one passed through a canal in C0-C1 and two arteries were absent unilaterally. Sixty vertebral arteries (34 on the right and 26 on the left side) had a redundant loop situated at a distance of  $\geq 5$  mm from the C1 lateral mass in patients with os odontoideum and irreducible atlantoaxial dislocation. **CONCLUSIONS:** In occipitalization of the atlas, the VA course is usually abnormal-typically passing through a canal within the C0-C1 fused complex or below the C1 arch. A redundant VA loop is more likely to be seen in os odontoideum and irreducible atlantoaxial dislocation. Careful study of the vertebral artery course with 3D CT angiography is mandatory while contemplating CVJ realignment surgery in congenital anomalies of the CVJ. DOI: 10.1007/s00586-016-4580-7

**INTL**

**PMID:27137997**

**CS**

**Sonbare DJ(1), Sitaram V(1).**

**Visible liver metastases.**

**Natl Med J India. 2016 Mar-Apr;29(2):105.**

**Author information:**

(1)Department of HPB Surgery, Christian Medical College, Vellore, Tamil Nadu, India.

**NAT**

**PMID:27586220**

**CS**

**Soumya SV(1), Daniel SS(1), Ashish KG(1), Santosh K(1).**

**Novel Use of Orthosis in a Case of Burn Contracture Microstomia.**

**J Maxillofac Oral Surg. 2016 Jun;15(2):281-4. doi: 10.1007/s12663-015-0830-1.Epub 2015 Aug 19.**

**Author information:**

(1)Christian Medical College & Hospital, Vellore, Tamil Nadu.

AIM: To prevent cicatricial scar formation of the oral commissure post commissuroplasty. METHOD: Bilateral commissuroplasty followed by tooth borne static orthosis and then after dynamic orthosis for a period of one year. CONCLUSION: The use of both static and dynamic orthosis in appropriate sequence resulted in good scar outcome. DOI: 10.1007/s12663-015-0830-1

**NAT**

**PMCID: PMC4871835 PMID:27298555**

**CS**

**Srivastava A**(1), Mason C(2), Wagena E(3), Cuende N(4), Weiss DJ(5), HorwitzEM(6), Dominici M(7).

Part 1: Defining unproven cellular therapies.

Cytotherapy. 2016 Jan;18(1):117-9. doi: 10.1016/j.jcyt.2015.11.004.

**Author information:**

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**INTL**

**PMID:26719202**

**CS**

**Subramaniam J**(1), Eswara S(2), Yesudhasan B(3).

Association of Urinary Tract Infection in Married Women Presenting with UrinaryIncontinence in a Hospital based Population.

J Clin Diagn Res. 2016 Mar;10(3):DC10-3. doi: 10.7860/JCDR/2016/16547.7390. Epub2016 Mar 1.

**Author information:**

(1)Associate Professor, Department of Microbiology, Faculty of Medicine, Northern Border University, Northern Borders, Kingdom of Saudi Arabia. (2)Junior Resident, Department of Microbiology, Saveetha Medical College & Hospital, Saveetha Nagar, Thandalam, Kancheepuram District, Chennai, India. (3)Associate Professor, Department of Microbiology, Christian Medical College, Vellore, India.

**INTRODUCTION:** Urinary incontinence (UI) is increasingly recognized as a significant health problem, which remains a hygienic as well as social problem. Women have higher risk of developing incontinence in their lifetime compared with men. Urinary tract infection can increase the incidence of incontinence. Present study was undertaken to assess the association of UTI in married women who presented with UI. **AIM:** The present study was aimed to identify the patients (married women) with complaints of UI and determining its association with UTI; and to identify the causative organism for the UTI along with its antimicrobial susceptibility pattern. **MATERIALS AND METHODS:** This is a cross-sectional, non-randomized study of 107 married women with UI, who attended outpatient department in our hospital. Mid-stream urine (MSU) samples were collected from these patients with positive history of incontinence. Screening of urine for significant bacteriuria and culture to identify the etiological agents were performed followed by evaluation of their antimicrobial susceptibility profiles using Kirby Bauer disc diffusion method. **RESULTS:** Overall 25.2% of patients with incontinence had a positive urine culture. History of UTI was elicited in around 38.3% of patients, among which 15% had positive urine culture and 10.3% of the patients who did not have a history had positive culture. *Escherichia coli* was the commonest causative organism (66.6) causing UTI, followed by *Enterococcus* spp. (22.3%), *Klebsiella pneumonia* (7.4%) and *Proteus mirabilis* (3.7%). The antimicrobial susceptibility pattern for *Escherichia coli* showed high sensitivity to Nitrofurantoin (94.4%) and high resistance to Ampicillin (94.4%). **CONCLUSION:** Our study revealed one in every four incontinent patients had UTI and almost half of them suffered from previous episodes of UTI. Thus appropriate

correction of the existing UTI can help in the treatment of UI. DOI: 10.7860/JCDR/2016/16547.7390

**NAT**

**PMCID: PMC4843257 PMID:27134871**

**CS**

**Sundar G(1)**, Keshava SN(1), Moses V(1), Chiramel GK(1), Ahmed M(1), Mammen S(1), Aggarwal S(2), Stephen E(2).

Outcomes of catheter-directed treatment of lower extremity deep vein thrombosis of patients presenting to a tertiary care hospital.

Indian J Radiol Imaging. 2016 Jan-Mar;26(1):73-80. doi: 10.4103/0971-3026.178340.

**Author information:**

(1)Department of Radiology, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Vascular Surgery, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND:** Lower extremity deep vein thrombosis (DVT) is a common illness with an annual incidence of 1 per 1000 adults. The major long-term complication of DVT is post-thrombotic syndrome (PTS) which occurs in up to 60% of patients within 2 years of an episode of DVT. **AIMS:** We aim to evaluate the outcomes of catheter-directed treatment (CDT) for symptomatic acute or subacute lower extremity DVT. **MATERIALS AND METHODS:** A retrospective 12-year study was conducted on the outcomes of CDT on 54 consecutive patients who presented with acute or subacute lower extremity DVT to our hospital. **STATISTICAL ANALYSIS:** Descriptive summary statistics and the Chi-square test were used to measure the outcomes of CDT. **RESULTS:** Grade 3 thrombolysis was achieved in 25 (46.3%) patients, grade 2 thrombolysis in 25 (46.3%) patients, and grade 1 thrombolysis in 4 (7.4%) patients. Significant recanalization (grade 2 or 3 thrombolysis) was possible in 50 (92.6%) patients. There was no statistically significant difference in the percentage of significant recanalization that could be achieved between patients who underwent CDT before and after 10 days. There was no significant difference between the thrombolysis achieved between urokinase and r-tPA. PTS was seen in 33% of the patients. Major complications were seen in 5.5% of the patients. **CONCLUSION:** CDT is a safe and effective therapeutic technique in patients with acute and subacute lower extremity DVT, if appropriate patient selection is made. DOI: 10.4103/0971-3026.178340

**NAT**

**PMCID: PMC4813079 PMID:27081228**

**CS**

**Sundaram SC(1)**, Salins SR(2), Kumar AN(3), Korula G(4).

Intra-Operative Fluid Management in Adult Neurosurgical Patients Undergoing Intracranial Tumour Surgery: Randomised Control Trial Comparing Pulse Pressure Variance (PPV) and Central Venous Pressure (CVP).

J Clin Diagn Res. 2016 May;10(5):UC01-5. doi: 10.7860/JCDR/2016/18377.7850. Epub 2016 May 1.

**Author information:**

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**INTRODUCTION:** Fluid management in neurosurgery presents specific challenges to the anaesthesiologist. Dynamic parameters like Pulse Pressure Variation (PPV) have been used successfully to guide fluid management. **AIM:** To compare PPV against Central Venous Pressure (CVP) in neurosurgical patients to assess hemodynamic stability and perfusion status. **MATERIALS AND METHODS:** This was a single centre prospective randomised control trial at a tertiary care centre. A total of 60 patients undergoing intracranial tumour excision in supine and lateral positions were randomised to two groups (Group 1, CVP n=30), (Group 2, PPV n=30). Intra-operative fluid management was titrated to maintain baseline CVP in Group 1 (5-10cm of water) and in Group 2 fluids were given to maintain PPV less than 13%. Acid base status, vital signs and blood loss were monitored. **RESULTS:** Although intra-operative hypotension and acid base changes were comparable between the groups, the patients in the CVP group had more episodes of hypotension requiring fluid boluses in the first 24 hours post surgery. {CVP group median (25, 75) 2400ml (1850, 3110) versus PPV group 2100ml (1350, 2200) p=0.03} The patients in the PPV group received more fluids than the CVP group which was clinically significant. {2250 ml (1500, 3000) versus 1500ml (1200, 2000) median (25, 75) (p=0.002)}. The blood loss was not significantly different between the groups. The median blood loss in the CVP group was 600ml and in the PPV group was 850 ml; p value 0.09. **CONCLUSION:** PPV can be used as a reliable index to guide fluid management in neurosurgical

patients undergoing tumour excision surgery in supine and lateral positions and can effectively augment CVP as a guide to fluid management. Patients in PPV group had better hemodynamic stability and less post operative fluid requirement. DOI: 10.7860/JCDR/2016/18377.7850

**NAT**

**PMCID: PMC4948505 PMID:27437329**

**CS**

**Telugu RB(1)**, Chowhan AK(2), Rukmangadha N(2), Patnayak R(2), Phaneendra BV(3), Prasad BC(4), Reddy MK(3).

Histopathological and Immunohistochemical Evaluation of Meningiomas with Reference to Proliferative Markers p53 and Ki-67.

J Clin Diagn Res. 2016 Jan;10(1):EC15-9. doi: 10.7860/JCDR/2016/15661.7117. Epub 2016 Jan 1.

#### Author information:

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**INTRODUCTION:** Meningiomas are slow growing primary central nervous system (CNS) tumours attached to the duramater, which arise from the meningotheial cells of the arachnoid. Grading of meningioma based on histological findings assisted with supplementary immunohistochemical studies, predicts the prognosis of meningioma with good precision.

**AIM:** To evaluate proliferative markers and correlate with various histological subtypes and grade.

**MATERIALS AND METHODS:** A total of 224 meningiomas, diagnosed between January 1995 and October 2011 were graded according to WHO 2007 criteria. Immunostaining for p53 and Ki-67 markers were performed on 100 cases.

**RESULTS:** There was female predominance. There were 194 Grade I, 24 Grade II and 6 Grade III meningiomas. Brain invasion noted in 18(8%) meningiomas predominantly in grade III followed by grade II. Recurrence was seen in 7 (3.1%) cases, most common in psammomatous followed by angiomatous meningioma. Immunostaining showed p53 positivity in 72.5% of grade I, 83.3% of grade II and all the cases of grade III tumours. Ki-67 Labelling Index (LI) consistently increased from grade I to grade III tumours.

**CONCLUSION:** p53 and Ki-67 LI correlated well with increasing histological grade and biological behaviour of meningioma.

DOI: 10.7860/JCDR/2016/15661.7117

**NAT**

**PMCID: PMC4740600 PMID:26894073**

**CS**

**Tilak M(1)**, Isaac SA(1), Fletcher J(1), Vasanthan LT(1), Subbaiah RS(1), BabuA(1), Bhide R(1), Tharion G(1).

Mirror Therapy and Transcutaneous Electrical Nerve Stimulation for Management of Phantom Limb Pain in Amputees - A Single Blinded Randomized Controlled Trial.

Physiother Res Int. 2016 Jun;21(2):109-15. doi: 10.1002/pri.1626. Epub 2015 Apr 1.

#### Author information:

(1)Christian Medical College, Vellore, 632002, India.

**BACKGROUND AND PURPOSE:** Phantom limb pain (PLP) can be disabling for nearly two thirds of amputees. Hence, there is a need to find an effective and inexpensive treatment that can be self administered. Among the non-pharmacological treatment for PLP, transcutaneous electrical nerve stimulation (TENS) applied to the contralateral extremity and mirror therapy are two promising options. However, there are no studies to compare the two treatments. The purpose of this study is to evaluate and compare mirror therapy and TENS in the management of PLP in subjects with amputation.

**METHODS:** The study was an assessor blinded randomized controlled trial conducted at Physiotherapy Gymnasium of Physical Medicine and Rehabilitation Department, Christian Medical College, Vellore. Twenty-six subjects with PLP consented to participate. An initial assessment of pain using visual analogue scale (VAS) and universal pain score (UPS) was performed by a therapist blinded to the treatment given. Random allocation into Group I-mirror therapy and Group II-TENS was carried out. After 4 days of treatment, pain was re-assessed by the same therapist. The mean difference in Pre and Post values were compared among the groups. The change in pre-post score was analyzed using the paired t test.

**RESULTS:** Participants of Group I had significant decrease in pain [VAS ( p = 0.003) and UPS ( p = 0.001)]. Group II also showed a significant reduction in pain [VAS ( p = 0.003) and UPS ( p = 0.002)]. However, no difference was

observed between the two groups [VAS (  $p = 0.223$  and UPS (  $p = 0.956$ )].

**DISCUSSION:** Both Mirror Therapy and TENS were found to be effective in pain reduction on a short-term basis. However, no difference between the two groups was found. Substantiation with long-term follow-up is essential to find its long-term effectiveness. Copyright © 2015 John Wiley & Sons, Ltd.

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**INTL**

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**CS**

**Turaka VP**(1), Varghese GM(1).

Risk Factors for development of active tuberculosis(TB) in HIV infected individuals.

J Assoc Physicians India. 2016 Jan;64(1):112.

**Author information:**

(1)Christian Medical College and Hospital, Vellore.

**NAT**

**PMID:**27728354

**CS**

**Turel MK**, D'Souza WP, Chacko AG, Rajshekhar V(1).

Giant vestibular schwannomas: Surgical nuances influencing outcome in 179 patients.

Neurol India. 2016 May-Jun;64(3):478-84. doi: 10.4103/0028-3886.181558.

**Author information:**

(1)Department of Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

**INTRODUCTION:** Giant vestibular schwannomas (VSs;  $\geq 4$  cm in size) are considered a separate entity owing to their surgical difficulty and increased morbidity. We studied the clinical presentation and surgical outcomes in a large series of giant VS patients. We also present the surgical nuances, which we believe can improve surgical outcomes.

**MATERIALS AND METHODS:** The clinical profiles, radiology, surgical results, and complications of 179 consecutive patients with a unilateral giant VS were reviewed. The study population was classified into two groups: Group A (4-4.9 cm, 124 [69.3%] patients) and Group B ( $\geq 5$  cm, 55 [30.7%] patients).

**RESULTS:** The mean tumor size in Group A was  $4.3 \pm 0.2$  cm (range, 4-4.8 cm), and in Group B, it was  $5.3 \pm 0.4$  (range, 5-6.7 cm). Patients in Group B were younger, with a mean age at presentation of  $34.8 \pm 12.3$  years versus  $41.8 \pm 13.1$  years in Group A ( $P < 0.05$ ). There was no difference in the clinical presentation except for papilledema (81.8% vs. 66.9%) and VI cranial nerve (CN) dysfunction (9.1% vs. 2.4%;  $P < 0.05$ ), which was higher in Group B. There

was no difference in the rate of total excision (86.2% vs. 85.4%), anatomical and physiological facial nerve preservation rates between the two groups (approximately 2/3 and 1/3, respectively), and the facial function at discharge. The incidence of postoperative morbidity was not statistically different between the two groups, except for the occurrence of postoperative cerebrospinal fluid (CSF) rhinorrhea, which was greater in Group B (10.9% vs. 2.4%). There were two mortalities in each group (overall, 4/179; 2.2%;  $P = 0.58$ ).

**CONCLUSIONS:** Patients with  $\geq 5$ cm VSs were younger, with a higher incidence of papilledema and lateral rectus paresis. However, when compared with tumors  $\geq 4$  cm in size, there was no difference in the extent of excision, facial nerve preservation, and postoperative complications (except CSF rhinorrhea) or mortality. Thus, further subclassification of giant VSs does not seem to be necessary.

DOI: 10.4103/0028-3886.181558

**NAT**

**PMID:**27147157

**CS**

**van den Berg HM**(1), Feldman B(2), Fischer K(3), Blanchette VS(4), Poonnoose P(5), Srivastava A(6).

Reply to the letter of O'Mahoney et al.: Patient-reported outcome is not confined to HRQOL.

Haemophilia. 2016 May;22(3):e209-11. doi: 10.1111/hae.12933. Epub 2016 Apr 14.

**Author information:**

(1)Julius Centre for Health, Sciences and Primary Care University Hospital Utrecht, Utrecht, The Netherlands. (2)The Hospital for Sick Children, Rheumatology; HPME & PHS University of Toronto, Toronto, Ontario, Canada. (3)Van Creveldklinik, UMCU, Utrecht, The Netherlands. (4)Hematology/Oncology, Hospital for Sick Children, Toronto, Ontario, Canada. (5)Flinders Medical Centre, Orthopaedics Christian Medical College, Vellore, TamilNadu, India. (6)Haematology, Christian Medical College, Vellore, TamilNadu, India.

DOI: 10.1111/hae.12933

**INTL**

**PMID:**27076036

**CS**

**Varghese AM**(1), Naina P(2), Cheng AT(3), Asif SK(4), Kurien M(5).

ACE grading-A proposed endoscopic grading system for adenoids and its clinical correlation.

Int J Pediatr Otorhinolaryngol. 2016 Apr;83:155-9. doi:10.1016/j.ijporl.2016.02.002. Epub 2016 Feb 21.

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**OBJECTIVES:** To propose a novel endoscopic adenoid grading system using a rigid nasal endoscope and to study its correlation with the clinical diagnosis.

**METHODOLOGY:** Prerecorded video clips of rigid nasal endoscopy taken during endoscopic adenoidectomy were retrieved. Otolaryngology consultants blinded to the clinical diagnosis of the child were presented these videos and asked to grade the adenoid hypertrophy as per the proposed endoscopic ACE (Airway/Choana/Eustachian tube) grading system. The clinical diagnosis was correlated with the different aspects of the descriptive endoscopic grading system.

**RESULTS:** 152 video clips were presented to the otolaryngology consultants for grading. The average age was 8.6 years (SD-3.48), while the male female ratio was 3:2. The A subcomponent of the ACE grading showed significant correlation with the diagnosis of sleep disordered breathing and chronic adenotonsillitis, C subcomponent with sleep disordered breathing and the E subcomponent with the diagnosis of otitis media.

**CONCLUSION:** The proposed endoscopic grading is easily applicable and at the same time clearly describes the relation of the adenoids to the nasopharynx, choana and Eustachian tube. Different aspects of the grading system correlated differently with the clinical diagnosis emphasizing that a descriptive scoring rather than a comprehensive scoring is a more relevant clinical tool.

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INTL

PMID:26968070

CS

**Varghese J(1)**, James JV(1), Sagi S(1), Chakraborty S(1), Sukumaran A(1), Ramakrishna B(2), Jacob M(1).

Decreased hepatic iron in response to alcohol may contribute to alcohol-induced suppression of hepcidin.

Br J Nutr. 2016 Jun;115(11):1978-86. doi: 10.1017/S0007114516001197. Epub 2016 Apr 15.

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(1)1Department of Biochemistry, Christian Medical College, Vellore, 632002, Tamilnadu, India.

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Hepatic Fe overload has often been reported in patients with advanced alcoholic liver disease. However, it is not known clearly whether it is the effect of alcohol that is responsible for such overload. To address this lacuna, a time-course study was carried out in mice in order to determine the effect of alcohol on Fe homeostasis. Male Swiss albino mice were pair-fed Lieber-DeCarli alcohol diet (20 % of total energy provided as alcohol) for 2, 4, 8 or 12 weeks. Expression levels of duodenal and hepatic Fe-related proteins were determined by quantitative PCR and Western blotting, as were Fe levels and parameters of oxidative stress in the liver. Alcohol induced cytochrome P450E1 and oxidative stress in the liver. Hepatic Fe levels and ferritin protein expression dropped to significantly lower levels after 12 weeks of alcohol feeding, with no significant effects at earlier time points. This was associated, at 12 weeks, with significantly decreased liver hepcidin expression and serum hepcidin levels. Protein expressions of duodenal ferroportin (at 8 and 12 weeks) and divalent metal transporter 1 (at 8 weeks) were increased. Serum Fe levels rose progressively to significantly higher levels at 12 weeks. Histopathological examination of the liver showed mild steatosis, but no stainable Fe in mice fed alcohol for up to 12 weeks. In summary, alcohol ingestion by mice in this study affected several Fe-related parameters, but produced no hepatic Fe accumulation. On the contrary, alcohol-induced decreases in hepatic Fe levels were seen and may contribute to alcohol-induced suppression of hepcidin.

DOI: 10.1017/S0007114516001197

INTL

PMID:27080262

CS

**Varghese VD(1)**, Livingston A(1), Boopalan PR(1), Jepeganam TS(1).

Valgus osteotomy for nonunion and neglected neck of femur fractures.

World J Orthop. 2016 May 18;7(5):301-7. doi: 10.5312/wjo.v7.i5.301. eCollection2016.

**Author information:**

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Nonunion neck of femur can be a difficult problem to treat, particularly in the young, and is associated with high complication rates of avascular necrosis due to the precarious blood supply and poor biomechanics. The various treatment options that have been described can be broadly divided according to the aim of improving either biology or biomechanics. Surgeries aimed at improving the biology, such as vascularized fibula grafting, have good success rates but require high levels of expertise and substantial resources. A popular surgical treatment aimed at improving the biomechanics-valgus intertrochanteric osteotomy-optimizes conditions for fracture healing by converting shear forces across the fracture site into compressive forces. Numerous variations of this surgical procedure have been developed and successfully applied in clinical practice. As a result, the proximal femoral orientation for obtaining a good functional outcome has evolved over the years, and the present concept of altering the proximal femoral anatomy as little as possible has arisen. This technical objective supports attaining union as well as a good functional outcome, since excessive valgus can lead to increased joint reaction forces. This review summarizes the historical and current literature on valgus intertrochanteric osteotomy treatment of nonunion neck of femur, with a focus on factors predictive of good functional outcome and potential pitfalls to be avoided as well as controversies surrounding this procedure.

DOI: 10.5312/wjo.v7.i5.301

**INTL**

**PMCID: PMC4865720 PMID:27190758**

**CS**

**Vaz T(1), Singh G.**

Large-volume Epidural Blood Patch: An Alternative Technique.

J Neurosurg Anesthesiol. 2016 Feb 15. [Epub ahead of print]

**Author information:**

(1)Christian Medical College and Hospital Vellore, Tamil Nadu, India.

DOI: 10.1097/ANA.0000000000000285

**INTL**

**PMID:26886863**

**CS**

**Vedantam A(1), Rajshekhar V(2).**

Clinical adjacent-segment pathology after central corpectomy for cervicalspondylotic myelopathy: incidence and risk factors.

Neurosurg Focus. 2016 Jun;40(6):E12. doi: 10.3171/2016.2.FOCUS1626.

**Author information:**

(1)Department of Neurosurgery, Baylor College of Medicine, Houston, Texas; and. (2)Department of Neurological Sciences, Christian Medical College, Vellore, India.

**OBJECTIVE** The goal of this study was to investigate the prevalence and risk factors of clinical adjacent-segment pathology (CASP) following central corpectomy for cervical spondylotic myelopathy (CSM) or ossification of the posterior longitudinal ligament (OPLL). **METHODS** The authors reviewed 353 cases involving patients operated on by a single surgeon with a minimum 12-month follow-up after central corpectomy for CSM or OPLL between 1995 and 2007. Patients with symptoms consistent with CASP at follow-up were selected for the study. The authors analyzed the prevalence and risk factors for CASP after central corpectomy for CSM/OPLL. **RESULTS** Fourteen patients (13 male, 1 female; mean age  $46.9 \pm 7.7$  years) were diagnosed with symptoms of CASP (3.9% of 353 patients) at follow-up. The mean interval between the initial surgery and presentation with symptoms of CASP was  $95.6 \pm 54.1$  months (range 40-213 months). Preoperative Nurick grades ranged from 2 to 5 (mean  $3.5 \pm 1.2$ ), and the Nurick grades at follow-up ranged from 1 to 5 (mean  $3.0 \pm 1.3$ ,  $p = 0.27$ ). Twelve patients had myelopathic symptoms and 2 had radiculopathy at follow-up. Patients with poorer preoperative Nurick grades had a higher risk for development of CASP (HR 2.6 [95% CI 1.2-5.3],  $p = 0.01$ ). **CONCLUSIONS** In the present study, CASP was seen in 3.9% of patients following central corpectomy for CSM/OPLL. The risk of CASP after central corpectomy for CSM/OPLL was higher in patients with poorer preoperative Nurick grades.

DOI: 10.3171/2016.2.FOCUS1626

**INTL**

**PMID:27246482**

**CS**

**Vedantam A, Rajshekhar V(1).**

Diffusion kurtosis imaging for cerebral astrocytomas.

Neurol India. 2016 Mar-Apr;64(2):273-4. doi: 10.4103/0028-3886.177601.

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**NAT**

**PMID:**26954805

**CS**

**Venkatesan P**(1), Tiwari A(2), Dasgupta R(1), Carey M(2), Kehlenbrink S(2), Wickramanayake A(2), Jambugulam M(1), Jeyaseelan L(3), Ramanathan K(3), Hawkins M(2), Thomas N(4).

Surrogate measures of insulin sensitivity when compared to euglycemic hyperinsulinemic clamp studies in Asian Indian men without diabetes.

J Diabetes Complications. 2016 Mar;30(2):287-91. doi:10.1016/j.jdiacomp.2015.11.024. Epub 2015 Dec 2.

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**AIM:** Fasting surrogate measures of insulin sensitivity are increasingly used in research and clinical practice. To assess the reliability of these measures, we aimed to evaluate multiple fasting surrogate measures simultaneously in non-diabetic subjects in comparison with the euglycemic hyperinsulinemic clamp study. **METHODS:** Sixteen normoglycemic male South Indian subjects were studied. After an overnight fast, blood samples were collected for glucose, insulin and lipid profile measurements, and stepped euglycemic hyperinsulinemic clamp studies were performed on all subjects. Steady state glucose infusion rates (M value) during low and high insulin phases of the clamp were calculated. Correlation of M value with surrogate markers of insulin sensitivity was performed. Predictive accuracy of surrogate indices was measured in terms of Root Mean Squared Error (RMSE) and leave-one-out cross-validation-type RMSE of prediction using a calibration model. **RESULTS:** M values showed a strong and significant correlation ( $p < 0.01$ ) with the following surrogate markers: Fasting insulin ( $r = -0.714$ ), Fasting glucose to insulin ratio (FGIR,  $r = 0.747$ ) and Raynaud index ( $r = 0.714$ ). FGIR had a significantly lower RMSE when compared

with HOMA-IR and QUICKI. **CONCLUSIONS:** Among the surrogate measures, FGIR had the strongest correlation with M values. FGIR was also the most accurate surrogate measure, as assessed by the calibration model. Copyright © 2016 Elsevier Inc. All rights reserved. DOI: 10.1016/j.jdiacomp.2015.11.024

**INTL**

**PMID:**26718937

**CS**

**Vimala LR**(1), Jasper A(1), Irodi A(1).

Non-Invasive and Minimally Invasive Imaging Evaluation of CSF Rhinorrhoea – a Retrospective Study with Review of Literature.

Pol J Radiol. 2016 Feb 29;81:80-5. doi: 10.12659/PJR.895698. eCollection 2016.

**Author information:**

(1)Department of Radiology, Christian Medical College, Vellore, India.

**BACKGROUND:** Localization of a cerebrospinal fluid [CSF] fistula is a diagnostic challenge. The choice of an optimal imaging technique is necessary to locate the site of CSF leak which is required for surgical/endoscopic repair of the CSF fistula. **MATERIAL/METHODS:** Retrospective analysis of imaging was performed in 33 patients who presented with symptoms suggestive of CSF rhinorrhoea over a period of two years. Either a bone defect on high resolution CT [HRCT] or CSF column extending extracranially from the subarachnoid space with or without brain/meningeal herniation on magnetic resonance [MR] cisternography was considered positive for CSF leak. The MR imaging technique included 1-mm heavily T2-weighted [TR 2000 ms; TE-200 ms] fast spin echo study in coronal and sagittal planes. HRCT sections involved 0.625 to 0.8-mm sections in the coronal plane, with or without axial planes, through the paranasal sinuses, reconstructed in a sharp algorithm and acquired with the patient in prone position. Imaging findings were compared with endoscopic findings, being the gold standard for the assessment of CSF rhinorrhea. **RESULTS:** A total of 25 patients had a combination of HRCT and MR cisternography. The sensitivity, specificity, positive predictive value [PPV] and negative predictive value [NPV] of both MR cisternography and HRCT together were 93%, 100%, 100% and 50% respectively. Two patients underwent only MR cisternography, 5 patients underwent only HRCT and one patient underwent HRCT, MR cisternography and CT cisternography. Though PPV was 100% in the groups with HRCT alone, MR cisternography alone and combined CT

cisternography, HRCT and MR cisternography, the results were not statistically significant as the number of patients in those groups was lower. **CONCLUSIONS:** Combination of MR cisternography and HRCT appears to be complementary, accurate and non-invasive and should be considered as optimal imaging modality for pre-op imaging in the evaluation of CSF rhinorrhoea. DOI: 10.12659/PJR.895698

**INTL**

**PMCID: PMC4774580 PMID:26985244**

**CS**

**Wilson BT(1),(2), Stark Z(3), Sutton RE(1), Danda S(4), Ekbote AV(4), ElsayedSM(5),(6), Gibson L(7), Goodship JA(1),(2), Jackson AP(8), Keng WT(9), KingMD(10),(11), McCann E(12), Motojima T(13), Murray JE(8), Omata T(13), Pilz D(14),Pope K(3), Sugita K(15), White SM(3),(16), Wilson IJ(2).**

The Cockayne Syndrome Natural History (CoSyNH) study: clinical findings in 102 individuals and recommendations for care.

Genet Med. 2016 May;18(5):483-93. doi: 10.1038/gim.2015.110. Epub 2015 Jul 23.

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**PURPOSE:** Cockayne syndrome (CS) is a rare, autosomal-recessive disorder characterized by microcephaly, impaired postnatal growth, and premature pathological aging. It has historically been

considered a DNA repair disorder; fibroblasts from classic patients often exhibit impaired transcription-coupled nucleotide excision repair. Previous studies have CLINlargely been restricted to case reports and small series, and no guidelines for care have been established. **METHODS:** One hundred two study participants were identified through a network of collaborating clinicians and the Amy and Friends CS support groups. Families with a diagnosis of CS could also self-recruit. Comprehensive clinical information for analysis was obtained directly from families and their clinicians. **RESULTS AND CONCLUSION:** We present the most complete evaluation of Cockayne syndrome to date, including detailed information on the prevalence and onset of clinical features, achievement of neurodevelopmental milestones, and patient management. We confirm that the most valuable prognostic factor in CS is the presence of early cataracts. Using this evidence, we have created simple guidelines for the care of individuals with CS. We aim to assist clinicians in the recognition, diagnosis, and management of this condition and to enable families to understand what problems they may encounter as CS progresses. Genet Med 18 5, 483-493. DOI: 10.1038/gim.2015.110

**INTL**

**PMCID: PMC4857186 PMID:26204423**

**CS**

**Abhilash K(1), Mannam PR(2), Rajendran K(1), John RA(2), Ramasami P(3).**

Chest radiographic manifestations of scrub typhus. J Postgrad Med. 2016 Oct-Dec;62(4):235-238. doi: 10.4103/0022-3859.184662.

**Author information:**

(1)Department of Emergency Medicine, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Radio-Diagnosis, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Biostatistics, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND AND RATIONALE:** Respiratory system involvement in scrub typhus is seen in 20-72% of patients. In endemic areas, good understanding and familiarity with the various radiologic findings of scrub typhus are essential in identifying pulmonary complications.

**MATERIALS AND METHODS:** Patients admitted to a tertiary care center with scrub typhus between October 2012 and September 2013 and had a chest X ray done were included in the analysis. Details and radiographic findings were noted and factors associated with abnormal X-rays were

analyzed. RESULTS: The study cohort contained 398 patients. Common presenting complaints included fever (100%), generalized myalgia (83%), headache (65%), dyspnea (54%), cough (24.3%), and altered sensorium (14%). Almost half of the patients (49.4%) had normal chest radiographs. Common radiological pulmonary abnormalities included pleural effusion (14.6%), acute respiratory distress syndrome (14%), airspace opacity (10.5%), reticulonodular opacities (10.3%), peribronchial thickening (5.8%), and pulmonary edema (2%). Cardiomegaly was noted in 3.5% of patients. Breathlessness, presence of an eschar, platelet counts of <20,000 cells/cumm, and total serum bilirubin >2 mg/dL had the highest odds of having an abnormal chest radiograph. Patients with an abnormal chest X-ray had a higher requirement of noninvasive ventilation (odds ratio [OR]: 13.98; 95% confidence interval CI: 5.89-33.16), invasive ventilation (OR: 18.07; 95% CI: 6.42-50.88), inotropes (OR: 8.76; 95% CI: 4.35-17.62), higher involvement of other organs/systems, longer duration of hospital stay ( $3.18 \pm 3$  vs.  $7.27 \pm 5.58$  days;  $P < 0.001$ ), and higher mortality (OR: 4.63; 95% CI: 1.54-13.85).

CONCLUSION: Almost half of the patients with scrub typhus have abnormal chest radiographs. Chest radiography should be included as part of basic evaluation at presentation in patients with scrub typhus, especially in those with breathlessness, eschar, jaundice, and severe thrombocytopenia. DOI: 10.4103/0022-3859.184662

**NAT**

**PMID:**27763480 **PMCID:** PMC5105208

**CS**

**Abhilash KP**(1), Jeevan JA(1), Mitra S(1), Paul N(1), Murugan TP(1), Rangaraj A(1), David S(1), Hansdak SG(1), Prakash JA(2), Abraham AM(3), Ramasami P(4), Sathyendra S(1), Sudarsanam TD(1), Varghese GM(1).

Acute Undifferentiated Febrile Illness in Patients Presenting to a Tertiary Care Hospital in South India: Clinical Spectrum and Outcome.

J Glob Infect Dis. 2016 Oct-Dec;8(4):147-154.

#### Author information:

(1)Department of General Medicine, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Microbiology, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Clinical Virology, Christian Medical College, Vellore, Tamil Nadu, India. (4)Department of Biostatistics, Christian Medical College, Vellore, Tamil Nadu, India.

BACKGROUND: Acute undifferentiated febrile illness (AUI) may have similar clinical presentation, and the etiology is varied and region specific. MATERIALS AND METHODS: This prospective observational study was

conducted in a tertiary hospital in South India. All adult patients presenting with AUI of 3-14 days duration were evaluated for etiology, and the differences in presentation and outcome were analyzed. RESULTS: The study cohort included 1258 patients. A microbiological cause was identified in 82.5% of our patients. Scrub typhus was the most common cause of AUI (35.9%) followed by dengue (30.6%), malaria (10.4%), enteric fever (3.7%), and leptospirosis (0.6%). Both scrub typhus and dengue fever peaked during the monsoon season and the cooler months, whereas no seasonality was observed with enteric fever and malaria. The mean time to presentation was longer in enteric fever (9.9 [4.7] days) and scrub typhus (8.2 [3.2] days). Bleeding manifestations were seen in 7.7% of patients, mostly associated with dengue (14%), scrub typhus (4.2%), and malaria (4.6%). The requirement of supplemental oxygen, invasive ventilation, and inotropes was higher in scrub typhus, leptospirosis, and malaria. The overall mortality rate was 3.3% and was highest with scrub typhus (4.6%) followed by dengue fever (2.3%). Significant clinical predictors of scrub typhus were breathlessness (odds ratio [OR]: 4.96; 95% confidence interval [CI]: 3.38-7.3), total whole blood cell count >10,000 cells/mm<sup>3</sup> (OR: 2.31; 95% CI: 1.64-3.24), serum albumin <3.5 g % (OR: 2.32; 95% CI: 1.68-3.2). Overt bleeding manifestations (OR: 2.98; 95% CI: 1.84-4.84), and a platelet count of <150,000 cells/mm<sup>3</sup> (OR: 2.09; 95% CI: 1.47-2.98) were independent predictors of dengue fever. CONCLUSION: The similarity in clinical presentation and diversity of etiological agents demonstrates the complexity of diagnosis and treatment of AUI in South India. The etiological profile will be of use in the development of rational guidelines for control and treatment of AUI. DOI: 10.4103/0974-777X.192966

**INT**

**PMCID:** PMC5126753 **PMID:**27942194

**CS**

**Abraham P**(1).

Treatment for hepatitis C virus infection in India: Promising times.

Indian J Med Microbiol. 2016 Jul-Sep;34(3):273-4. doi: 10.4103/0255-0857.188312.

#### Author information:

(1)Department of Clinical Virology, Christian Medical College, Vellore, Tamil Nadu, India.

DOI: 10.4103/0255-0857.188312

**NAT**

**PMID:**27514946

## CS

**Adde L(1)**, Thomas N(2), John HB(3), Oommen S(4), Vågen RT(5), Fjørtoft T(6), Jensenius AR(7), Støen R(8).

Early motor repertoire in very low birth weight infants in India is associated with motor development at one year.

Eur J Paediatr Neurol. 2016 Nov;20(6):918-924. doi: 10.1016/j.ejpn.2016.07.019. Epub 2016 Jul 30.

**Author information:**

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**BACKGROUND:** Most studies on Prechtl's method of assessing General Movements (GMA) in young infants originate in Europe. **AIM:** To determine if motor behavior at an age of 3 months post term is associated with motor development at 12 months post age in VLBW infants in India. **METHODS:** 243 VLBW infants

(135 boys, 108 girls; median gestational age 31wks, range 26-39wks) were video-recorded at a median age of 11wks post term (range 9-16wks). Certified and experienced observers assessed the videos by the "Assessment of Motor Repertoire - 2-5 Months". Fidgety movements (FMs) were classified as abnormal if absent, sporadic or exaggerated, and as normal if intermittently or continually present. The motor behaviour was evaluated by repertoire of co-existent other movements (age-adequacy) and concurrent motor repertoire. In addition, videos of 215 infants were analyzed by computer and the variability of the spatial center of motion (CSD) was calculated. The Peabody Developmental Motor Scales was used to assess motor development at 12 months. **RESULTS:** Abnormal FMs, reduced age adequacy, and an abnormal concurrent motor repertoire were significantly associated with lower Gross Motor and Total Motor Quotient (GMQ, TMQ) scores ( $p < 0.05$ ). The CSD was higher in children with TMQ scores  $< 90$  ( $-1SD$ ) than in children with higher TMQ scores ( $p = 0.002$ ). **CONCLUSION:** Normal FMs (assessed by Gestalt perception) and a low variability of the spatial center of motion (assessed by computer-based video analysis) predicted higher Peabody scores in 12-month-old infants born in India with a very low birth weight. Copyright © 2016 European Paediatric Neurology Society. Published by Elsevier Ltd. All rights reserved. DOI: 10.1016/j.ejpn.2016.07.019

**INT**

**PMID:**27524392

**CS**

**Agarwala MK(1)**, Schwartz ME(2), Smith FJ(2). Pachyonychia Congenita: New Classification and Diagnosis.

Indian J Dermatol. 2016 Sep-Oct;61(5):567. doi: 10.4103/0019-5154.190110.

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(1)Department of Dermatology, Christian Medical College, Vellore, Tamil Nadu, India. E-mail: manoj.agw@gmail.com. (2)Pachyonychia Congenita Project, Salt Lake City, UT, USA.

Comment in Indian J Dermatol. 2016 Nov-Dec;61(6):675.

DOI: 10.4103/0019-5154.190110

**NAT**

**PMCID:** PMC5029248 **PMID:**27688452

**CS**

**Ahmed R(1)**, Devasia AJ(2), Viswabandya A(2), Lakshmi KM(2), Abraham A(2), Karl S(3), Mathai J(3), Jacob PM(4), Abraham D(4), Srivastava A(2), Mathews V(2), George B(5).

Long-term outcome following splenectomy for chronic and persistent immunethrombocytopenia (ITP) in adults and children : Splenectomy in ITP.

Ann Hematol. 2016 Sep;95(9):1429-34. doi: 10.1007/s00277-016-2738-3. Epub 2016 Jul 2.

#### Author information:

(1)Department of Haematology, Rajiv Gandhi Cancer Institute & Research Centre, New Delhi, India. (2)Department of Haematology, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Paediatric Surgery, Christian Medical College, Vellore, Tamil Nadu, India. (4)Department of General Surgery, Christian Medical College, Vellore, Tamil Nadu, India. (5)Department of Haematology, Christian Medical College, Vellore, Tamil Nadu, India. [biju@cmcvellore.ac.in](mailto:biju@cmcvellore.ac.in).

The purpose of this research is to study the outcomes of splenectomy for chronic and persistent immune thrombocytopenia (ITP). This study is a retrospective analysis of 254 patients with chronic or persistent ITP who underwent splenectomy at CMC, Vellore, India between 1995 and 2009. Responses were assessed based on standard criteria. One hundred and sixty seven adults and 87 children with a median age of 29 years (range 2-64) with persistent (n=103) or chronic ITP (n=151) was studied. Response was seen in 229 (90.2 %) including CR in 74.4 % at a median time of 1 day (range 1-54). Infections following splenectomy were reported in 16 %. Deaths related to post splenectomy sepsis occurred in 1.57 % and major bleeding in 0.78 %. At median follow-up of 54.3 months (range 1-290), 178 (70.1 %) remain in remission. The 5-year and 10-year overall survival (OS) is 97.4 ± 1.2 % and 94.9 ± 2.1 %, respectively, while the 5-year and 10-year event-free survival (EFS) is 76.5 ± 2.9 % and 71.0 ± 3.9 %, respectively. Splenectomy is associated with long-term remission rates of >70 % in chronic or persistent ITP. DOI: 10.1007/s00277-016-2738-3

INTL

PMID:27370992

CS

Alexander A(1), Mathew J(2), Varghese AM(2), Ganesan S(3).

Endoscopic Repair of CSF Fistulae: A Ten Year Experience.

J Clin Diagn Res. 2016 Aug;10(8):MC01-4. doi: 10.7860/JCDR/2016/18903.8390. Epub 2016 Aug 1.

#### Author information:

(1)Associate Professor, Department of Otolaryngology and Head and Neck Surgery, Jawaharlal Institute of Postgraduate Medical Education and Research , Puducherry, Tamil Nadu, India . (2)Professor,

Department of Otolaryngology and Head and Neck Surgery, Christian Medical College , Vellore, Tamil Nadu, India . (3)Assistant Professor, Department of Otolaryngology and Head and Neck Surgery, Jawaharlal Institute of Postgraduate Medical Education and Research , Puducherry, Tamil Nadu, India

INTRODUCTION: Cerebrospinal Fluid (CSF) fistulae are repaired endoscopically with varying degrees of success around the world. Large series are still uncommon, and the results varied primarily because of the different techniques by different surgeons and also because of a variation in the patient profile in each series, for example, many series deal primarily with traumatic CSF leaks where the defects are larger and outcomes poorer. AIM: To analyse the surgical outcomes of Endoscopic CSF rhinorrhea closure.

MATERIALS AND METHODS: This is a series of 34 cases operated upon primarily by one surgeon in two different centres over a period of 10 years. RESULTS: Of the 34 cases, 76% of the patients were women. Among the patients only 20.6% patients had a history of trauma preceding the CSF leak. The most common site of leak was in the fovea ethmoidalis in 19 (55.8%) followed by 10 (29.4%) in the cribriform plate. An overlay technique of placing the multiple layers of fascia and mucosa was used in 26 (76.5%) patients and underlay technique in the remaining. Postoperative lumbar drain was used in all patients.

CONCLUSION: Based on the treatment outcome of the 34 patients, it can be concluded that the success rate of a single endoscopic procedure in our experience is 97% and 100% following the second. Endoscopic approach for closure of CSF leak is safe with minimal complications and little morbidity.

DOI: 10.7860/JCDR/2016/18903.8390

NAT

PMCID: PMC5028510 PMID:27656471

CS

Antoniamy B(1), Vasan SK(2), Geethanjali FS(3), Gowri M(1), Hepsy YS(1), RichardJ(1), Raghupathy P(4), Karpe F(5), Osmond C(6), Fall CH(6).

Weight Gain and Height Growth during Infancy, Childhood, and Adolescence as Predictors of Adult Cardiovascular Risk.

J Pediatr. 2017 Jan;180:53-61.e3. doi: 10.1016/j.jpeds.2016.09.059. Epub 2016 Nov 4.

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**OBJECTIVES:** To investigate independent relationships of childhood linear growth (height gain) and relative weight gain to adult cardiovascular disease (CVD) risk traits in Asian Indians. **STUDY DESIGN:** Data from 2218 adults from the Vellore Birth Cohort were examined for associations of cross-sectional height and body mass index (BMI) and longitudinal growth (independent conditional measures of height and weight gain) in infancy, childhood, adolescence, and adulthood with adult waist circumference (WC), blood pressure (BP), insulin resistance (homeostatic model assessment-insulin resistance [HOMA-IR]), and plasma glucose and lipid concentrations. **RESULTS:** Higher BMI/greater conditional relative weight gain at all ages was associated with higher adult WC, after 3 months with higher adult BP, HOMA-IR, and lipids, and after 15 years with higher glucose concentrations. Taller adult height was associated with higher WC (men  $\beta = 2.32$  cm per SD, women  $\beta = 1.63$ , both  $P < .001$ ), BP (men  $\beta = 2.10$  mm Hg per SD, women  $\beta = 1.21$ , both  $P \leq .001$ ), and HOMA-IR (men  $\beta = 0.08$  log units per SD, women  $\beta = 0.12$ , both  $P \leq .05$ ) but lower glucose concentrations (women  $\beta = -0.03$  log mmol/L per SD  $P = .003$ ). Greater height or height gain at all earlier ages were associated with higher adult CVD risk traits. These positive associations were attenuated when adjusted for adult BMI and height. Shorter length and lower BMI at birth were associated with higher glucose concentration in women. **CONCLUSIONS:** Greater height or weight gain relative to height during childhood or adolescence was associated with a more adverse adult CVD risk marker profile, and this was mostly attributable to larger adult size. Copyright © 2016 The Authors. Published by Elsevier Inc. All rights reserved. DOI: 10.1016/j.jpeds.2016.09.059

**INT**

**PMID:**27823768

**CS**

**Bajpai R(1), Chaturvedi H(2), Jayaseelan L(3), Harvey P(4), Seguy N(5), Chavan L(5), Raj P(6), Pandey A(2).**

Effects of Antiretroviral Therapy on the Survival of Human Immunodeficiency Virus-positive Adult Patients in Andhra Pradesh, India: A Retrospective Cohort Study, 2007-2013. *J Prev Med Public Health*. 2016 Nov;49(6):394-405. Epub 2016 Oct 28.

#### **Author information:**

(1)Department of Community Medicine, Army College of Medical Sciences, New Delhi, India. (2)National Institute of Medical Statistics, New Delhi, India. (3)Department of Biostatistics, Christian Medical College, Vellore, India. (4)Division of Global HIV/AIDS, Centers for Disease Control and Prevention, New Delhi, India. (5)World Health Organization Country Office for India, New Delhi, India. (6)National AIDS Control Organization, New Delhi, India.

**OBJECTIVES:** The survival outcomes of antiretroviral treatment (ART) programs havenot been systematically evaluated at the state level in India. This retrospectivestudy assessed the survival rates and factors associated with survival amongadult human immunodeficiency virus (HIV)-infected patients in Andhra Pradesh, India. **METHODS:** The present study used data from 139 679 HIV patients aged  $\geq 15$  years onART who were registered from 2007 to 2011 and were followed up through December2013. The primary end point was death of the patient. Mortality densities (per1000 person-years) were calculated. Kaplan-Meier and Cox-regression models wereused to estimate survival and explore the factors associated with survival. **RESULTS:** The overall median follow-up time was 16.0 months (2.0 months for thedeceased and 14.0 months for those lost to follow-up). Approximately 13.2% ofthose newly initiated on ART died during follow-up. Of those deaths, 56% occurredin the first three months. The crude mortality rate was 80.9 per 1000person-years at risk. The CD4 count (adjusted hazard ratio [aHR], 4.88; 95%confidence interval [CI], 4.36 to 5.46 for  $< 100$  cells/mm<sup>3</sup> vs.  $> 350$  cells/mm<sup>3</sup>), functional status (aHR, 3.05; 95% CI, 2.82 to 3.30 for bedriddenvs. normal), and body weight (aHR, 3.69; 95% CI, 3.42 to 3.97 for  $< 45$  kg vs.  $> 60$  kg) were strongly associated with the survival of HIV patients. **CONCLUSIONS:** The study findings revealed that high mortality was observed withinthe first three months of ART initiation. Patients with poor baseline clinicalcharacteristics had a higher risk of mortality. Expanded testing and counselingsould

be encouraged, with the goal of ensuring early enrollment into the program followed by the initiation of ART in HIV-infected patients. DOI: 10.3961/jpmph.16.073

**INT**

**PMID:**27951632

**CS**

**Bal HS(1), Sen S(2), Karl S(1), Mathai J(1), Thomas RJ(1).**

An assessment of quality of life of operated cases of esophageal atresia in the community

J Indian Assoc Pediatr Surg. 2016 Jul-Sep;21(3):131-8. doi:10.4103/0971-9261.182588.

**Author information:**

(1)Department of Pediatric Surgery, Christian Medical College, Vellore, India.(2)Department of Pediatric Surgery, PSG Institute of Medical Sciences and Research, Coimbatore, Tamil Nadu, India

**AIMS:** To evaluate the outcome of the operated children of esophageal atresia (EA) focusing on their early and late morbidity and mortality and quality of life (QoL) of survivors

**SETTINGS AND DESIGN:** A cross-sectional follow-up with retrospective analysis of available medical and surgical records of children who underwent repair for EA.

**MATERIALS AND METHODS:** The medical records of the children who underwent repair for EA during the period from 2000 to 2011 at the Christian Medical College Hospital, Vellore, were collected retrospectively. Patients with parents were invited to visit the hospital for follow-up and nutritional status, digestive and respiratory symptoms, status of associated anomalies and QoL assessment of children done. QoL assessment was done using the PedsQL™ 4.0 generic core scales questionnaire comprising 4 scale scores: physical, emotional, social functioning, and school functioning. Mean scores are calculated based on a 5-point response scale for each item and transformed to a 0-100 scale with a higher score representing better QoL.

**STATISTICAL ANALYSIS USED:** Statistical Package for Social Sciences (SPSS) version 16 using Chi-square or Fisher's exact test.

**RESULTS:** Of 79 patients operated during the said period, there were 10 deaths and a total of 69 (87%) children survived. Of the 66 patients available for follow-up, we interviewed 30 parents and children while for the remaining 36 children, out-patient charts were reviewed retrospectively. Mean follow-up duration was 3.56 years. The height and weight for age measurement showed 47% and 56% of children respectively as below the 5(th) percentile. Main problems faced by operated EA children were of the

respiratory (26%) and gastroesophageal (36%) tracts. In spite of the mentioned problems faced, the overall QoL of this group appeared good. In 23 of 30 patients, who answered PedsQL™, more than 70% had scores >85 out of 100 in QoL scoring.

**CONCLUSIONS:** While survivals of the children born with EA have improved, these children still face nutritional, respiratory, and gastroesophageal problems during their early childhood. In spite of this, the overall QoL of this patient group appears good. DOI: 10.4103/0971-9261.182588

**NAT**

**PMCID:** PMC4895739 **PMID:**27365908

**CS**

**Bal HS(1), Sen S(2).**

The use of ileocolic segment for esophageal replacement in children.

J Indian Assoc Pediatr Surg. 2016 Jul-Sep;21(3):116-9. doi:10.4103/0971-9261.182584.

**Author information:**

(1)Department of Pediatric Surgery, Christian Medical College, Vellore, India.

(2)Department of Pediatric Surgery, PSG Institute of Medical Science and Research, Coimbatore, Tamil Nadu, India.

**AIMS:** To evaluate and describe the procedure and outcome of ileocolic replacement of esophagus.

**MATERIALS AND METHODS:** We review 7 children with esophageal injuries, who underwent esophageal replacement using ileocolic segment in Christian Medical College, Vellore, India between 2006 and 2014.

**RESULTS:** The ileocolic segment was used in 7 children with scarred or inadequate esophagus. There were 4 girls and 3 boys, who underwent esophageal replacement using isoperistaltic ileocolic segment in this period. Age at presentation varied from 1 month to 14 years with an average of 4.6 years. The indications for ileocolic replacements were corrosive strictures in 5, failed esophageal atresia repair in one and gastric volvulus related esophageal stricture in another. The average follow-up duration was 37 months. One child with corrosive stricture lost to follow-up and died 2 years later in another center. Other 6 children were free of dysphagia till the last follow-up.

**CONCLUSIONS:** Although the ileocolic segment is not commonly used for esophageal substitution, it can be useful in special situations where the substitution needs to reach the high cervical esophagus and also where the stomach is scarred

and not suitable for gastric pull-up DOI: 10.4103/0971-9261.182584

**NAT**

**PMCID: PMC4895735 PMID:27365904**

**CS**

**Bal SK(1)**, Thangakunam B, Irodi A, Gupta M, Christopher DJ.

Small Sample Lung Biopsy Findings in Patients With Clinicoradiologic Suspicion of Pulmonary Venocclusive Disease-Pulmonary Capillary Hemangiomatosis.

J Bronchology Interv Pulmonol. 2016 Oct;23(4):308-315.

**Author information:**

(1)Departments of \*Pulmonary Medicine †Radiology ‡General Pathology, Christian Medical College, Vellore, Tamil Nadu, India.

Pulmonary venocclusive disease (PVOD) and pulmonary capillary hemangiomatosis (PCH) form a sinister subgroup of pulmonary arterial hypertension where the predominant pathology lies in the pulmonary veins and capillaries, thus making the use of pulmonary vasodilators potentially dangerous in these patients. Radiologically, the presence of centrilobular nodules, interlobular septal thickening, and significant mediastinal adenopathy are useful in identifying this subgroup from patients with pulmonary arterial hypertension. The combination of all three has a sensitivity of 66% and a specificity of 100% in identifying this subgroup. We present a case series of 3 patients who were radiologically suspected to have PVOD or PCH and in whom pathologic corroborative evidence suggestive of PVOD and PCH was found in small sample lung biopsy specimens: transbronchial lung biopsy (2 patients) and trucut biopsy of the postmortem lung (1 patient). Histopathology, in our patients, showed pulmonary arteriole smooth muscle proliferation and narrowing, capillary proliferation, intimal fibrosis of pulmonary veins and arteries, interstitial fibrosis, interstitial foreign body type of multinucleate giant cells, and aggregates of alveolar and interstitial hemosiderophages. In conclusion, histopathology of small lung biopsy samples can provide useful corroborative pathologic evidence in patients with clinicoradiologic suspicion of PVOD-PCH. DOI: 10.1097/LBR.0000000000000320

**INTL**

**PMID:27623416**

**CS**

**Balekuduru A(1)**, Dutta AK(2), Subbaraj SB(1).

Endoscopic ultrasound-guided transoral drainage of parapharyngeal abscess.

Dig Endosc. 2016 Nov;28(7):756. doi: 10.1111/den.12696. Epub 2016 Aug 8.

**Author information:** (1)Department of Gastroenterology, Christian Medical College, Vellore, Tamilnadu, India. (2)Department of Gastroenterology, M.S. Ramaiah Memorial Hospitals Bangalore, Karnataka, India. DOI: 10.1111/den.12696

**INTL**

**PMID:27411396**

**CS**

**Ballen K(1)**, Woo Ahn K(2), Chen M(3), Abdel-Azim H(4), Ahmed I(5), Aljurf M(6), Antin J(7), Bhatt AS(8), Boeckh M(9), Chen G(10), Dandoy C(11), George B(12), Laughlin MJ(13), Lazarus HM(14), MacMillan ML(15), Margolis DA(16), Marks DI(17), Norkin M(18), Rosenthal J(19), Saad A(20), Savani B(21), Schouten HC(22), Storek J(23), Szabolcs P(24), Ustun C(25), Verneris MR(15), Waller EK(26), Weisdorf DJ(25), Williams KM(27), Wingard JR(18), Wirk B(28), Wolfs T(29), Young JA(15), Auletta J(30), Komanduri KV(31), Lindemans C(32), Riches ML(33).

Infection Rates among Acute Leukemia Patients Receiving Alternative Donor Hematopoietic Cell Transplantation.

Biol Blood Marrow Transplant. 2016 Sep;22(9):1636-45.

doi:10.1016/j.bbmt.2016.06.012. Epub 2016 Jun 22.

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Cancer Institute, Boston, Massachusetts.(8)Stanford University School of Medicine, Stanford, California. (9)Vaccine and Infectious Disease Division, Fred Hutchinson Cancer Research Center, Seattle, Washington. (10)Department of Medicine, Roswell Park Cancer Institute, Buffalo, New York. (11)Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio.(12)Christian Medical College, Vellore, India. (13)Medical Director, Cleveland Cord Blood Center, Cleveland, Ohio. (14)Seidman Cancer Center, University Hospitals Case Medical Center, Cleveland, Ohio. (15)Division of Blood and Marrow Transplantation, Department of Pediatrics, University of Minnesota, Minneapolis, Minnesota. (16)Section of Hematology, Oncology and BMT, Department of Pediatrics, Medical College of Wisconsin, Milwaukee, Wisconsin. (17)Pediatric Bone Marrow Transplant, University Hospitals Bristol NHS Trust, Bristol, United Kingdom.(18)Division of Hematology/Oncology, University of Florida College of Medicine, Gainesville, Florida. (19)City of Hope National Medical Center, Duarte, California. (20)Division of Hematology/Oncology Department of Medicine, University of Alabama at Birmingham, Birmingham, Alabama. (21)Division of Hematology/Oncology, Department of Medicine, Vanderbilt University Medical Center, Nashville, Tennessee. (22)Department of Hematology, Academische Ziekenhuis, Maastricht, Netherlands. (23)Department of Medicine, University of Calgary, Calgary, Alberta, Canada. (24)Division of Blood and Marrow Transplantation, Children's National Health System, Washington, District of Columbia. (25)Division of Hematology, Oncology and Transplantation, Department of Medicine, University of Minnesota Medical Center, Minneapolis, Minnesota(26)Department of Hematology and Medical Oncology, Winship Cancer Institute, Emory University, Atlanta, Georgia. (27)Experimental Transplantation and Immunology Branch, National Cancer Institute, National Institute of Health, Bethesda, Maryland. (28)Division of Bone Marrow Transplant, Seattle Cancer Care Alliance, Seattle, Washington. (29)Division of Pediatrics, Wilhelmina Children's Hospital, Utrecht, Netherlands. (30)Host Defense Program, Divisions of Hematology/Oncology/Bone Marrow Transplant and Infectious Diseases, Nationwide Children's Hospital, Columbus, Ohio. (31)Adult Stem Cell Transplantation Program, University of Miami, Miami, Florida. (32)Pediatric Blood and Marrow Transplantation Program, University Medical Center Utrecht, Utrecht, Netherlands.(33)Division of Hematology/Oncology, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina.

Alternative graft sources (umbilical cord blood [UCB], matched unrelated donors [MUD], or mismatched unrelated donors [MMUD]) enable patients without a matched sibling donor to receive potentially curative hematopoietic cell transplantation (HCT). Retrospective studies demonstrate comparable outcomes among different graft sources. However, the risk and types of infections have not been compared among graft sources. Such information may influence the choice of a particular graft source. We compared the incidence of bacterial, viral, and fungal infections in 1781 adults with acute leukemia who received alternative donor HCT (UCB, n = 568; MUD, n = 930; MMUD, n = 283) between 2008 and 2011. The incidences of bacterial infection at 1 year were 72%, 59%, and 65% (P < .0001) for UCB, MUD, and MMUD, respectively. Incidences of viral infection at 1 year were 68%, 45%, and 53% (P < .0001) for UCB, MUD, and MMUD, respectively. In multivariable analysis, bacterial, fungal, and viral infections were more common after either UCB or MMUD than after MUD (P < .0001). Bacterial and viral but not fungal infections were more common after UCB than MMUD (P = .0009 and < .0001, respectively). The presence of viral infection was not associated with an increased mortality. Overall survival (OS) was comparable among UCB and MMUD patients with Karnofsky performance status (KPS) ≥ 90% but was inferior for UCB for patients with KPS < 90%. Bacterial and fungal infections were associated with poorer OS. Future strategies focusing on infection prevention and treatment are indicated to improve HCT outcomes.

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**INTL**

**PMCID: PMC5008458 PMID: 27343716**

**CS**

**Bose A(1), Munshi R(2), Tripathy RM(3), Madhusudana SN(4), Harish BR(5), Thaker S(6), Mahendra BJ(5), Gunale B(7), Gogtay NJ(6), Thatte UM(6), Mani RS(4), Manjunath K(1), George K(1), Yajaman AB(4), Sahai A(7), Dhare RM(7), Alex RG(1), Adhikari DD(1), Abhilash(1), Raghava V(1), Kumbhar D(2), Behera TR(3), Kulkarni PS(8).**

A randomized non-inferiority clinical study to assess post-exposure prophylaxis by a new purified vero cell rabies vaccine (Rabivax-S) administered by intramuscular and intradermal routes.

Vaccine. 2016 Sep 14;34(40):4820-6. doi: 10.1016/j.vaccine.2016.08.005. Epub 2016 Aug 21.

**Author information:**

(1) Christian Medical College, Vellore, India. (2) T.N. Medical College & BYL Nair Ch. Hospital, Mumbai, India. (3) M.K.C.G. Medical College and Hospital, Berhampur, India. (4) National Institute of Mental Health and NeuroSciences (NIMHANS), Bangalore, India. (5) Mandya Institute of Medical Sciences, Mandya, India. (6) Seth Gordhandas Sunderdas Medical College and King Edward Memorial Hospital, Mumbai, India. (7) Serum Institute of India Pvt. Ltd., Pune, India. (8) Serum Institute of India Pvt. Ltd., Pune, India. Electronic address: [drpsk@seruminstitute.com](mailto:drpsk@seruminstitute.com).

**BACKGROUND:** Rabies is a 100% fatal disease but preventable with vaccines and immunoglobulins. We have developed a new purified vero cell rabies vaccine (Rabivax-S) and evaluated its safety and immunogenicity in post-exposure prophylaxis by intramuscular (IM) and intradermal (ID) routes. **METHODS:** This was a randomized active-controlled non-inferiority study in 180 individuals (age 5 years and above) with suspected rabies exposure (90 each with WHO Category II and Category III exposures). The participants received either Rabivax-S (1mL IM; five doses), Rabivax-S (0.1mL ID; eight doses) or purified chick embryo cell vaccine (PCEC, Rabipur®) (1mL IM; five doses). The IM doses were given on Day 0, 3, 7, 14 and 28 while the ID doses were given on days 0, 3, 7 and 28. Category III patients also received a human rabies immunoglobulin (HRIG) on Day 0. Adverse events (AEs) were recorded with diary cards till day 42. Rabies neutralizing antibody levels were measured on day 0, 7, 14, 28 and 42. **RESULTS:** In both the category II and III patients, the geometric mean concentration (GMC) ratios of Rabivax-S IM and Rabivax-S ID groups to PCEC IM were more than 1, thus proving the non-inferiority. GMCs were similar or higher in Rabivax-S groups at all the time points. Seropositivity against rabies (RFFIT titre  $\geq$  0.5 IU/mL) was achieved in all participants. Mostly mild local and systemic adverse events were reported across the three groups and all resolved without sequelae. **CONCLUSIONS:** Rabivax-S was well tolerated and showed immunogenicity comparable to a licensed rabies vaccine by both IM and ID routes in post-exposure prophylaxis. Registry No.: CTRI/2012/11/003135. Copyright © 2016 Elsevier Ltd. All rights reserved. DOI: 10.1016/j.vaccine.2016.08.005

**INTL****PMID:**27554534**CS**

**Brito-Zerón P**, Acar-Denizli N, Zeher M, Rasmussen A, Seror R, Theander E, Li X, Baldini C, Gottenberg JE, Danda D, Quartuccio L, Priori R, Hernandez-Molina G, Kruize AA, Valim V, Kvarnstrom M, Sene D, Gerli R, Praprotnik S, Isenberg D, Solans R, Rischmueller M, Kwok SK, Nordmark G, Suzuki Y, Giacomelli R, Devauchelle-Pensec V, Bombardieri M, Hofauer B, Bootsma H, Brun JG, Fraile G, Carsons SE, Gheita TA, Morel J, Vollenveider C, Atzeni F, Retamozo S, Horvath IF, Sivils K, Mandl T, Sandhya P, De Vita S, Sanchez-Guerrero J, van der Heijden E, Trevisani VF, Wahren-Herlenius M, Mariette X, Ramos-Casals M; EULAR-SS

Influence of geolocation and ethnicity on the phenotypic expression of primary Sjögren's syndrome at diagnosis in 8310 patients: a cross-sectional study from the Big Data Sjögren Project Consortium.

Ann Rheum Dis. 2016 Nov 29. pii: annrheumdis-2016-209952. doi:

**OBJECTIVES:** To analyse the influence of geolocation and ethnicity on the clinical presentation of primary Sjögren's syndrome (SjS) at diagnosis. **METHODS:** The Big Data Sjögren Project Consortium is an international, multicentre registry designed in 2014. By January 2016, 20 centres from five continents were participating. Multivariable logistic regression analyses were performed. **RESULTS:** We included 7748 women (93%) and 562 men (7%), with a mean age at diagnosis of primary SjS of 53 years. Ethnicity data were available for 7884 patients (95%): 6174 patients (78%) were white, 1066 patients (14%) were Asian, 393 patients (5%) were Hispanic, 104 patients (1%) were black/African-American and 147 patients (2%) were of other ethnicities. SjS was diagnosed a mean of 7 years earlier in black/African-American compared with white patients; the female-to-male ratio was highest in Asian patients (27:1) and lowest in black/African-American patients (7:1); the prevalence of sicca symptoms was lowest in Asian patients; a higher frequency of positive salivary biopsy was found in Hispanic and white patients. A north-south gradient was found with respect to a lower frequency of ocular involvement in northern countries for dry eyes and abnormal ocular tests in Europe (OR 0.46 and 0.44, respectively) and Asia (OR 0.18 and 0.49, respectively) compared with southern countries. Higher frequencies of antinuclear antibodies (ANAs) were reported in northern countries in America (OR=1.48) and Asia (OR=3.80) while, in Europe, northern countries had lowest frequencies of ANAs (OR=0.67) and

Ro/La (OR=0.69) CONCLUSIONS: This study provides the first evidence of a strong influence of geolocation and ethnicity on the phenotype of primary SjS at diagnosis. Published by the BMJ Publishing Group Limited. For permission to use (where not already granted under a licence) please go to <http://www.bmj.com/company/products-services/rights-and-licensing/>. DOI: 10.1136/annrheumdis-2016-209952

**INTL**

**PMID:**27899373

**CS**

**Buchmann EJ(1), Stones W(2), Thomas N(3).**

Preventing deaths from complications of labour and delivery.

Best Pract Res Clin Obstet Gynaecol. 2016 Oct;36:103-115. doi:

**Author information:**

(1)Department of Obstetrics and Gynaecology, Chris Hani Baragwanath Academic Hospital, PO Bertsham 2013, Johannesburg, South Africa. Electronic address: [eckhart.buchmann@wits.ac.za](mailto:eckhart.buchmann@wits.ac.za). (2)School of Medicine, University of St Andrews and College of Medicine, University of Malawi, Fife KY16 9JT, UK. Electronic address: [rws6@st-andrews.ac.uk](mailto:rws6@st-andrews.ac.uk). (3)Department of Neonatology, Christian Medical College, Vellore 632004, India. Electronic address: [niranjan@cmcvellore.ac.in](mailto:niranjan@cmcvellore.ac.in).

The process of labour and delivery remains an unnecessary and preventable cause of death of women and babies around the world. Although the rates of maternal and perinatal death are declining, there are large disparities between rich and poor countries, and sub-Saharan Africa has not seen the scale of decline as seen elsewhere. In many areas, maternity services remain sparse and under-equipped with insufficient and poorly trained staff. Priorities for reducing the mortality burden are provision of safe caesarean section, prevention of sepsis and appropriate care of women in labour in line with the current best practices, appropriately and affordably delivered. A concern is that large-scale recourse to caesarean delivery has its own dangers and may present new dominant causes for maternal mortality. An area of current neglect is newborn care. However, innovative training methods and appropriate technologies offer opportunities for affordable and effective newborn resuscitation and follow-up management in low-income settings. Copyright © 2016. Published by Elsevier Ltd. DOI: 10.1016/j.bpobgyn.2016.05.012

**INTL**

**PMID:**27427491

**CS**

**Burad DK(1), Kodiatte TA(1), Rajeeb SM(1), Goel A(1), Eapen CE(1), Ramakrishna B(1).**

Neuroendocrine neoplasms of liver - A 5-year retrospective clinico-pathological study applying World Health Organization 2010 classification. World J Gastroenterol. 2016 Oct 28;22(40):8956-8966.

**Author information:**

(1)Deepak Kalyansingh Burad, Thomas Alex Kodiatte, Banumathi Ramakrishna, Department of Pathology, Christian Medical College, Vellore 632004, Tamil Nadu, India

**AIM:** To study the clinicopathological characteristics of neuroendocrine neoplasms (NEN) on liver samples and apply World Health Organization (WHO) 2010 grading of gastroenteropancreatic (GEP) NEN. **METHODS:** Clinicopathological features of 79 cases of NEN of the liver diagnosed between January 2011 to December 2015 were analyzed. WHO 2010 classification of GEP NEN was applied and the tumors were graded as G1, G2 or G3. Two more categories, D1/2 (discordant 1/2) and D2/3 (discordant 2/3) were also applied. The D1/2 grade tumors had a mitotic count of G1 and Ki-67 index of G2. The D2/3 tumors had a mitotic count of G2 and Ki-67 index of G3. The follow up details which were available till the end of the study period (December 2015) were collected. **RESULTS:** Of the 79 tumors, 16 each were G1 and G2, and 18 were G3 tumors. Of the remaining 29 tumors, 13 were assigned to D1/2 and 16 were D2/3 grade. Male preponderance was noted in all tumors except for G2 neoplasms, which showed a slight female predilection. The median age at presentation was 47 years (range 10-82 years). The most common presentation was abdominal pain (81%). Pancreas (49%) was the most common site of primary followed by gastrointestinal tract (24.4%) and lungs (18%). Radiologically, 87% of the patients had multiple liver lesions. Histopathologically, necrosis was seen in only D2/3 and G3 tumors. Microvascular invasion was seen in all grades. Metastasis occurred in all grades of primary NEN and the grades of the metastatic tumors and their corresponding primary tumors were similar in 67% of the cases. Of the 79 patients, 36 had at least one follow up visit with a median duration of follow up of 8.5 mo (range: 1-50 mo). This study did not show any impact of the grade of tumor on the short term clinical outcome of these patients. **CONCLUSION:** Liver biopsy is an important tool for

clinicopathological characterization and grading of NEN, especially when the primary is not identified. Eighty-seven percent of the patients had multifocal liver lesions irrespective of the WHO grade, indicating a higher stage of disease at presentation. Follow up duration was inadequate to derive any meaningful conclusion on long term outcome in our study patients. DOI: 10.3748/wjg.v22.i40.8956

**INTL**

**PMCID: PMC5083801 PMID:27833387**

**CS**

**Chadha AS**(1), Khoo A(1), Aliru ML(1), Arora HK(2), Gunther JR(1), Krishnan S(3).

Recent Advances and Prospects for Multimodality Therapy in Pancreatic Cancer.

Semin Radiat Oncol. 2016 Oct;26(4):320-37. doi: 10.1016/j.semradonc.2016.05.002. Epub 2016 May 26.

**Author information:**

(1)Department of Radiation Oncology, The University of Texas MD Anderson Cancer, Houston, TX. (2)Department of Internal Medicine, Christian Medical College Vellore, India. (3)Department of Radiation Oncology, The University of Texas MD Anderson Cancer, Houston, TX. Electronic address: [skrishnan@mdanderson.org](mailto:skrishnan@mdanderson.org).

The outcomes for treatment of pancreatic cancer have not improved dramatically in many decades. However, the recent promising results with combination chemotherapy regimens for metastatic disease increase optimism for future treatments. With greater control of overt or occult metastatic disease, there will likely be an expanding role for local treatment modalities, especially given that nearly a third of pancreatic cancer patients have locally destructive disease without distant metastatic disease at the time of death. Technical advances have allowed for the safe delivery of dose-escalated radiation therapy, which can then be combined with chemotherapy, targeted agents, immunotherapy, and nanoparticulate drug delivery techniques to produce novel and improved synergistic effects. Here we discuss recent advances and future directions for multimodality therapy in pancreatic cancer. Copyright © 2016 Elsevier Inc. All rights reserved. DOI:

10.1016/j.semradonc.2016.05.002

**INTL**

**PMID:27619253**

**CS**

**Chanana L**(1), Atre K(2), Galwankar S(3), Kelkar D(4). State of the Globe: What's the Right Test for Diagnosing Rickettsial Diseases.

J Glob Infect Dis. 2016 Jul-Sep;8(3):95-6. doi: 10.4103/0974-777X.188581.

**Author information:**

(1)Honourable Fellow of the Academic College of Emergency Experts, Vellore, India. (2)Christian Medical College, Vellore, India. (3)Department of Emergency Medicine, University of Florida, Jacksonville, USA. (4)Department of Emergency Medicine, Section of Infectious Diseases, Winter Haven Hospital Division, University of Florida, Jacksonville, USA. DOI: 10.4103/0974-777X.188581

**NAT**

**PMCID: PMC4997799 PMID:27621558**

**CS**

**Cherian AG**(1), Jamkhandi D(2), George K(2), Bose A(2), Prasad J(2), Minz S(2).

Prevalence of Congenital Anomalies in a Secondary Care Hospital in South India: A Cross-Sectional Study.

J Trop Pediatr. 2016 Oct;62(5):361-7. doi: 10.1093/tropej/fmw019. Epub 2016 Apr 4.

**Author information:**

(1)Community Health Department, Christian Medical College, Vellore, India [annegc97@yahoo.co.in](mailto:annegc97@yahoo.co.in). (2)Community Health Department, Christian Medical College, Vellore, India.

**OBJECTIVE:** To study the prevalence and types of congenital anomalies that present at birth in a secondary-level hospital in South India and its contribution to perinatal mortality. **MATERIALS AND METHODS:** A total of 36,074 births over 10 years, from 2003 to 2013, were studied for the prevalence of gross congenital malformations at birth. It was a descriptive, cross-sectional study using data from the birth register and available medical records. **RESULTS:** The incidence of birth defects was 12.5 per 1000 live births, with musculoskeletal disorders being the commonest, followed by craniovertebral anomalies. The prevalence of anomalies over the past 10 years has not shown any significant change ( $p = 0.555$ ). **DISCUSSION:** The high prevalence of neural tube defects indicates the need for preconceptional folic acid supplementation and early detection of anomalies, which would help in timely management. Detection of musculoskeletal anomalies would help in counseling patients antenatally. © The Author [2016]. Published by Oxford University Press. All rights reserved. For Permissions, please email:

journals.permissions@oup.com.DOI:  
10.1093/tropej/fmw019

**INTL**

**PMID:**27044502

**CS**

**Chilbule SK**(1), Dutt V(1), Madhuri V(1).

Limb lengthening in achondroplasia.

Indian J Orthop. 2016 Jul-Aug;50(4):397-405. doi:  
10.4103/0019-5413.185604.

**Author information:**

(1)Pediatric Orthopedics Unit, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND:** Stature lengthening in skeletal dysplasia is a contentious issue. Specific guidelines regarding the age and sequence of surgery, methods and extent of lengthening at each stage are not uniform around the world. Despite the need for multiple surgeries, with their attendant complications, parents demanding stature lengthening are not rare, due to the social bias and psychological effects experienced by these patients. This study describes the outcome and complications of extensive stature lengthening performed at our center.

**MATERIALS AND METHODS:** Eight achondroplastic and one hypochondroplastic patient underwent bilateral transverse lengthening for tibiae, humeri and femora. Tibia lengthening was carried out using a ring fixator and bifocal corticotomy, while a monolateral pediatric limb reconstruction system with unifocal corticotomy was used for the femur and humerus. Lengthening of each bone segment, height gain, healing index and complications were assessed. Subgroup analysis was carried out to assess the effect of age and bone segment on the healing index.

**RESULTS:** Nine patients aged five to 25 years (mean age 10.2 years) underwent limb lengthening procedures for 18 tibiae, 10 femora and 8 humeri. Four patients underwent bilateral lengthening of all three segments. The mean length gain for the tibia, femur and humerus was 15.4 cm (100.7%), 9.9 cm (52.8%) and 9.6 cm (77.9%), respectively. Healing index was 25.7, 25.6 and 20.6 days/cm, respectively, for the tibia, femur and humerus. An average of 33.3% height gain was attained. Lengthening of both tibia and femur added to projected height achieved as the 3<sup>rd</sup> percentile of standard height in three out of four patients. In all, 33 complications were encountered (0.9 complications per segment). Healing index was not affected by age or bone segment.

**CONCLUSION:** Extensive limb lengthening (more than 50% over initial length) carries significant risk and should be undertaken only after due consideration.

DOI: 10.4103/0019-5413.185604

**NAT**

**PMCID:** PMC4964773 **PMID:**27512222  
**CS**

**Chowdhury SD**(1), Kurien RT(2), Ramachandran A(2), Joseph AJ(2), Simon EG(2), Dutta AK(2), David D(2), Kumar C B(2), Samuel P(3), Balasubramaniam KA(2).

Pancreatic exocrine insufficiency: Comparing fecal elastase 1 with 72-h stool for fecal fat estimation.

Indian J Gastroenterol. 2016 Nov;35(6):441-444. Epub 2016 Nov 23.

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**INTRODUCTION:** Identification of pancreatic exocrine insufficiency (PEI) is important in the management of chronic pancreatitis. The 72-h stool for fecal fat estimation (FFE) has long been considered a gold standard indirect test for the diagnosis of PEI. However, the test is cumbersome for both patients and laboratory personnel alike. In this study, we aimed to assess fecal elastase 1 (FE1) as an alternate to FFE for the diagnosis of PEI.

**METHODS:** In all, 87 consecutive patients diagnosed with chronic pancreatitis were included in this study. FFE and FE1 estimation was done for all the patients. For FE1, two cutoffs (<100 and <200 µg) were selected to define pancreatic exocrine insufficiency. The sensitivity, specificity, and positive and negative predictive values for the two cutoffs were estimated. Kappa statistics was used to assess degree of agreement between both tests.

**RESULTS:** All patients completed the study and were included in the analysis. The sensitivity, specificity, and positive and negative predictive value and PABAK (prevalence and bias adjusted kappa) for FE1 <100 µg was 84.9, 47.6, 83.6, 50, and 0.52, respectively. For FE1 <200 µg, it was 90.9, 9.5, 75.95, 25, and 0.43, respectively.

**CONCLUSION:** FE1 is a sensitive test; however, it does not have a good agreement with FFE. FE1 may be used as screening test for PEI in patients with chronic pancreatitis.

DOI: 10.1007/s12664-016-0714-4

**NAT**

**PMID:**27878466

**CS**

**Deshpande P(1), Kathirvel K(1), Alex AA(1), Korula A(1), George B(1), Shaji RV(1), Mathews V(2).**  
Leukocyte Adhesion Deficiency-I: Clinical and Molecular Characterization in an Indian Population. *Indian J Pediatr.* 2016 Aug;83(8):799-804. doi: 10.1007/s12098-016-2051-0. Epub 2016 Feb 29.

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**OBJECTIVE:** To describe clinical and flow cytometric immunophenotyping details of 26 patients of Leukocyte adhesion deficiency-I (LAD-I) along with molecular characterization of 7 patients.

**METHODS:** Diagnosis of LAD-I was suspected on the basis of clinical features, white blood cell count and absolute neutrophil counts and flow cytometric assessment of expression of CD18 and CD11(a, b, c) on leukocytes. Mutation analysis was performed using DNA PCR and conformation sensitive gel electrophoresis (CSGE) technique followed by sequencing.

**RESULTS:** All the patients were symptomatic by the age of 6 mo, with history of recurrent bacterial infections involving skin, mucosa or umbilical cord (omphalitis) being the most frequent presenting symptoms. White blood cells (WBC) and absolute neutrophil counts (ANC) were markedly elevated, without any specific morphological findings. On flow cytometry, CD11a and CD11c showed moderate correlation with CD18 expression. Mutation analysis was performed in 7 patients and six different mutations (4 missense, 2 nonsense and 1 splice site) were identified, all of which were homozygous in nature.

**CONCLUSIONS:** A presentation of repeated bacterial infections during infancy, especially omphalitis, with markedly elevated absolute neutrophil counts should trigger investigations for LAD-I including flow cytometric analysis of CD11/CD18 expression.

DOI: 10.1007/s12098-016-2051-0

**NAT**

**PMID:**26924654

**CS**

**Divyashree S(1), Nabarro LE(2),(3), Veeraraghavan B(4), Rupali P(1).**  
Enteric fever in India: current scenario and future directions. *Trop Med Int Health.* 2016 Oct;21(10):1255-1262. doi: 10.1111/tmi.12762. Epub 2016 Sep 8.

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Enteric fever is a major cause of morbidity and mortality in tropical areas worldwide. The Indian subcontinent bears the brunt of the disease, both in terms of absolute case numbers and drug-resistant strains. Recent phylogenetic studies suggest that the multidrug-resistant clade H58 originated in India and subsequently expanded through Asia and Africa. In Africa, it caused unrecognized outbreaks in areas previously considered free of the disease. In this study, we discuss the current status of enteric fever in India, the factors preventing its control and its future directions in this rapidly developing nation. © 2016 John Wiley & Sons Ltd. DOI: 10.1111/tmi.12762

**INTL**

**PMID:**27495900

**CS**

**Eapen A, Gibikote S(1).**

Role of Computed Tomography in Pediatric Abdominal Conditions.

*Indian J Pediatr.* 2016 Jul;83(7):691-701. doi: 10.1007/s12098-016-2030-5. Epub 2016 Mar 11.

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In the pediatric patient, computed tomography (CT) scan as an imaging modality for evaluation of the abdomen is to be used judiciously. The use of correct scanning protocols, single phase scanning, scanning only when required are key factors to minimize radiation doses to the child, while providing diagnostic quality. CT is the preferred modality in the evaluation of trauma, to assess extent of solid organ or bowel injury. It is also useful in several inflammatory conditions such as inflammatory bowel diseases and acute pancreatitis. CT also has an important role in evaluating intra-abdominal tumors, although magnetic resonance imaging (MRI) can be used as an alternative to CT.

DOI: 10.1007/s12098-016-2030-5

**NAT**

PMID:26964550  
CS

**Ebenezer K**(1), Dawodu A(2), Steinhoff M(2).  
Serum Vitamin D Status and Outcome among Critically Ill Children Admitted to the Pediatric Intensive Care Unit in South India: Authors' Reply.  
Indian J Pediatr. 2016 Aug;83(8):912-3. doi: 10.1007/s12098-015-1991-0. Epub 2016 Jan 14.

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DOI: 10.1007/s12098-015-1991-0

NAT

PMID:26762329

CS

**Fischer K**(1), Poonoose P(2), Dunn AL(3), Babyn P(4), Manco-Johnson MJ(5), DavidJA(6), van der Net J(7), Feldman B(8), Berger K(9), Carcao M(10), de KleijnP(11), Silva M(12), Hilliard P(13), Doria A(14), Srivastava A(15), BlanchetteV(10); participants of the International Symposium on Outcome Measures in Hemophilic Arthropathy.

Collaborators: Avila L, Boma-Fischer L, Brandao L, Busch MT, Castro D, Chiu A, Funk S, Luke B, Manco-Johnson M, Mohanta A, Monahan P, St-Louis J, Shupak R, Stimec J, Teitel J, Zourikian N, Bonanad S, Gouw S, Querol F, Santagostino E, Solimeno PL, von Mackensen S, Wells A, Carneiro JD, Gibokte S, Keshava SN, Matta M, Natesirinilkul R, Ozelo M, Poonoose P, Sakamoto F, Sun J, Uchoa M, Wu R.

Choosing outcome assessment tools in haemophilia care and research: a multidisciplinary perspective.

Haemophilia. 2016 Sep 15. doi: 10.1111/hae.13088. [Epub ahead of print]

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Health Services, Child Development and Exercise Center, University Medical Center and Children's Hospital, Utrecht, The Netherlands. (8)Division of Rheumatology, Department of Paediatrics and Child Health Evaluative Sciences, Research Institute, Hospital for Sick Children, University of Toronto, Toronto, ON, Canada. (9)Division of Haematology/Oncology, University Hospital of Munich, Munich, Germany. (10)Division of Haematology/Oncology, Department of Paediatrics and Child Health Evaluative Sciences, Research Institute, Hospital for Sick Children, University of Toronto, Toronto, ON, Canada. (11)Department of Rehabilitation, Nursing Science and Sports, and Van Creveldkliniek, University Medical Center Utrecht, Utrecht, The Netherlands. (12)Department of Orthopaedic Surgery, Orthopaedic Institute for Children, David Geffen School of Medicine at UCLA, Los Angeles, CA, USA. (13)Department of Rehabilitation, Hospital for Sick Children, University of Toronto, Toronto, ON, Canada. (14)Department of Diagnostic Imaging, Research Institute, Hospital for Sick Children, University of Toronto, Toronto, ON, Canada. (15)Department of Haematology, Christian Medical College, Vellore, Tamil Nadu, India.

**INTRODUCTION:** The implementation of early long-term, regular clotting factor concentrate (CFC) replacement therapy ('prophylaxis') has made it possible to offer boys with haemophilia a near normal life. Many different regimens have reported favourable results, but the optimum treatment regimens have not been established and the cost of prophylaxis is very high. Both for optimizing treatment and reimbursement issues, there is a need to provide objective evidence of both short- and long-term results and benefits of prophylactic regimens. **AIMS:** This report presents a critical review of outcome measures for use in the assessment of musculoskeletal health in persons with haemophilia according to the International Classification of Functioning, Disability and Health (ICF). This framework considers structural and functional changes, activities and

participation in a context of both personal and environmental factors. **METHODS:** Results were generated by a combination of a critical review of available literature plus expert opinion derived from a two day consensus conference between 48 health care experts from different disciplines involved in haemophilia assessment and care. Outcome tools used in haemophilia were reviewed for reliability and validity in different patient groups and for resources required.

**RESULTS AND CONCLUSION:** Recommendations for choice of outcome tools were made according to the ICF domains, economic setting, and reason for use (clinical or research). The next step will be to identify a 'core' set of outcome measures for use in clinical care or studies evaluating treatment. © 2016 The Authors. Haemophilia Published by John Wiley & Sons Ltd. DOI: 10.1111/hae.13088

**INTL**

**PMID:**27633342

**CS**

**Garge S(1), Keshava SN(1), Moses V(1), Mammen S(1), Ahmed M(1), Chiramel GK(1), Cherian V(2), Manasseh N(2), George B(3), Mathews V(3), Abraham A(3), Viswabandya A(3), Srivastava A(3), Gibikote S(1).** Role of endovascular embolization in treatment of acute bleeding complications in haemophilia patients. *Br J Radiol.* 2016 Jul 12:20151064. [Epub ahead of print]

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**OBJECTIVE:** Bleeding complications either spontaneously or post-operatively are very common in patients with haemophilia. Sometimes these bleeding complications remain unresponsive despite being on high dose of clotting factor replacement. The aim was to assess the role of endovascular embolization in patients with haemophilia in (a) treating haemorrhagic complications due to local causes refractory to clotting factors substitution and (b) reducing intraoperative blood loss in elective pseudotumour surgery.

**METHODS:** 10 patients seen between January 2000 and April 2015 with severe haemophilia A or B who had unexplained profuse persistent bleeding or required large pseudotumour excision and were taken up for digital subtraction angiography and embolization were included in the study. Data of all these patients were reviewed using the computerized hospital information system and picture archiving and communication system. Details including indications for the procedure, patient preparation for the procedure, imaging findings, details of angiography with intervention, if any, and outcome as well as follow-up data were analyzed. **RESULTS:** In 6 of these 10 cases, bleeding was spontaneous, in 2 cases due to trivial fall and in 2 cases due to post-operative bleeding. Angiography in these patients revealed vascular blush, abnormal hypervascularity or active extravasation. In all 10 patients, an embolization procedure was performed, with bleeding controlled in

8 patients. There were no procedure-related complications during the procedure, post-procedure bleeding or haematoma at the site of arterial access. One patient had recurrence of bleeding for whom surgical exploration was required, and one patient had significant bleeding intraoperatively which was controlled with high-dose clotting factors, blood transfusion and fresh frozen plasma intraoperatively. **CONCLUSION:** Endovascular embolization is a safe, effective and cost-saving procedure in arresting bleeding in selected patients with severe haemophilia who are unresponsive to adequate clotting factor replacement and where local vascular causes could be contributing to the bleeding. Pre-operative embolization is also a good procedure to reduce intraoperative blood loss in patients with large pseudotumours. **ADVANCES IN KNOWLEDGE:** Angiography and embolization in patients with haemophilia is technically challenging and should be performed by highly skilled interventional radiologists, which limits its wider use and familiarity among multidisciplinary teams managing haemophilia. By bringing the knowledge of this effective treatment to the specialist groups who care for patients with haemophilia, its wider application may be possible which can save life and/or reduce morbidity. DOI: 10.1259/bjr.20151064

**INTL**

**PMCID:** PMC5124877 **PMID:**27327402

**CS**

**Garge S(1), Keshava SN(2), Moses V(2).** Cannula-Assisted, Transabdominal Ultrasound-Guided Inferior Vena Cava Recanalization in Inferior Vena Cava Occlusion. *Curr Probl Diagn Radiol.* 2016 Aug 3. pii: S0363-0188(16)30029-9. doi:10.1067/j.cpradiol.2016.07.003. [Epub ahead of print]

**Author information:** (1)Department of Radiology, Christian Medical College, Vellore, India. Electronic address: drshaileshgarge@gmail.com. (2)Department of Radiology, Christian Medical College, Vellore, India.

We describe a novel technique for facilitating recanalization of intrahepatic inferior vena cava (IVC) via the transjugular approach in patients with short segmental hepatic IVC occlusion, where a transjugular liver biopsy cannula provides additional support to the catheter-wire combination and trans-abdominal ultrasound helps in positioning the tip of the cannula at the

stump of suprahepatic IVC. Copyright © 2016 Elsevier Inc. All rights reserved.

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**INTL**

**PMID:**27667701

**CS**

**George AJ**(1), Nair S(2), Karthic JC(3), Joseph M(2).

The incidence of deep venous thrombosis in high-risk Indian neurosurgical patients: Need for early chemoprophylaxis?

Indian J Crit Care Med. 2016 Jul;20(7):412-6. doi: 10.4103/0972-5229.186223.

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**INTRODUCTION:** Deep venous thrombosis (DVT) is thought to be less common in Asians than in Caucasian population. The incidence of DVT in high-risk groups, especially the neurosurgical (NS) patients, has not been well studied. This leaves no firm basis for the start of early prophylactic anticoagulation within first 5 postoperative days in Indian NS patients. This is a prospective observational study to determine the early occurrence of DVT in the NS patients.

**PATIENTS AND METHODS:** We screened 137 consecutive high-risk NS patients based on inclusion and exclusion criteria. The femoral veins were screened using Doppler ultrasound on day 1, 3, and 5 of admission into the NS Intensive Care Unit (ICU) at tertiary center from South India.

**RESULTS:** Among 2887 admissions to NICU 147 patients met inclusion criteria. One hundred thirty seven were screened for DVT. There was a 4.3% (6/137) incidence of DVT with none of the six patients having signs or symptoms of pulmonary embolism. Among the risk factors studied, there was a significant association with femoral catheterization and a probable association with weakness/paraparesis/paraplegia. The mortality in the study group was 10.8% with none attributable to DVT or pulmonary embolism.

**CONCLUSION:** There is a low incidence of DVT among the high risk neurosurgical population evaluated within the first 5 days of admission to NICU, limiting the need for early chemical thrombo-prophylaxis in these patients. With strict protocols for mechanical prophylaxis with passive leg exercise, early mobilization and serial femoral Doppler screening, heparin anticoagulation can be restricted within the first 5 days of ICU admission in high risk patients.

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**NAT**

**PMCID:** PMC4968064 **PMID:**27555696

**CS**

**George L**(1), Peter D(1), Chopra M(1), George B(2), Abraham A(2), Mathews V(2),Srivastava A(2), Pulimood SA(1).

Efficacy of narrow band UVB in the treatment of cutaneous GvHD: an Indian experience.

Bone Marrow Transplant. 2016 Jul;51(7):988-90. doi: 10.1038/bmt.2016.13. Epub 2016 Feb 22.

**Author information:**

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**INTL**

**PMID:**26901707

**CS**

**George R**(1), Kandasamy R(2).

A Space to Heal.

J Clin Oncol. 2016 Sep 20;34(27):3349-50. doi: 10.1200/JCO.2016.68.6816. Epub 2016 Aug 1.

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DOI: 10.1200/JCO.2016.68.6816

**INTL**

**PMID:**27480151

**CS**

**Gouse M**(1), Albert S, Inja DB, Nithyananth M.

Incidence and predictors of radial nerve palsy with the anterolateral brachialis splitting approach to the humeral shaft.

Chin J Traumatol. 2016 Aug 1;19(4):217-20.

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**PURPOSE:** Fractures of the humeral shaft are common and account for 3%-5% of all orthopedic injuries. This study aims to estimate the incidence of radial nerve palsy and its outcome when the anterior approach is employed and to analyze the predictive factors. **METHODS:** The study was performed in the department of orthopaedics unit of a tertiary care trauma referral center. Patients who underwent surgery for acute fractures and nonunions of humerus shaft through an anterior

approach from January 2007 to December 2012 were included. We retrospectively analyzed medical records, including radiographs and discharge summaries, demographic data, surgical procedures prior to our index surgery, AO fracture type and level of fracture or nonunion, experience of the operating surgeon, time of the day when surgery was performed, and radial nerve palsy with its recovery condition. The level of humerus shaft fracture or nonunion was divided into upper third, middle third and lower third. Irrespective of prior surgeries done elsewhere, the first surgery done in our institute through an anterior approach was considered as the index surgery and subsequent surgical exposures were considered as secondary procedures.

**RESULTS:** Of 85 patients included, 19 had preoperative radial nerve palsy. Eleven (16%) patients developed radial nerve palsy after our index procedure. Surgeons who have two or less than two years of surgical experience were 9.2 times more likely to induce radial nerve palsy ( $p=0.002$ ). Patients who had surgery between 8 p.m. and 8 a.m. were about 8 times more likely to have palsy ( $p=0.004$ ). The rest risk factor is AO type A fractures, whose incidence of radial nerve palsy was 1.3 times as compared with type B fractures ( $p=0.338$ ). For all the 11 patients, one was lost to follow-up and the others recovered within 6 months. **CONCLUSION:** Contrary to our expectations, secondary procedures and prior multiple surgeries with failed implants and poor soft tissue were not predictive factors of postoperative deficit. From our study, we also conclude that radial nerve recovery can be reasonably expected in all patients with a postoperative palsy following the anterolateral approach.

#### INTL

**PMCID:** PMC4992102 **PMID:** 27578378

#### CS

**Grassly NC**(1), Praharaj I(2), Babji S(2), Kaliappan SP(2), Giri S(2), VenugopalS(2), Parker EP(3), Abraham A(2), Muliyl J(2), Doss S(2), Raman U(2), Liu J(4), Peter JV(2), Paranjape M(2), Jeyapaul S(2), Balakumar S(2), Ravikumar J(2), Srinivasan R(2), Bahl S(5), Iturriza-Gómara M(6), Uhlig HH(7), Houpt ER(4), JohnJ(2), Kang G(2).

The effect of azithromycin on the immunogenicity of oral poliovirus vaccine: a double-blind randomised placebo-controlled trial in seronegative Indian infants. *Lancet Infect Dis.* 2016 Aug;16(8):905-14. doi: 10.1016/S1473-3099(16)30023-8. Epub 2016 May 4.

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Medical College, Vellore, Tamil Nadu, India. (3)Department of Infectious Disease Epidemiology, Imperial College London, London, UK. (4)Division of Infectious Diseases and International Health, University of Virginia School of Medicine, Charlottesville, VA, USA. (5)WHO Regional Office for South-East Asia, New Delhi, India. (6)Institute of Infection and Global Health, and NIHR Health Protection Research Unit in Gastrointestinal Infection, University of Liverpool, Liverpool, UK. (7)Translational Gastroenterology Unit, Nuffield Department of Medicine, and Department of Paediatrics, University of Oxford, Oxford, UK.

**BACKGROUND:** Oral poliovirus vaccine is less immunogenic and effective in low-income countries than in high-income countries, similarly to other oral vaccines. The high prevalence of intestinal pathogens and associated environmental enteropathy has been proposed to explain this problem. Because administration of an antibiotic has the potential to resolve environmental enteropathy and clear bacterial pathogens, we aimed to assess whether antibiotics would improve oral poliovirus vaccine immunogenicity. **METHODS:** We did a double-blind, randomised, placebo-controlled trial of the effect of azithromycin on the immunogenicity of serotype-3 monovalent oral poliovirus vaccine given to healthy infants living in 14 blocks of Vellore district, India. Infants were eligible to participate if they were 6-11 months old, available for the study duration, and lacked serum neutralising antibodies to serotype-3 poliovirus. Infants were randomly assigned (1:1) at enrolment to receive oral 10 mg/kg azithromycin or placebo once daily for 3 days, followed by serotype-3 monovalent oral poliovirus vaccine on day 14. The primary outcome was detection of serum neutralising antibodies to serotype-3 poliovirus at a dilution of one in eight or more on day 35 and was assessed in the per-protocol population (ie, all those who received azithromycin or placebo, oral poliovirus vaccine, and provided a blood sample according to the study protocol). Safety outcomes were assessed in all infants enrolled in the study. The trial is registered with the Clinical Trials Registry India, number CTRI/2014/05/004588. **FINDINGS:** Between Aug 5, 2014, and March 21, 2015, 754 infants were randomly assigned: 376 to receive azithromycin and 378 to placebo. Of these, 348 (93%) of 376 in the azithromycin group and 357 (94%) of 378 infants in the placebo group completed the study per protocol. In the azithromycin group, 175 (50%) seroconverted to

serotype-3 poliovirus compared with 192 (54%) in the placebo group (risk ratio 0.94, 95% CI 0.81-1.08;  $p=0.366$ ). Azithromycin reduced faecal biomarkers of environmental enteropathy (calprotectin, myeloperoxidase,  $\alpha$ 1-antitrypsin) and the prevalence of bacterial but not viral or eukaryotic pathogens. Viral pathogens were associated with lower seroconversion. Three serious adverse events were reported (two in the azithromycin group and one in the placebo group), but none was considered related to the study interventions. **INTERPRETATION:** Azithromycin did not improve the immunogenicity of oral poliovirus vaccine despite reducing biomarkers of environmental enteropathy and the prevalence of pathogenic intestinal bacteria. Viral interference and innate antiviral immune mechanisms might be more important determinants of the immunogenicity of live-virus oral vaccines. **FUNDING:** Bill & Melinda Gates Foundation. Copyright © 2016 Elsevier Ltd. All rights reserved. DOI: 10.1016/S1473-3099(16)30023-8

**INTL**

**PMID:**27156189

**CS**

**Gupta PK**(1), Krishna M(2), Chullikana A(3), Desai S(4), Murugesan R(5), DuttaS(6), Sarkar U(7), Raju R(8), Dhar A(9), Parakh R(10), Jeyaseelan L(11), Viswanathan P(3), Vellotare PK(3), Seetharam RN(3), Thej C(12), Rengasamy M(3), Balasubramanian S(3), Majumdar AS(3).

Administration of Adult Human Bone Marrow-Derived, Cultured, Pooled, Allogeneic Mesenchymal Stromal Cells in Critical Limb Ischemia Due to Buerger's Disease: Phase II Study Report Suggests Clinical Efficacy.

Stem Cells Transl Med. 2016 Oct 5. pii: sctm.2016-0237. [Epub ahead of print]

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Biostatistics, Christian Medical College, Vellore, India. (12) Stempeutics Research, Bangalore, India  
Manipal University, Manipal, India. :

Critical limb ischemia (CLI) due to Buerger's disease is a major unmet medical need with a high incidence of morbidity. This phase II, prospective, nonrandomized, open-label, multicentric, dose-ranging study was conducted to assess the efficacy and safety of i.m. injection of adult human bone marrow-derived, cultured, pooled, allogeneic mesenchymal stromal cells (BMMSC) in CLI due to Buerger's disease. Patients were allocated to three groups: 1 and 2 million cells/kg body weight (36 patients each) and standard of care (SOC) (18 patients). BMMSCs were administered as 40-60 injections in the calf muscle and locally, around the ulcer. Most patients were young (age range, 38-42 years) and ex-smokers, and all patients had at least one ulcer. Both the primary endpoints—reduction in rest pain (0.3 units per month [SE, 0.13]) and healing of ulcers (11% decrease in size per month [SE, 0.05])—were significantly better in the group receiving 2 million cells/kg body weight than in the SOC arm. Improvement in secondary endpoints, such as ankle brachial pressure index (0.03 [SE, 0.01] unit increase per month) and total walking distance (1.03 [SE, 0.02] times higher per month), were also significant in the group receiving 2 million cells/kg as compared with the SOC arm. Adverse events reported were remotely related or unrelated to BMMSCs. In conclusion, i.m. administration of BMMSC at a dose of 2 million cells/kg showed clinical benefit and may be the best regimen in patients with CLI due to Buerger's disease. However, further randomized controlled trials are required to confirm the most appropriate dose. **SIGNIFICANCE:** Critical limb ischemia (CLI) due to Buerger's disease presents a major unmet medical need. The limited therapeutic options lead to increased morbidity and mortality. This study showed that use of adult human bone marrow-derived, cultured, pooled, allogeneic mesenchymal stromal cells is safe and efficacious when the cells are injected intramuscularly at a dose of 2 million cells/kg body weight in patients with CLI. Rest pain and ulcer healing significantly improved in most patients. This regimen may be a novel therapeutic option for Buerger's disease. ©AlphaMed Press. DOI: 10.5966/sctm.2016-0237

**INTL**

**PMID:**27708131

**CS**

**Hernandez AL**(1), Karthik R, Sivasubramanian M, Raghavendran A, Gnanamony M, Lensing S, Lee JY, Kannangai R, Abraham P, Mathai D, Palefsky JM. Prevalence of Anal HPV Infection Among HIV-Positive Men Who Have Sex With Men in India. *J Acquir Immune Defic Syndr*. 2016 Apr 1;71(4):437-43. doi:10.1097/QAI.0000000000000855.

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(1)\*Department of Medicine, University of California, San Francisco, CA; †School of Public Health, Department of Epidemiology, University of California, Berkeley, CA; ‡Department of Medicine, Christian Medical College, Vellore, India; §The Humsafar Trust, Mumbai, India; ||Department of Clinical Virology, Christian Medical College, Vellore, India; ¶Department of Cancer Biology and Pharmacology, University of Illinois, Chicago, IL; #Department of Biostatistics, University of Arkansas for Medical Sciences, Little Rock, Arkansas; and \*\*Apollo Institute of Medical Sciences and Research, Hyderabad, India. **BACKGROUND:** India has a large population of HIV-positive individuals, including men who have sex with men (MSM), and the incidence of human papillomavirus (HPV)-related cancers is high. In developed countries, HIV-positive MSM exhibit the highest prevalence of anal HPV infection and incidence of anal cancer. Little is known about anal HPV infection in HIV-positive Indian MSM. **METHODS:** We evaluated 300 HIV-positive MSM from 2 cities in India. Men were tested for anal HPV infection using L1-HPV DNA polymerase chain reaction with probes specific for 29 types and a mixture of 10 additional types. CD4 level and plasma HIV viral load were measured. Participants completed an interviewer-administered questionnaire including a sexual history. **RESULTS:** The prevalence of anal HPV was 95% (95% confidence interval: 91% to 97%). The 3 most common types were HPV 35 (20%), HPV 16 (13%), and HPV 6/11 (13%). History of taking antiretroviral medications decreased risk of anal HPV 16 infection [relative risk (RR): 0.6 (0.4-1.0)]. Having an increased number of vaginal sex partners lowered risk of any anal HPV infection. Ever having receptive sex increased risk of any anal HPV [RR: 1.2 (1.1-1.4)] and anal HPV 16 [RR: 6.5 (1.8-107)]. **CONCLUSIONS:** Almost all Indian HIV-positive MSM had anal HPV infection. The prevalence of HPV 16 was lower and the prevalence of other oncogenic HPV types was higher than in similar populations in North America and Europe. Vaccine-based prevention strategies for HPV infection in India should consider potential differences in HPV type distribution among HIV-infected MSM when designing interventions. DOI: 10.1097/QAI.0000000000000855

**INTL**

**PMCID: PMC4939069 PMID:26379067**

**CS**

**Ishitha G**(1), Manipadam MT(2), Backianathan S(3), Chacko RT(4), Abraham DT(5), Jacob PM(6). Clinicopathological Study of Triple Negative Breast Cancers. *J Clin Diagn Res*. 2016 Sep;10(9):EC05-EC09. Epub 2016 Sep 1.

#### Author information:

(1)Assistant Professor, Department of Pathology, CMC, Vellore, Tamil Nadu, India. (2)Professor, Department of Pathology, CMC, Vellore, Tamil Nadu, India. (3)Professor and Head of Department, Department of Radiation Therapy, CMC, Vellore, Tamil Nadu, India. (4)Professor and Head of Department, Department of Medical Oncology, CMC, Vellore, Tamil Nadu, India. (5)Professor, Department of Endocrine Surgery, CMC, Vellore, Tamil Nadu, India. (6)Professor and Head, Department of Endocrine Surgery, CMC, Vellore, Tamil Nadu, India.

**INTRODUCTION:** Triple Negative Breast Cancers (TNBC) are a subset of breast cancers which are composed of different molecular subtypes. The most common is the basal like subtype, which has an adverse prognosis and limited treatment options.

**AIM:** This study was undertaken to assess the clinico-pathologic and immunohistochemical subtypes of triple negative breast cancers and assess how each of these subtypes correlate with clinical behaviour and survival outcomes.

**MATERIALS AND METHODS:** Fifty-three (22.2%) of 238 cases of primary invasive breast carcinomas diagnosed from January 2010 to June 2011 were found to be negative for immunohistochemical markers- ER, PR and HER2. These fifty three cases were included in the study and were classified into four histological subtypes proposed by Ishikawa et al. Basal markers- CK5/6, EGFR and CK14 were done on these cases and they were further classified immunohistochemically into basal and non basal subtypes. The morphological features, disease free survival and overall survival were evaluated for both basal and non basal subtypes.

**RESULTS:** Majority (96%) of TNBC cases were classified according to WHO as invasive ductal carcinoma (NOS). Type C Ishikawa histological subtype was found to be the commonest subtype in both basal and non-basal TNBC. Of 53 TNBC cases, basal immunohistochemical markers were performed on 47 cases only because of paucity of tissue. Of these 47 cases, thirty-five (74.4%) were found to be of basal like subtype and all these

cases were picked up by a combination of CK5/6 and EGFR.

**CONCLUSION:** High grade morphological features, hormonal markers with additional use of basal markers can help identify the basal like subtype of TNBC, thereby predicting breast cancer survival. The combination of CK5/6 and EGFR identified all cases of basal subtype. EGFR in addition also has potential therapeutic implications. The morphological features and survival outcomes were not significantly different between basal and non-basal phenotypes.

DOI: 10.7860/JCDR/2016/20475.8539

**NAT**

**PMCID:** PMC5071942 **PMID:**27790442

**CS**

**J. C.Park, N. M. Gandhi, M. A. Carducci, M. A. Eisenberger, A. S. Baras, G. J. Netto, J. J. Liu, C. G. Drake, M. P. Schoenberg, T. J. Bivalacqua and N. M. Hahn Birendra R(1), Kekre NS(1)**

A Retrospective Analysis of the Effect on Survival of Time from Diagnosis to Neoadjuvant Chemotherapy to Cystectomy for Muscle Invasive Bladder Cancer

J Urol. 2016 Oct;196(4):1318-9. doi:

10.1016/j.juro.2016.05.096. Epub 2016 Jul 6.

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(1)Department of Urology, Christian Medical College and Hospital, Vellore, Tamilnadu, India DOI: 10.1016/j.juro.2016.05.096

**INTL**

**PMID:**27393900

**CS**

**Jacob J(1), Joseph TK, Srinivasan R, Kompithra RZ, Simon A, Kang G.**

Direct and Indirect Costs of Pediatric Gastroenteritis in Vellore, India.

Indian Pediatr. 2016 Jul 8;53(7):642-4.

**Author information:**

(1)Division of Gastrointestinal Sciences, and \*Department of Child Health; Christian Medical College, Vellore, Tamil Nadu, India. Correspondence to: Dr Gagandeep Kang, Division of Gastrointestinal Sciences, Christian Medical College, Vellore, TN 632 004, India. gkang@cmcvellore.ac.in.

**OBJECTIVE:** To determine costs of pediatric gastroenteritis in out-patient and in-patient facilities.

**METHODS:** Cross-sectional survey of children with acute gastroenteritis attending out-patient clinic (n=30) or admitted in the ward (n=30) for management in the Christian Medical College, Vellore, India from July-September 2014 to estimate direct (drugs, tests, consultation/hospitalization) and

indirect (travel, food, lost wages) costs associated with the episode.

**RESULTS:** Median direct and indirect costs were Rs 590 and Rs 190 for out-patient management and Rs 7258 and Rs. 610 for hospitalization, constituting 1.1% and 11% of median annual household income, respectively.

**CONCLUSIONS:** Escalating healthcare costs need tracking for evaluation of interventions.

**NAT**

**PMID:**27508545

**CS**

**Jayasree D(1), Shaji RV(1), George B(1), Mathews V(1), Srivastava A(1), EdisonES(1).**

Clinical, Hematological and Molecular Analysis of Homozygous Hb E (HBB:c.79G>A) in the Indian Population.

Hemoglobin. 2016;40(1):16-9. doi:

10.3109/03630269.2015.1086880. Epub 2015 Nov11.

**Author information:**

(1)a Department of Haematology , Christian Medical College , Vellore , Tamil Nadu , India.

Homozygous Hb E [ $\beta$ 26(B8)Glu→Lys; HBB: c.79G>A] is a clinically mild disease with no significant symptoms. Very few studies are available on clinical variability in Hb E disorders. We report the profile of a series of homozygous Hb E patients in the Indian population. We analyzed various genetic factors that contribute to the heterogeneity in the phenotype of homozygous Hb E patients. Analysis of these parameters further enhances our understanding of the Hb E syndrome. DOI: 10.3109/03630269.2015.1086880

**INTL**

**PMID:**26554862

**CS**

**Jeyaseelan L(1), Yadav B(1), Silambarasan V(1), Vijayaselvi R(2), Jose R(3).**

Large for Gestational Age Births Among South Indian Women: Temporal Trend and Risk Factors from 1996 to 2010.

J Obstet Gynaecol India. 2016 Oct;66(Suppl 1):42-50. doi:10.1007/s13224-015-0765-y. Epub 2015 Sep 8.

**Author information:**

(1)Department of Biostatistics, Christian Medical College, Vellore, 632002 India. (2)Obstetrics and Gynaecology Unit IV, Christian Medical College, Vellore, 632002 India. (3)Obstetrics and Gynaecology Unit IV, Christian Medical College, Vellore, 632002 India ; Department of Obstetrics

and Gynecology Unit IV, Christian Medical College, Vellore, 632004 India.

**BACKGROUND/PURPOSE:** Mean birth weight is a good health indicator for any population. In the recent past, there have been many reports in the West indicating that there has been an increase in the proportion of large for gestational age (LGA) babies. The objective is to describe the change in the incidence of LGA babies from 1996 to 2010 in South India and the maternal risk factors.

**METHODS:** A rotational sampling scheme was used, i.e., the 12 months of the year were divided into 4 quarters and a month was from each quarter was selected rotationally. All deliveries for that month were considered. Only deliveries that occurred between 28 and 42 weeks of pregnancy were considered. The association between risk variables was studied using multivariable logistic regression.

**RESULTS:** There were 35,718 deliveries that occurred during these 15-year-study period in the gestational age 28-42 weeks were registered through the outpatient clinics. The incidence of LGA was 9.4 % that has mostly remained at the same level. The incidence of LGA in mothers with gestational diabetes was 6.7, 3 and 17.6 % in overweight, obese and gestational 1 diabetes mothers. Overweight, obesity in pregnant women and cesarean section were significant risk factors.

**CONCLUSION:** Unlike in Western countries, where the incidence of LGA babies has spiraled upward, has remained nearly at the same level over one and a half decades, in South India. The risk factors for giving birth to LGA babies in South India were similar to other studies.

DOI: 10.1007/s13224-015-0765-y

**NAT**

**PMCID: PMC5016405 PMID:27651576**

**CS**

**Jose J(1), Manik G(2), Abdel-Wahab M(3).**

Setting up a transcatheter aortic valve implantation program: Indian perspective.

Indian Heart J. 2016 Sep - Oct;68(5):732-736. doi: 10.1016/j.ihj.2015.12.006. Epub 2016 Jan 11.

**Author information:**

(1)Herzzentrum, Segeberger Kliniken GmbH, Academic Teaching Hospital of the Universities of Kiel and Hamburg, Bad Segeberg, Germany; Christian Medical College Hospital, Vellore, India. Electronic address: drjohnjose@gmail.com. (2)Christian Medical College Hospital, Vellore, India. (3)Herzzentrum, Segeberger Kliniken GmbH, Academic Teaching Hospital of the Universities of Kiel and Hamburg, Bad Segeberg, Germany.

Transcatheter aortic valve implantation (TAVI) has revolutionized the management of elderly patients with symptomatic severe aortic stenosis in the western world. It is a valuable alternative to surgical aortic valve replacement in patients, who are inoperable or at high surgical risk due to comorbidities. The prevalence of aortic stenosis increases sharply with age after the sixth decade and is expected to have a significant impact on the geriatric health care system of India, given the rapid increase in life expectancy in recent years. Although a decade has passed since the first TAVI implantation, it is yet to penetrate most of the developing countries in a major way. This short review focuses on fundamentals of initiating a TAVI program based on the experience of a high volume TAVI center with a successful program in Germany.

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**NAT**

**PMCID: PMC5079126 PMID:27773417**

**CS**

**Joseph M(1), Shyamasunder AH(1), Gupta RD(1), Anand V(1), Thomas N(1).**

Demographic details, clinical features, and nutritional characteristics of young adults with Type 1 diabetes mellitus - A South Indian tertiary center experience.

Indian J Endocrinol Metab. 2016 Nov-Dec;20(6):799-804.

**Author information:**

(1)Department of Endocrinology, Diabetes and Metabolism, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

**CONTEXT:** Type 1 diabetes mellitus (T1DM) accounts for 5-10% of all diagnosed diabetes and the highest incidence is found in India.

**AIMS:** The main objectives were to study the demographic, clinical, and nutritional characteristics of young adults with T1DM and its effect glycosylated hemoglobin levels.

**SUBJECTS AND METHODS:** This cross-sectional study was conducted among young adults with T1DM (18-45 years of age) in a tertiary hospital in South India. Data were obtained from updated medical records. The dietary data were assessed from food diaries and 24 h recall method. Anthropometry was determined.

**RESULTS:** The analysis revealed that socio-economic variables did not affect the glycosylated hemoglobin levels. The mean glycosylated hemoglobin value was  $8.81 \pm 2.38\%$ . Nearly, half

the patients were malnourished. The overall dietary intake was inadequate. The multivariate regression model, adjusted for confounding factors such as gender, age, and body mass index, revealed that only duration of diabetes and protein intake were significant predictors of glycosylated hemoglobin status ( $P < 0.005$ ).

**CONCLUSION:** Integrated care provided at subsidized cost has been pivotal in effective diabetes management. However, there is an urgent need to educate our patients on nutrition therapy. T1DM patients need specialized advice to ensure appropriately balanced nutrition that has a significant impact on their long-term glycemic control.

DOI: 10.4103/2230-8210.192895

**NAT**

**PMID:**27867883

**CS**

**Kalampokas** T(1), Kamath M(2), Boutas I(1), Kalampokas E(3).

Ulipristal acetate for uterine fibroids: a systematic review and meta-analysis.

Gynecol Endocrinol. 2016;32(2):91-6. doi: 10.3109/09513590.2015.1106471. Epub2015 Nov 16.

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(1)a Second Department of Obstetrics and Gynecology, University of Athens, "Aretaieion" Hospital, Athens, Greece. (2)b Reproductive Medicine Unit, Christian Medical College, Vellore, Tamil Nadu, India, and. (3)c Gynaecological Oncology Department, University of Aberdeen, Aberdeen, UK.

Ulipristal acetate (UA), a selective progesterone modulator, has been approved for short-term therapy for symptomatic fibroids. We decided to undertake a systematic review of the best available evidence and draw a more definitive conclusion regarding the efficacy of UA for the management of uterine fibroids. The outcomes included symptomatic relief, quality of life-related parameters, reduction in fibroid size, side effects and recurrence rate. We included four randomised controlled trials which consisted of three trials which compared UA with placebo, and one trial compared it with gonadotropin-releasing hormone analogues for symptomatic relief. The three trials comparing UA with placebo reported significant improvement in symptoms related to excessive uterine bleeding as evidenced by the attainment of amenorrhea or reduction in pictorial blood assessment chart. However, due to the heterogeneity of the available data, a meta-analysis was possible only for one the outcomes - attainment of amenorrhea which indicated improvement in symptoms [57.88 (19.81-169.16);  $p < 0.00001$ ]. The improved quality of life parameters and reduction in fibroid size was

noted in the UA group. With regards to adverse events, even though the three included studies reported increased non-physiological endometrial-related changes following UA, these changes reverted back to normal within 6 months. Short-term use of UA seems to be an effective and safe method of treating uterine fibroids. DOI: 10.3109/09513590.2015.1106471

**INT**

**PMID:**26572056

**CS**

**Kaliappan** SP(1), Venugopal S(2), Giri S(3), Praharaj I(4), Karthikeyan AS(5), Babji S(6), John J(7), Muliyl J(8), Grassly N(9), Kang G(10).

Factors determining anti-poliovirus type 3 antibodies among orally immunized Indian infants.

Vaccine. 2016 Sep 22;34(41):4979-84. doi: 10.1016/j.vaccine.2016.08.032. Epub2016 Aug 24.

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**BACKGROUND:** Among the three poliovirus serotypes, the lowest responses after vaccination with trivalent oral polio vaccine (tOPV) are to serotype 3. Although improvements in routine

immunisation and supplementary immunisation activities have greatly increased vaccine coverage, there are limited data on antibody prevalence in Indian infants. **METHODS:** Children aged 5-11 months with a history of not having received inactivated polio vaccine were screened for serum antibodies to poliovirus serotype 3 (PV3) by a micro-neutralisation assay according to a modified World Health Organization (WHO) protocol. Limited demographic information was collected to assess risk-factors for a lack of protective antibodies. Student's t-test, logistic regression and multilevel logistic regression (MLR) model were used to estimate model parameters. **RESULTS:** Of 8454 children screened at a mean age of 8.3 (standard deviation [SD]-1.8) months, 88.1% (95% confidence interval (CI): 87.4-88.8) had protective antibodies to PV3. The number of tOPV doses received was the main determinant of seroprevalence; the maximum likelihood estimate yields a 37.7% (95% CI: 36.2-38.3) increase in seroprevalence per dose of tOPV. In multivariable logistic regression analysis increasing age, male sex, and urban residence were also independently associated with seropositivity (Odds Ratios (OR): 1.17 (95% CI: 1.12-1.23) per month of age, 1.27 (1.11-1.46) and 1.24 (1.05-1.45) respectively). **CONCLUSION:** Seroprevalence of antibodies to PV3 is associated with age, gender and place of residence, in addition to the number of tOPV doses received. Ensuring high coverage and monitoring of response are essential as long as oral vaccines are used in polio eradication. Copyright © 2016 The Author(s). Published by Elsevier Ltd.. All rights reserved. DOI: 10.1016/j.vaccine.2016.08.032

INTL

PMCID: PMC5038128 PMID:27566901

CS

**Kamath MS(1)**, Pradhan S(1), Edison ES(2), Velayudhan SR(2), Antonisamy B(3), Karthikeyan M(1), Mangalaraj AM(1), Kunjummen A(1), George K(4).

Chorionic villous sampling through transvaginal ultrasound approach: A retrospective analysis of 138 cases.

J Obstet Gynaecol Res. 2016 Oct;42(10):1229-1235. doi: 10.1111/jog.13070. pub2016 Jun 29.

**Author information:**

(1)Reproductive Medicine Unit, Christian Medical College, Vellore, India. (2)Department of Haematology, Christian Medical College, Vellore, India. (3)Department of Biostatistics, Christian Medical College, Vellore, India. (4)Reproductive medicine Unit, Bangalore Baptist Hospital, Bangalore, India. [gkorula@gmail.com](mailto:gkorula@gmail.com).

**AIM:** The aim of this study was to evaluate the effectiveness and safety of a transvaginal approach for chorionic villous sampling (CVS). **METHODS:** We carried out a retrospective data analysis of all the transvaginal CVS procedures performed for the purpose of prenatal diagnosis in a university-level referral center between January 2000 and December 2014. Women underwent the prenatal testing between 10 and 17 weeks of gestation mainly for hematological disorders involving single gene defects. The main outcomes were successful sampling rate, maternal contamination rate, post-procedure complications rates, and immediate fetal loss rate (<14 days post-procedure). **RESULTS:** A total of 1138 transvaginal CVS were performed during the study period and were available for analysis. The sampling success rate after the first attempt was 98.5% (1121/1138) and the overall success rate was 99.6% (1133/1138). The maternal contamination rate was 0.4% (5/1138). While two patients had vaginal bleeding (0.2%), fresh retroplacental collection was noted in four patients (0.4%) post-procedure. None of the patients developed ascending uterine infection following CVS. The immediate fetal loss rate was 0.2% (2/1138).

**CONCLUSION:** Transvaginal approach is associated with high sampling success, along with low rates of maternal contamination and post-procedure complications; hence, it can be offered as an effective alternative method of CVS. © 2016 Japan Society of Obstetrics and Gynecology. DOI: 10.1111/jog.13070

INTL

PMID:27352773

CS

**Kang G(1)**, Thuppall SV, Srinivasan R, Sarkar R, Subashini B, Venugopal S, Sindhu K, Anbu D, Parez N, Svensson L, Bose A.

Racecadotril in the Management of Rotavirus and Non-rotavirus Diarrhea in Under-five Children: Two Randomized, Double-blind, Placebo-controlled Trials.

Indian Pediatr. 2016 Jul 8;53(7):595-600.

**Author information:**

(1)Departments of Gastrointestinal Sciences, Christian Medical College, Vellore, India; \*Service des Urgences Pédiatriques, Hôpital d'enfants Armand Trousseau, Assistance Publique-Hopitaux de Paris, Paris, France; #Division of Molecular Virology, Department of Clinical and Experimental Medicine, Medical Faculty, Linköping University, Linköping, Sweden; and \$Community Health, Christian Medical College, Vellore, India. Correspondence to: Dr. Gagandeep Kang,

Professor and Head, Division of Gastrointestinal Sciences, Christian Medical College, Vellore, India. [gkang@cmcvellore.ac.in](mailto:gkang@cmcvellore.ac.in).

**OBJECTIVE:** To study the effect of racecadotril on reduction in the duration of acute rotavirus and non-rotavirus diarrhea.

**DESIGN:** Two randomized double-blind placebo-controlled trials.

**SETTING:** Community-based trial in an urban area in Vellore, hospital-based trial at a secondary hospital in Vellore.

**PARTICIPANTS:** 199 and 130 3-59 month old children in the community- and hospital-based trials, respectively.

**METHODS:** Racecadotril (1.5 mg/kg/dose, thrice a day for three days) or placebo were given to manage acute diarrhea in both trials.

**MAIN OUTCOME MEASURE:** Median duration of diarrhea.

**RESULTS:** Among 124 children completing the hospital trial, the median duration of diarrhea was 25 h in both arms (P=0.5); median total stool weight was 74 g/kg and 53.5 g/kg in racecadotril group and placebo group, respectively (P=0.4); and average fluid intake per day was 3.6 mL/kg/h and 3mL/kg/h in racecadotril and placebo arms, respectively (P=0.3). Among rotavirus-positive children, median duration of diarrhea was 26.9 h and 30.2 h in racecadotril and placebo arms, respectively (P=0.7). In the community, 196 completed the trial, the median duration of diarrhea was 2 days for both arms (P=0.8) and rotavirus positive children had similar outcomes with median diarrheal duration of 3 d in both arms (P=0.4). **CONCLUSIONS:** Treatment with racecadotril did not reduce diarrheal duration, stool volume or the requirement for fluid replacement in children with acute gastroenteritis, both with and without rotavirus infection.

**NAT**

**PMID:**27508536

**CS**

**Kang G(1)**, White AC Jr.

We are (at risk with) what we eat.

*Curr Opin Infect Dis.* 2016 Oct;29(5):476-7. doi: 10.1097/QCO.0000000000000307.

**Author information:**

(1)aDivision of Gastrointestinal Sciences, Christian Medical College, Vellore, India bInfectious Diseases Division, Department of Internal Medicine, University of Texas Medical Branch, Galveston, Texas, USA. DOI: 10.1097/QCO.0000000000000307

**INTL**

**PMID:**27552659

**CS**

**Kang G(1).**

Rotavirus in India: Forty Years of Research. *Indian Pediatr.* 2016 Jul 8;53(7):569-73.

**Author information:**

(1)Division of Gastrointestinal Sciences, Christian Medical College, Vellore, Tamil Nadu, India. [gkang@cmcvellore.ac.in](mailto:gkang@cmcvellore.ac.in).

Rotavirus was first identified as a human pathogen just over 40 years ago, and work on this pathogen in India started shortly thereafter. Subsequent studies have confirmed its pre-eminent role in gastroenteritis in children in India. Standardized surveillance has enabled the documentation of the high burden of disease, and has demonstrated that there is considerable geographic and temporal variation in strain circulation. Internationally licensed vaccines, vaccine candidates based on indigenous strains and out-licensed strains have been tested for safety, immunogenicity and efficacy; three vaccines are now licensed in India and are used in the private sector. Public sector vaccination has begun, and it will be path-breaking for Indian vaccinologists to measure impact of vaccine introduction in terms of safety and effectiveness. So far, India has kept pace with international epidemiologic and vaccine research on rotavirus, and these efforts should continue.

**NAT**

**PMID:**27508532

**CS**

**Kodiatte TA(1)**, Burad D(2), Rymbai ML(3).

Clinicopathological Features of Intraductal Papillary Mucinous Neoplasms of Pancreas in a Tertiary Care Center: A 14 Year Retrospective Study.

*J Clin Diagn Res.* 2016 Aug;10(8):EC10-3. doi: 10.7860/JCDR/2016/20226.8296. Epub 2016 Aug 1.

**Author information:**

(1)Assistant Professor, Department of General Pathology, Christian Medical College Hospital, Vellore, Tamil Nadu, India. (2)Associate Professor, Department of General Pathology, Christian Medical College Hospital, Vellore, Tamil Nadu, India. (3)Assistant Professor, Department of Hepatopancreaticobiliary (HPB) Surgery, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

**INTRODUCTION:** Pancreatic surgeries are usually performed for inflammatory conditions and neoplasms. Intraductal Papillary Mucinous Neoplasm (IPMN) account for approximately 5-7% of all pancreatic neoplasms in western

literature. To the best of our knowledge, there has been no published literature in Indian subcontinent on IPMN.

**AIM:** To assess the spectrum of different pancreatic pathologies on pancreatic resection specimens. Also, to review and share the experience on the clinicopathological features of IPMNs in our institute.

**MATERIALS AND METHODS:** This was a 14 year retrospective study of all cases where pancreatic surgeries were done for pancreatic pathology. The slides and blocks of diagnosed cases of IPMNs were retrieved from the department archives, reviewed and a detailed study on the histopathological features was done.

**RESULTS:** Among the 377 pancreatic surgical specimens, pancreatitis was the most common diagnosis followed by exocrine neoplasms and endocrine neoplasms. IPMN constituted 3.2 % of all pancreatic neoplasms. Histologically, the most common type was the gastric foveolar type. Pancreatobiliary type was aggressive and associated with an invasive component and had evidence of metastasis on follow up.

**CONCLUSION:** IPMNs are rare neoplasms of pancreas with a male predominance. They are usually indolent except for the pancreatobiliary type which may have an aggressive course, often associated with an invasive adenocarcinoma component. Diligent follow up is recommended.

DOI: 10.7860/JCDR/2016/20226.8296

**NAT**

**PMCID: PMC5028479 PMID:27656444**

**CS**

**Kumar S(1).**

Open versus robotic prostatectomy.

Indian J Urol. 2016 Oct-Dec;32(4):253-254.

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DOI: 10.4103/0970-1591.191233

**NAT**

**PMCID: PMC5054652 PMID:27843204**

**CS**

**Kumaran D(1), John S(2), Isiah R(2), Das S(2).**

Management of Locally Advanced Carcinoma Oesophagus with Radiation/Chemoradiation: Single Institute Experience.

J Gastrointest Cancer. 2016 Sep;47(3):313-7. doi: 10.1007/s12029-016-9825-5.

**Author information:**

(1)Christian Medical College and Hospital, Vellore, Tamil Nadu, India. damodar.dr@gmail.com.

(2)Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

**PURPOSE:** Oesophageal malignancy is the fourth commonest cancer which has a very poor outcome. In the management of oesophageal malignancy, radiation therapy is underutilized by many physicians due to feared complications though its role is well proven in literature. This study brings the role of radiation therapy in terms of loco- regional and distant relapse. This study characterizes demographic characteristics, treatment modality and the impact of these on recurrence-free survival of locally advanced carcinoma oesophagus. **METHOD:** In a retrospective analysis over a period of 24 months, 28 patients diagnosed to have locally advanced oesophageal malignancy were included. Neoadjuvant chemotherapy was carried out in 4 patients and concurrent

chemoradiotherapy in 18 patients. Among the 28 patients, 7 patients who were operable and fit underwent surgery 6-8 weeks after completion of the planned neoadjuvant therapy. All patients received concurrent chemoradiation for a period of 5 weeks with platinum and/or taxane-based chemotherapy. **RESULTS:** With a median follow-up of 12 months, loco-regional recurrence and distant relapse were substantially less with 14 and 10 %, respectively. The Kaplan-Meier recurrence-free survival was 60 % at 24 months. All patients who had surgery as a part of the multimodality management were disease free at the last follow-up. **CONCLUSION:** In locally advanced oesophageal malignancy, radiation therapy plays an important role in downsizing the tumour for operability or can also be utilized as the sole modality of management. DOI: 10.1007/s12029-016-9825-5

**INTL**

**PMID:27146042**

**CS**

**Kurian JJ(1), Jehangir S(1), Varghese IT(1), Thomas RJ(1), Mathai J(1), KarlS(1).**

Clinical profile and management options of children with congenital esophageal stenosis: A single center experience.

J Indian Assoc Pediatr Surg. 2016 Jul-Sep;21(3):106-9. doi:10.4103/0971-9261.182581.

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**AIM:** The aim of the study is to review 7 patients with congenital esophageal stenosis treated in our institution from a diagnostic and therapeutic point of view.

**MATERIALS AND METHODS:** This is a retrospective cohort study of 7 patients treated in Christian Medical College, Vellore from 2008 to 2014. The data were analyzed with regards to age at onset of symptoms, investigative findings, age at definitive treatment, pathology, modalities of treatment, and outcomes.

**RESULTS:** Symptoms started within the 1(st) year of life in all children with a median age of 4 months. The time of delay in diagnosis ranged from 8 months to 81 months with a mean period of 37 months. About 6 patients had a lower esophageal stenosis and 1 patient had a mid-esophageal stenosis. About 4 of the 7 children underwent endoscopic balloon dilatation from elsewhere, with 2 of the above 4 undergoing a myotomy for a wrongly diagnosed achalasia. The number of dilatations ranged from 2 to 7 with a mean of 4 dilatations. Resection of the stenotic segment with end to end anastomosis was employed in 6 of the 7 patients, and a transverse colon interpositioning was done in 1 patient. An antireflux procedure was performed in one patient. Histopathological examination of the resected specimen revealed tracheobronchial remnant in 3 patients, fibromuscular thickening in 3 patients, and membranous web in 1 patient. Postoperatively, 2 of the 7 patients had asymptomatic gastroesophageal reflux and 1 patient had postoperative stricture requiring one session of endoscopic balloon dilatation. The mean follow-up period was 42 months (range 18-72 months). At the time of the last follow-up, all 7 patients were able to eat solid food, and none of the children were found to have symptoms suggestive of obstruction or gastroesophageal reflux. There was a statistically significant increase in the weight for age after the operation.

**CONCLUSION:** Congenital esophageal stenosis is rare and often confused with other causes of esophageal obstruction. Although endoscopic balloon dilatation offers an effective temporary relief, we feel that definitive surgery is curative. Long-term results following definitive surgery have been good, especially with respect to symptoms and weight gain.

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**NAT**

**PMCID:** PMC4895732 **PMID:** 27365901

**CS**

Lu J(1), Hou J(2), Liu KY(1), Parmar S(3), De La Fuente A(4), Andersson B(3), YanC(1), Zhou D(5), Tan D(6), Ritchie D(7), Wu D(8), Shpall E(3), Laport GG(9), Lij(10), Hu J(11), Zhang LS(12), Wang M(3), Malhotra P(13), Jiang Q(1), Qin Y(1), Wong R(14), Champlin R(3), Issaragrisil S(15), Iyer S(16), Mathews V(17), WangY(1), Hu Y(18), Xiao Z(19), Shao Z(20), Rosengarten R(21),(22), Steuernagle J4th(22),(23), Xiao JH(1), Orlowski R(3), Chim CS(24).

Asia-Pacific Hematology Consortium Report on approach to multiple myeloma. Survey results from the 6th International Hematologic Malignancies Conference: Bridging the Gap 2015, Beijing, China.

Leuk Lymphoma. 2016 Jul;57(7):1534-8. doi: 10.3109/10428194.2015.1135434. Epub 2016 Feb 17.

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The Asia-Pacific Hematology Consortium (APHCON), in partnership with MDRing™, a mobile global physician education network, has initiated a detailed longitudinal study of physician knowledge and practice preferences in the Asia-Pacific sphere. The first dataset comes from a series of surveys answered by delegates at the APHCON Bridging The Gap (BTG) conference in Beijing in January, 2015. In this report we present our findings regarding diagnosis and treatment of

multiple myeloma (MM). We aim to create a conduit for physicians in this region to share their experiences with the rest of the world, to identify areas of consensus and best practices, and to highlight opportunities for improvement in communication, education and patient care. DOI: 10.3109/10428194.2015.1135434

**INTL**

**PMID:**26887657

**CS**

**Madhusudhan VL(1).**

Efficacy of 1% acetic acid in the treatment of chronic wounds infected with *Pseudomonas aeruginosa*: prospective randomised controlled clinical trial.

Int Wound J. 2016 Dec;13(6):1129-1136. doi: 10.1111/iwj.12428. Epub 2015 Apr 8.

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Chronic wounds are those wounds that are persistent and do not respond to any sort of treatment. The concept of using topical antiseptics on open wounds is to prevent and treat infections. They also help to shorten the time taken to heal the wounds. The use of topical agents on wounds to prevent infection is a minimal ability to develop resistance to the microorganisms. *Pseudomonas aeruginosa* is a Gram-negative opportunistic pathogen with innate resistance to many antibiotics. In places that are economically backward, these problems get compounded by the inability of patients to afford newer expensive drugs. Topically applied dilute acetic acid, which is cheap and easily available, has been found to be effective in such chronic wounds. In the present study, an attempt has been made to use 1% acetic acid as the sole antimicrobial agent for the treatment of pseudomonal wound infections. A control limb was used in which the wounds were treated with normal saline. Our objective was to evaluate the efficacy of acetic acid in low concentration of 1% in chronic wounds infected with *P. aeruginosa*. This was a prospective study conducted over a period of 6 months. **INCLUSION CRITERIA:** All patients with chronic wounds infected with *P. aeruginosa*. **EXCLUSION CRITERIA:** Wounds due to massive burns, suspected malignancy, immunocompromised individuals and individuals with sepsis. A total of 32 patients enrolled in the study. Subjects were randomised equally to the 1% acetic acid group and saline dressing group. None of the patients received any systemic antibiotics during the study period and received twice daily dressings. The endpoint of the treatment was wounds free of *P. aeruginosa*. The duration of treatment required to eliminate the

*Pseudomonas* from the wounds in the acetic acid group was on an average 7 days less than that required by the saline group. P value was <0.001. In the 1% acetic acid group irrespective of the sensitivity of the organism to antibiotics, *Pseudomonas* organisms were eliminated within the same time period - 4.5 days. In the saline group, susceptible organisms were eliminated within 11.5 days and multidrug-resistant organisms were eliminated by 15.5 days. 1% acetic acid is a simple, safe and effective topical antiseptic that can be used in the elimination of *P. aeruginosa* from chronic infected wounds. © 2015 Medicalhelplines.com Inc and John Wiley & Sons Ltd. DOI: 10.1111/iwj.12428

**INTL**

**PMID:**25851059

**CS**

**Malik S(1),** Giri S(2), Madhu SV(2), Rathi V(3), Banerjee BD(4), Gupta N(5).

Relationship of levels of Vitamin D with flow-mediated dilatation of brachial artery in patients of myocardial infarction and healthy control: A case-control study.

Indian J Endocrinol Metab. 2016 Sep-Oct;20(5):684-689.

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**BACKGROUND:** Cardiovascular diseases (CVD) remain the leading cause of death worldwide. Vitamin D deficiency has been linked to increased risk of adverse CV events. Vitamin D deficiency may be responsible for endothelial dysfunction which in turn affects the onset and progression of coronary artery disease and its risk factors, directly or indirectly through various mechanisms. **MATERIALS AND METHODS:** It was case-control study. A total of 50 cases of acute myocardial infarction (AMI) (aged 40-60 years), admitted to medicine emergency/CCU, were taken as per ACC/AHA 2007 guidelines. An equal number of age- and sex-matched controls were also taken. Risk factors of AMI, flow-mediated dilatation (FMD), and 25(OH)D levels were studied in all cases and controls. Correlation was also studied between FMD and 25(OH)D.

**RESULTS:** The mean values of FMD were  $18.86 \pm 5.39\%$  and  $10.35 \pm 4.90\%$  in controls and cases, respectively ( $P < 0.05$ ). The endothelial dilatation after glyceryl trinitrate (GTN) was also studied and was found to be  $26.175 \pm 4.25\%$  and  $18.80 \pm 5.72\%$  in controls and cases, respectively ( $P < 0.05$ ). The mean levels of 25(OH)D in controls and cases were  $25.45 \pm 12.17$  and  $14.53 \pm 8.28$  ng/ml, respectively. In this study, 56% of subjects were Vitamin D deficient, 25% were Vitamin D insufficient, and only 19% had Vitamin D in normal range. A positive correlation coefficient was found between FMD and 25(OH) Vitamin D levels ( $r = 0.841$ ,  $P < 0.01$ ). In this study, a positive correlation coefficient was also found between endothelial dilatation after GTN and 25(OH)D levels ( $r = 0.743$ ,  $P < 0.01$ ).

**CONCLUSION:** In this study, it was found that FMD was markedly impaired in patients of AMI when compared to controls. It was also found that majority of the study population was Vitamin D deficient; however, the deficiency was more severe in patients of AMI. We also found out that FMD was positively correlated ( $r = 0.841$ ) to the deficiency state of Vitamin D in all the study subjects.

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**NAT**

**PMCID: PMC5040051 PMID:27730081**

**CS**

**Manesh A(1), John AO(1), Mathew B(1), Varghese L(1), Rupa V(1), Zachariah A(1), Varghese GM(1).**

Posaconazole: an emerging therapeutic option for invasive rhino-orbito-cerebral mucormycosis.

Mycoses. 2016 Jul 22. doi: 10.1111/myc.12529. [Epub ahead of print]

#### **Author information:**

(1) Christian Medical College, Vellore, India.

Posaconazole has significant activity against the Mucormycetes. However, data are limited on the clinical efficacy of posaconazole for treating rhino-orbito-cerebral mucormycosis (ROCM). The aim of this study is to assess the efficacy and safety of posaconazole in patients with ROCM. We included 12 consecutive adult patients admitted with ROCM and treated with posaconazole between January 2010 and February 2015. The main outcome of the study was the overall success rate (i.e. either complete or partial response) at the end of treatment. We also assessed serum posaconazole concentrations in a subgroup of patients. Of the 12 patients who received posaconazole, eight patients (66.6%) had complete resolution with median follow-up of 6.5 months (range 2-24 months). Two patients (16.6%) had significant reduction of disease and two (16.6%) had marked residual disease on follow-up. Uncontrolled

diabetes was the predisposing factor in all except one patient. One patient developed diarrhoea on posaconazole, which settled without discontinuation of the drug. Posaconazole appears to be a safe and effective antifungal agent in diabetic patients with ROCM, especially in those who have toxicity with polyene therapy. © 2016 Blackwell Verlag GmbH. DOI: 10.1111/myc.12529

**INTL**

**PMID:27443253**

**CS**

**Manish P(1), Rathore S(2), Benjamin SJ(3), Abraham A(2), Jeyaseelan V(4), MathewsJE(5).** A randomised controlled trial comparing 30 mL and 80 mL in Foley catheter for induction of labour after previous Caesarean section. Trop Doct. 2016 Oct;46(4):205-211. Epub 2016 Jan 15.

#### **Author information:**

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Obstetrics and Gynaecology, Christian Medical College, Vellore, Tamil Nadu, India. (3) Associate Professor, Department of Obstetrics and Gynaecology, Christian Medical College, Vellore, Tamil Nadu, India. (4) Lecturer, Department of Biostatistics, Christian Medical College, Vellore, Tamil Nadu, India. (5) Professor, Department of Obstetrics and Gynaecology, Christian Medical College, Vellore, Tamil Nadu, India [og5@cmcvellore.ac.in](mailto:og5@cmcvellore.ac.in).

Inducing labour with a Foley balloon catheter rather than using oxytocin or prostaglandins is considered to be less risky if the uterus is scarred. (1) It is not known if more fluid in the balloon is more effective without being more dangerous. Volumes of 80 mL and 30 mL were compared in 154 eligible women. Mode of delivery, duration of labour and delivery within 24 h were similar in both groups. However, the second group required oxytocin more frequently. Though more scar dehiscences occurred in the first group, the difference was not significant. © The Author(s) 2016. DOI: 10.1177/0049475515626031

**INTL**

**PMID:26774112**

**CS**

**Mathew SK(1), Mathew BS, Neely MN, Naik GS, Prabha R, Jacob GG, K S, Fleming DH.**

A Nonparametric Pharmacokinetic Approach to Determine the Optimal Dosing Regimen for 30-

Minute and 3-Hour Meropenem Infusions in Critically Ill Patients. *Ther Drug Monit.* 2016 Oct;38(5):593-9. doi: 10.1097/FTD.0000000000000323.

#### Author information:

(1)\*Clinical Pharmacology Unit, Department of Pharmacology and Clinical Pharmacology, Christian Medical College, Vellore, India; †Laboratory of Applied Pharmacokinetics and Bioinformatics (LAPKB), Children's Hospital of Los Angeles, Keck School of Medicine, University of Southern California, Los Angeles, California; ‡Biocon Research Limited, Bangalore, India; and §Surgical Intensive Care Unit, Division of Critical Care, Christian Medical College, Vellore, India.

**BACKGROUND:** Pharmacokinetics of meropenem differ widely in the critically ill population. It is imperative to maintain meropenem concentrations above the inhibitory concentrations for most of the interdose interval. A population pharmacokinetic/pharmacodynamic model was developed to determine the probability of target attainment for 3-hour and 30-minute infusion regimens in this population. **METHODS:** This study was performed in an intensive care setting among adult patients who were initiated on meropenem at a dose of 1000 mg. Multiple blood specimens were collected at predetermined time points during the interdose period, and meropenem concentrations were measured using high performance liquid chromatography. Using Pmetrics, a pharmacokinetic/pharmacodynamic model was developed and validated. Monte Carlo simulation was performed, and probability of target attainment (100% T > minimum inhibitory concentration (MIC), with a probability >0.9) for doubling MICs was determined for different regimens of meropenem. **RESULTS:** A 2-compartment multiplicative gamma error model best described the population parameters from 34 patients. The pharmacokinetic parameters used in the final model were Ke (elimination rate constant from the central compartment), Vc (volume of distribution of central compartment), KCP and KPC (intercompartmental rate constants), and IC2 (the fitted amount of meropenem in the peripheral compartment). Inclusion of creatinine clearance (CL<sub>creat</sub>) and body weight as covariates improved the model prediction ( $Ke = Ke_0 \times$  [Equation is included in full-text article.],  $Vc = Vc_0 \times$  Weight). The Ke and Vc [geometric mean (range)] of the individuals were 0.54 (0.01-2.61)/h and 9.36 (4.35-21.62) L, respectively. The probability of attaining the target, T > MIC of 100%, was higher for 3-hour infusion regimens compared with 30-minute infusion regimens for all ranges of CL<sub>creat</sub>. **CONCLUSIONS:** This study emphasizes that extended regimens of meropenem

are preferable for treating infections caused by bacteria with higher MICs. The nonparametric analysis using body weight and CL<sub>creat</sub> as covariate adequately predicted the pharmacokinetics of meropenem in critically ill patients with a wide range of renal function. DOI: 10.1097/FTD.0000000000000323

**INTL**

**PMID:**27454665

**CS**

**Mehan R(1), Rupa V(2), Lukka VK(1), Ahmed M(3), Moses V(3), Shyam Kumar NK(3).**

Association between vascular supply, stage and tumour size of juvenilenasopharyngeal angiofibroma.

*Eur Arch Otorhinolaryngol.* 2016 Dec;273(12):4295-4303. Epub 2016 Jun 11.

#### Author information:

(1)Department of ENT, Christian Medical College, Vellore, 632004, India. (2)Department of ENT, Christian Medical College, Vellore, 632004, India. rupavedantam@cmcvellore.ac.in. (3)Department of Radiology, Christian Medical College, Vellore, India.

Juvenile nasopharyngeal angiofibroma (JNA) is a highly vascular tumour seen in adolescent males. To study the vascular pattern of these tumours, we retrospectively reviewed the records of patients with JNA who underwent preoperative angiography. Most (82.2 %) of the 45 patients assessed were Radkowski stage III with a mean size of 5.29 cm. There was a significant association between tumour stage and size ( $p = 0.029$ ). Ten different vessels were seen to supply these tumours. All tumours had primary supply from the distal third of the ipsilateral internal maxillary artery (IMA). Accessory vessel supply was chiefly from the Vidian branch of internal carotid artery (ICA) (55.6 %). Stage III tumours were supplied by a greater number of feeding vessels than earlier stage tumours ( $p < 0.01$ ). Larger tumours were more likely to have ICA supply ( $p = 0.04$ ). Bilateral supply was seen in 48.7 %. However, there was no predominance of bilateral over ipsilateral IMA supply even in advanced stage tumours. One patient in our series was found to have a caroticocavernous fistula. Residual or recurrent tumours were characterized by new vasculature (100 %) and greater accessory supply from the ipsilateral ICA (85.7 %). Our study highlights the fact that surgical planning cannot be dependent on staging alone and should include preoperative assessment of tumour vasculature by angiography. DOI: 10.1007/s00405-016-4136-9

INTL

PMID:27289235

CS

**Mishra AK(1)**, Devakiruba NS(2), Jasmine S(3), Sathyendra S(4), Zachariah A(5), Iyadurai R(6).

Clinical spectrum of yellow phosphorous poisoning in a tertiary care centre in South India: a case series.

Trop Doct. 2016 Sep 23. pii: 0049475516668986. [Epub ahead of print]

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Rodenticides such as yellow phosphorus are highly toxic compounds which are commonly used for pest control. Reports of yellow phosphorus poisoning from tropical nations is scanty. In this retrospective study, we report the clinical features, mortality and predictors of mortality among nine patients at a tertiary care centre in south India. Yellow phosphorus consumption was common among a younger age group of patients. The mean duration of presentation after consumption was five days. The most common clinical manifestations seen were abdominal pain and vomiting followed by a depressed sensorium. Features of acute liver failure including coagulopathy were seen in all patients. Despite all patients receiving supportive therapy, a poor outcome or death resulted in the majority. Early referral to a tertiary care centre, meticulous monitoring and supportive measures are key elements of patient management as there are no specific antidotes available at present. Increase in public and physician awareness to the toxin and implementation of preventive policies is of utmost importance.

© The Author(s) 2016. DOI: 10.1177/0049475516668986

INTL

PMID:27663491

CS

**Naik D(1)**, Shyamasunder AH(1), Mruthyunjaya MD(1), Gupta Patil R(1), Paul TV(1), Christina F(1),

Inbakumari M(1), Jose R(2), Lionel J(2), Regi A(2), JeyaseelanPV(3), Thomas N(1).

Masked hypoglycemia in pregnancy.

J Diabetes. 2016 Sep 14. doi: 10.1111/1753-0407.12485. [Epub ahead of print]

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**BACKGROUND:** Hypoglycemia is a major hindrance for optimal glycemic control in women with gestational diabetes mellitus (GDM) on insulin. In the present study, masked hypoglycemia (glucose <2.77 mmol/L for ≥30 min) was estimated in pregnant women using a continuous glucose monitoring (CGM) system.

**METHODS:** Twenty pregnant women with GDM on insulin (cases) and 10 age-matched euglycemic pregnant women (controls) between 24 and 36 weeks gestation were recruited. Both groups performed self-monitoring of blood glucose (SMBG) and underwent CGM for 72 h to assess masked hypoglycemia. Masked hypoglycemic episodes were further stratified into two groups based on interstitial glucose (2.28-2.77 and ≤2.22 mmol/L).

**RESULTS:** Masked hypoglycemia was recorded in 35% (7/20) of cases and 40% (4/10) of controls using CGM, with an average of 1.28 and 1.25 episodes per subject, respectively. Time spent at glucose levels between 2.28 and 2.77 mmol/L did not differ between the two groups (mean 114 vs 90 min; P = 0.617), but cases spent a longer time with glucose ≤2.2 mmol/L. Babies born to women with GDM were significantly lighter than those born to controls (2860 vs 3290 g; P = 0.012). There was no significant difference in birth weight within the groups among babies born to women with or without hypoglycemia.

**CONCLUSION:** Euglycemic pregnant women and those with GDM on insulin had masked hypoglycemia. Masked hypoglycemia was not associated with adverse maternal or fetal outcomes. Therefore, low glucose levels in the hypoglycemic range may represent a physiologic adaptation in pregnancy. This response is exaggerated in women with GDM on insulin.

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INTL

PMID:27625296  
CS

**Naik R**(1), George G(2), Karuppiah S(2), Philip MA(3). Hyperlactatemia in patients undergoing adult cardiac surgery under cardiopulmonary bypass: Causative factors and its effect on surgical outcome. *Ann Card Anaesth.* 2016 Oct-Dec;19(4):668-675. doi: 10.4103/0971-9784.191579.

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(1)Department of Cardiothoracic and Vascular Surgery, Sri Jayadeva Institute of Cardiovascular Sciences and Research, Bengaluru, Karnataka, India. (2)Department of Anaesthesia, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. (3)Department of Cardiothoracic Surgery, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

**OBJECTIVES OF THE STUDY:** To identify the factors causing high lactate levels in patients undergoing cardiac surgery under cardiopulmonary bypass (CPB) and to assess the association between high blood lactate levels and postoperative morbidity and mortality.

**METHODS:** A retrospective observational study including 370 patients who underwent cardiac surgeries under cardiopulmonary bypass. The patients were divided into 2 groups based on serum lactate levels; those with serum lactate levels greater than or equal to 4 mmol/L considered as hyperlactatemia and those with serum lactate levels less than 4 mmol/L. Blood lactate samples were collected intraoperatively and postoperatively in the ICU. Preoperative and intraoperative risk factors for hyperlactatemia were identified using the highest intraoperative value of lactate. The postoperative morbidity and mortality associated with hyperlactatemia was studied using the overall (intraoperative and postoperative values) peak lactate levels. Preoperative clinical data, perioperative events and postoperative morbidity and mortality were recorded.

**RESULTS:** Intraoperative peak blood lactate levels of 4.0 mmol/L or more were present in 158 patients (42.7%). Females had higher peak intra operative lactate levels ( $P = 0.011$ ). There was significant correlation between CPB time (Pearson correlation coefficient  $r = 0.024$ ;  $P = 0.003$ ) and aortic cross clamp time ( $r = 0.02$ ,  $P = 0.007$ ) with peak intraoperative blood lactate levels. Patients with hyperlactatemia had significantly higher rate of postoperative morbidity like atrial fibrillation (19.9% vs. 5.3%;  $P = 0.004$ ), prolonged requirement of inotropes (34% vs. 11.8%;  $P = 0.001$ ), longer stay in the ICU ( $P = 0.013$ ) and hospital ( $P = 0.001$ ).

**CONCLUSIONS:** Hyperlactatemia had significant association with post-operative morbidity. Detection of hyperlactatemia in the perioperative period should be considered as an indicator of inadequate tissue oxygen delivery and must be aggressively corrected.

DOI: 10.4103/0971-9784.191579

INTL

PMCID: PMC5070327 PMID:27716698

CS

**Nair S**(1), Nair BR(1), Vidyasagar A(1), Joseph M(1).

Importance of fibrinogen in dilutional coagulopathy after neurosurgical procedures: A descriptive study.

*Indian J Anaesth.* 2016 Aug;60(8):542-5. doi: 10.4103/0019-5049.187778.

#### Author information:

(1)Department of Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND AND AIMS:** The routine management of coagulopathy during surgery involves assessing haemoglobin, prothrombin time (PT), activated partial thromboplastin time (aPTT) and platelets. Correction of these parameters involves administration of blood, fresh frozen plasma and platelet concentrates. The study was aimed at identifying the most common coagulation abnormality during neurosurgical procedures and the treatment of dilutional coagulopathy with blood components.

**METHODS:** During 2 years period, all adult patients undergoing neurosurgical procedures who were transfused two or more units of red cells were prospectively evaluated for the presence of a coagulopathy. PT, aPTT, platelet count and fibrinogen levels were estimated before starting a component therapy.

**RESULTS:** After assessing PT, aPTT, platelet count and fibrinogen levels following two or more blood transfusions, thirty patients were found to have at least one abnormal parameter that required administration of a blood product. The most common abnormality was a low fibrinogen level, seen in 26 patients; this was the only abnormality in three patients. No patient was found to have an abnormal PT or aPTT without either the fibrinogen concentration or platelet count or both being low.

**CONCLUSION:** Low fibrinogen concentration was the most common coagulation abnormality found after blood transfusions for neurosurgical procedures.

DOI: 10.4103/0019-5049.187778

**NAT****PMCID: PMC4989803 PMID:27601735****CS**

National Rotavirus Surveillance Network, **Kumar CP(1)**, Venkatasubramanian S, Kang G, Arora R, Mehendale S.

Profile and Trends of Rotavirus Gastroenteritis in Under 5 children in India, 2012 - 2014, Preliminary Report of the Indian National Rotavirus Surveillance Network.

Indian Pediatr. 2016 Jul 8;53(7):619-22.

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Correspondence to: Dr CP Girish Kumar, National Institute of Epidemiology, II Main Road, TNHB, Ayakkam, Chennai 600 077, India. girishkumar@nie.gov.in.

**OBJECTIVE:** To estimate the burden of rotavirus-associated gastroenteritis in India.

**METHODS:** Hospital based surveillance network was established, with clinical evaluation and laboratory testing for rotavirus among children aged below 5 years hospitalized with acute gastroenteritis.

**RESULTS:** Between September 2012 and December 2014, stool samples from 10207 children were tested and rotavirus was detected in 39.6% of cases. Infections were more commonly seen among younger children (<2 years). Detection rates were higher during cooler months of September-February. Among rotavirus infected children, 64.0% had severe or very severe disease. G1P[8] was the predominant rotavirus genotype (62.7%) observed during the surveillance period.

**CONCLUSIONS:** Surveillance data highlights the high rotavirus disease burden and emphasizes the need for close monitoring to reduce morbidity and mortality associated with rotavirus gastroenteritis in India.

**NAT****PMID:27508539****CS**

**Pallapati SC(1)**, Thomas BP(2), Anderson GA(1).

En bloc Excision and Matched Metatarsal Transfer for Expansive Benign Osteolytic Lesions of the Metacarpal. *J Hand Surg Am.* 2016 Nov;41(11):e417-e423. doi: 10.1016/j.jhssa.2016.08.004. Epub 2016 Sep 7.

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**PURPOSE:** Benign aggressive expansile osteolytic lesions such as giant cell tumors and aneurysmal bone cysts involving the metacarpal head pose problems in management. Unacceptably high rates of recurrence are reported after curettage and bone grafting. An en bloc excision of such tumors ideally requires osteoarticular replacement of the excised metacarpal heads to retain mobility and function. We used nonvascularized metatarsal head and shaft harvested from the foot to replace the metacarpal defect after en bloc resection to retain movement and function of metacarpophalangeal (MCP) joint. The purpose of this study was to evaluate results of patients who underwent this procedure.

**METHOD:** Nine patients treated with metatarsal transfer for osteoarticular reconstruction after en bloc excision of benign aggressive osteolytic metacarpal head tumors were reviewed retrospectively. The postoperative evaluation included examination of radiographs, joint mobility, and patient rated return of function using the Michigan Hand Questionnaire.

**RESULTS:** Of 9 patients, 4 had aneurysmal bone cyst, 4 had giant cell tumor, and 1 an atypical cartilaginous lesion. Patients were aged between 14 and 45 years at the time of surgery. After an average of 44 months of follow-up (minimum follow-up of 24 months; range, 24-104 months), all patients had good postoperative function, satisfactory results, and no recurrence of tumor. The mean active range of motion at the reconstructed MCP joint was 75° (range, 0° to 90°). The Michigan Hand Questionnaire score averaged 80 (range, 69-92). No patient complained of donor site morbidity. One patient underwent MCP joint fusion after a pin tract infection.

**CONCLUSIONS:** Use of a matched metatarsal graft for osteoarticular reconstruction after en bloc excision of benign aggressive tumors involving the metacarpal head is a potential treatment option. In this limited series, consistent results with respect to functional range of motion at MCP joint, and without recurrence of tumor or notable donor site morbidity were obtained.

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

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**INTL****PMID:27614921****CS**

**Pandian GR(1)**, Thampi SM(2), Chakraborty N(1), Kattula D(1), Kundavaram PP(1).

Profile and outcome of sudden cardiac arrests in the emergency department of a tertiary care hospital in South India.

J Emerg Trauma Shock. 2016 Oct-Dec;9(4):139-145.

#### Author information:

(1)Department of Emergency Medicine, Christian Medical College, Vellore, Tamil Nadu, India.  
(2)Department of Anaesthesiology, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND:** Sudden cardiac arrest (SCA) requiring cardiopulmonary resuscitation (CPR) is one of the common emergencies encountered in the emergency department (ED) of any hospital. Although several studies have reported the predictors of CPR outcome in general, there are limited data from the EDs in India.

**MATERIALS AND METHODS:** This retrospective study included all patients above 18 years with SCA who were resuscitated in the ED of a tertiary care hospital with an annual census of 60,000 patients between August 2014 and July 2015. A modified Utstein template was used for data collection. Factors relating to a sustained return of spontaneous circulation and mortality were analyzed using descriptive analytic statistics and logistic regressions.

**RESULTS:** The study cohort contained 254 patients, with a male predominance (64.6%). Median age was 55 (interquartile range: 42-64) years. Majority were in-hospital cardiac arrests (73.6%). Only 7.4% (5/67) of the out-of-hospital cardiac arrests received bystander resuscitation before ED arrival. The initial documented rhythm was pulseless electrical activity (PEA)/asystole in the majority (76%) of cases while shockable rhythms pulseless ventricular tachycardia/ventricular fibrillation were noted in only 8% (21/254) of cases. Overall ED-SCA survival to hospital admission was 29.5% and survival to discharge was 9.9%. Multivariate logistic regression analysis showed age  $\geq 65$  years (odds ratio [OR]: 12.33; 95% confidence interval [CI]: 1.38-109.59;  $P = 0.02$ ) and total duration of CPR  $> 10$  min (OR: 5.42; 95% CI: 1.15-25.5;  $P = 0.03$ ) to be independent predictors of mortality.

**CONCLUSION:** SCA in the ED is being increasingly seen in younger age groups. Despite advances in resuscitation medicine, survival rates of both in-hospital and out-of-hospital SCA remain poor. There exists a great need for improving prehospital care as well as control of risk factors to decrease the incidence and improve the outcome of SCA.

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**INTL**

**PMCID: PMC5113080 PMID:27904259**

**CS**

**Pandian RM(1)**, John NT(1), Eapen A(2), Antonisamy B(3), Devasia A(1), Kekre N(1).

Does MRI help in the pre-operative evaluation of pelvic fracture urethral distraction defect? - A pilot study.

Int Braz J Urol. 2016 Nov 2;42. doi: 10.1590/S1677-5538.IBJU.2016.0252.

[Epubahead of print]

#### Author information:

(1)Department of Urology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.  
(2)Department of Radiology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.  
(3)Department of Biostatistics, Christian Medical College and Hospital, Tamil Nadu, India.

**OBJECTIVES:** To study the usefulness of MRI in preoperative evaluation of PFUDD. Can MRI provide additional information on urethral distraction defect (UDD) and cause of erectile dysfunction (ED)?

**MATERIALS AND METHODS:** In this prospective study, consecutive male patients presenting with PFUDD were included from Feb 2011 till Dec 2012. Those with traumatic spinal cord injury and pre-existing ED were excluded. Patients were assessed using IIEF questionnaire, retrograde urethrogram and micturating cystourethrogram (RGU+MCU) and MRI pelvis. Primary end point was erectile function and secondary end point was surgical outcome.

**RESULTS:** Twenty patients were included in this study. Fourteen patients (70%) were  $\leq 40$  years; fifteen patients (75%) had ED, seven patients (35%) had severe ED. MRI findings associated with ED were longer median UDD (23mm vs. 15mm,  $p=0.07$ ), cavernosal injury (100%,  $p=0.53$ ), rectal injury (100%,  $p=0.53$ ), retropubic scarring (60%,  $p=0.62$ ) and prostatic displacement (60%,  $p=0.99$ ). Twelve patients (60%) had a good surgical outcome, five (25%) had an acceptable outcome, three (15%) had a poor outcome. Poor surgical outcome was associated with rectal injury (66.7%,  $p=0.08$ ), cavernosal injury (25%,  $p=0.19$ ), retropubic scarring (18.1%,  $p=0.99$ ) and prostatic displacement (16.7%,  $p=0.99$ ). Five patients with normal erections had good surgical outcome. Three patients with ED had poor outcome (20%,  $p=0.20$ ).

**CONCLUSIONS:** MRI did not offer significant advantage over MCU in the subgroup of men with normal erections. Cavernosal injury noted on MRI strongly correlated with ED. Role of MRI may be

limited to the subgroup with ED or an inconclusive MCU.

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**INTL**

**PMID:**27819749

**CS**

**Paul P(1), Kuriakose T(1), John J(2), Raju R(1), George K(2), Amritanand A(1), Doss PA(1), Muliylil J(2).**

Prevalence and Visual Outcomes of Cataract Surgery in Rural South India: A Cross-Sectional Study.

Ophthalmic Epidemiol. 2016 Oct;23(5):309-15. doi: 10.1080/09286586.2016.1212991. Epub 2016 Aug 23.

**Author information:**

(1)a Department of Ophthalmology, Christian Medical College, Vellore, India. (2)b Department of Community Health, Christian Medical College, Vellore, India.

**PURPOSE:** To determine the prevalence of cataract surgery and postoperative vision-related outcomes, especially with respect to sex, socioeconomic status (SES) and site of first contact with eye care, in a rural area of South India. **METHODS:** In a population-based cross-sectional survey of 5530 individuals aged 50 years or older from 10 villages selected by cluster sampling, individuals who had undergone cataract surgery in one or both eyes were identified. Consenting participants were administered a questionnaire, underwent vision assessment and ophthalmic examination. Outcomes were classified as good if visual acuity of the operated eye was 6/18 or better, fair if worse than 6/18 but better than or equal to 6/60, and poor if worse than 6/60.

**RESULTS:** Prevalence of cataract surgery in this age group (771 persons) was 13.9% (95% confidence interval, CI, 13.0-14.9%). In the 1112 eyes of 749 persons studied, at presentation, 53.1% (95% CI 50.1-56.1%) of operated eyes had good, 38.1% (95% CI 35.2-41.0%) had fair, and 8.8% (95% CI 7.1-10.5%) had poor outcomes. With pinhole, 75.2% (95% CI 72.6-77.8%) had good, 17.2% (95% CI 14.9-19.5%) had fair, and 7.4% (95% CI 5.8-9.0%) had poor outcomes. In 76.3% of eyes with fair and poor presenting outcomes we detected an avoidable cause for the suboptimal visual acuity. Place of surgery and duration since surgery of 3 years or more were risk factors for blindness, while SES, sex and site of first eye care contact were not.

**CONCLUSION:** The high prevalence of avoidable causes of visual impairment in this rural setting indicates the scope for preventive strategies.

DOI: 10.1080/09286586.2016.1212991

**INTL**

**PMID:**27552313

**CS**

**Petnikota H(1), Madhuri V(1), Gangadharan S(1), Agarwal I(2), Antonisamy B(3).**

Retrospective cohort study comparing the efficacy of prednisolone and deflazacort in children with muscular dystrophy: A 6 years' experience in a South Indian teaching hospital.

Indian J Orthop. 2016 Sep;50(5):551-557.

**Author information:**

(1)Department of Paediatric Orthopaedics, CMC, Vellore, Tamil Nadu, India. (2)Department of Child Health, CMC, Vellore, Tamil Nadu, India. (3)Department of Biostatistics, CMC, Vellore, Tamil Nadu, India.

**BACKGROUND:** Muscular dystrophies are inherited myogenic disorders characterized by progressive muscle wasting and weakness of variable distribution and severity. They are a heterogeneous group characterized by variable degree of skeletal and cardiac muscle involvement. The most common and the most severe form of muscular dystrophy is DMD. Currently, there is no curative treatment for muscular dystrophies. Several drugs have been studied to retard the progression of the muscle weakness. There is much controversy about steroid usage in muscular dystrophy with respect to regimen, adverse effects, and whether long term benefits outweigh side effects. This study is to assess steroid efficacy in children with muscular dystrophy.

**MATERIALS AND METHODS:** All children with diagnosed muscular dystrophy by muscle biopsy, immunohistochemistry and/or genetic test were enrolled in the study. They were started on either prednisolone (0.75 mg/kg/day) or deflazacort 0.9 mg/kg/day based on affordability. All were followed up every 6 months with clinical assessment, quality of life questionnaire and clinical and laboratory assessment of side effects. Outcome measures of children on deflazacort and prednisolone at 1 year followup were summarized as numbers and percentages and were compared using Fisher's exact test.

**RESULTS:** Twenty two children with muscular dystrophy were included (prednisolone group: 10 and deflazacort group: 12). The mean age was 7.7 years at an average followup of 26.4 months. Twenty children were diagnosed to have Duchenne's; one had Becker's muscular dystrophy while one had sarcoglycanopathy by Type 2C. All children from prednisolone group maintained their ambulatory status at 2 and 4 years followups while three on deflazacort lost their ability to walk at an average age of 11.3 years. All activities of

daily living were found to be better in prednisolone group. Muscle function and time taken to walk improved in prednisolone group. Weight gain in children on prednisolone was three times more.

**CONCLUSIONS:** Prednisolone is more beneficial than deflazacort at doses of 0.75 mg/kg/day and 0.9 mg/kg/day, respectively, however it is associated with adverse effects.

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**NAT**

**PMCID: PMC5017179 PMID:27746500**

**CS**

**Philip C(1), George B(1), Korula A(1), Srivastava A(1), Balasubramanian P(1), Mathews V(2).**

Treatment rates of paediatric acute myeloid leukaemia: a view from three tertiary centres in India - response to Gupta et al.

Br J Haematol. 2016 Oct;175(2):347-349. doi: 10.1111/bjh.13857. Epub 2015 Dec 2.

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DOI: 10.1111/bjh.13857

**INTL**

**PMID:26627639**

**CS**

**Philip SS(1), Mani SE(2), Dutton GN(3).**

Pediatric Balint's Syndrome Variant: A Possible Diagnosis in Children.

Case Rep Ophthalmol Med. 2016;2016:3806056. Epub 2016 Nov 8.

**Author information:**

(1)Department of Ophthalmology, The Cerebral Visual Impairment Clinic, Christian Medical College and Hospital, Vellore, Tamil Nadu 632001, India. (2)Department of Radiodiagnosis, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Vision Sciences, Glasgow Caledonian University, Cowcaddens Road, Glasgow G4 0BA, UK.

Balint's syndrome is well described in adults, but not in children. It is caused by bilateral posterior parietal lobe damage and comprises a triad of simultanagnosia (inability to simultaneously see more than a small number of items), optic ataxia (impaired visual guidance of movement of the limbs and body), and apraxia of gaze (inability to volitionally direct gaze despite the requisite motor substrate) often associated with homonymous lower visual field loss. We, here, describe five children (four males, one female; mean age 7.4 years, [range 4-11 years]; birth

weight  $\leq$  2.5 kg; four were born  $\leq$  36 weeks of gestational age and one at 40 weeks) who presented to the Cerebral Visual Impairment Clinic at a tertiary care center in South India with clinical features remarkably consistent with the above description. In all children neuroimaging showed bilateral parietooccipital gliosis with regional white matter volume loss and focal callosal thinning, consistent with perinatal hypoxic ischemic encephalopathy and possible neonatal hypoglycemia.

DOI: 10.1155/2016/3806056

**INTL**

**PMCID: PMC5118514 PMID:27895948**

**CS**

**PonMalar J(1), Benjamin SJ(1), Abraham A(1), Rathore S(1), Jeyaseelan V(2), Mathews JE(3).**

Randomized double-blind placebo controlled study of preinduction cervical priming with 25  $\mu$ g of misoprostol in the outpatient setting to prevent formal induction of labour.

Arch Gynecol Obstet. 2016 Aug 26. [Epub ahead of print]

**Author information:**

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**OBJECTIVE:** To compare the efficacy of preinduction outpatient use of a single dose of 25  $\mu$ g vaginal misoprostol between 38(1/2) and 40 weeks with that of placebo, to decrease the interval from intervention to delivery after stretch and sweep in low-risk gravid women with Bishop's score  $<$ 4.

**METHOD:** Sixty three women received 25  $\mu$ g vaginal misoprostol and 63 women received placebo after stretch and sweep.

**RESULTS:** The duration from intervention to delivery was 3.35 (1.12-9.46) days in the misoprostol group and 5.42 (2.39-10.11) days in the placebo group which was statistically significant ( $p = 0.029$ ). Spontaneous labor was seen in 39 women (61.9 %) in the misoprostol group and 35 women (55.6 %) in the placebo group ( $p = 0.531$ ). Eight women in the misoprostol group and 18 in the placebo group had Lower Segment Caesarean Section (LSCS) and this difference was also statistically significant

( $p = 0.027$ ). There were no major maternal and neonatal complications in both groups.

**CONCLUSION:** Preinduction use of 25 µg vaginal misoprostol after stretch and sweep in the outpatient setting decreased the intervention to delivery interval when compared to placebo.

DOI: 10.1007/s00404-016-4173-z

**INTL**

**PMID:**27566696

**CS**

**Poonnoose PM**(1), Hilliard P(2), Doria AS(3), Keshava SN(4), Gibikote S(4), Kavitha ML(5), Feldman BM(6), Blanchette V(7), Srivastava A(5).

Correlating clinical and radiological assessment of joints in haemophilia: results of a cross sectional study. *Haemophilia*. 2016 Nov;22(6):925-933. doi: 10.1111/hae.13023. Epub 2016 Jul 7.

**Author information:**

(1)Department of Orthopaedics, Christian Medical College, Vellore, India. (2)Department of Rehabilitation, The Hospital for Sick Children, Toronto, ON, Canada. (3)Department of Diagnostic Imaging, The Hospital for Sick Children, Toronto, ON, Canada. (4)Department of Radiology Christian Medical College, Vellore, India. (5)Department of Haematology, Christian Medical College, Vellore, India. (6)Division of Rheumatology, Departments of Paediatrics, The Hospital for Sick Children, Institute of Health Policy, Management and Evaluation, University of Toronto, Toronto, ON, Canada. (7)Division of Haematology/Oncology, Department of Paediatrics, The Hospital for Sick Children, University of Toronto, Toronto, ON, Canada.

**OBJECTIVES:** This study was undertaken to determine the correlation between the radiological changes in haemophilic arthropathy [X-ray, Ultrasound (US) and MRI] and clinical assessment as determined by the Hemophilia Joint Health Score (HJHS); and to document the US and MRI changes in joints that appear normal on plain X-ray and clinical evaluation.

**MATERIALS AND METHODS:** Of 55 study joints (22 knees and 33 ankles) in 51 patients with haemophilia/von Willebrand disease, with a median age of 15 years (range: 5-17) were assessed using X-rays (Pettersson score) and clinical examination (HJHS) at two centres (Toronto, Canada; Vellore, India). MRI and ultrasonographic scoring was done through a consensus assessment by imagers at both centres using the IPSG MRI and US scores.

**RESULTS:** The HJHS had a good correlation with the Pettersson score ( $rs = 0.66$ ). Though the HJHS had moderate correlation with the osteochondral component of the MRI and US scores ( $rs$  0.51, 0.45 respectively), its correlation with the soft tissue

component was poor ( $rs$  0.19; 0.26 respectively). Of the 18 joints with a Pettersson score of zero, 88.9% had changes that were detected clinically by the HJHS. Osteochondral abnormalities were identified in 38.9% of these joints by the MRI, while US images of the same joints were deemed abnormal in 83.3% by the current criteria. US identified haemosiderin and other soft tissue changes in all of the joints, while the same changes were noted in 94.4% of these joints on MRI. There were four joints with a HJHS of zero, all of which had soft tissue changes on MRI (score 1-7) and US (score 2-7). Osteochondral changes were detected in three of these joints by US and in 2 by MRI. There were four joints with an MRI score of 0-1 that had significant US scores (3-5) and HJHS scores (0-6).

**CONCLUSION:** US and MRI are able to identify pathological changes in joints with normal X-ray imaging and clinical examination. However, further studies are required to be able to differentiate early abnormalities from normal. Clinical (HJHS) and radiological assessment (US/MRI) provide complimentary information and should be considered conjointly in the assessment of early joint arthropathy.

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**INTL**

**PMID:**27385495

**CS**

**Prasanna KS**(1), Goel A(1), Amirtharaj GJ(2), Ramachandran A(2), BalasubramanianKA(2), Mackie I(3), Zachariah U(1), Sajith KG(1), Elias E(1),(4), Eapen CE(5).

Plasma von Willebrand factor levels predict in-hospital survival in patients with acute-on-chronic liver failure.

*Indian J Gastroenterol*. 2016 Nov;35(6):432-440. Epub 2016 Nov 8.

**Author information:**

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**BACKGROUND AND AIMS:** Circulating levels of von Willebrand factor (vWF) predict mortality in patients with cirrhosis. We hypothesized that systemic inflammation in acute-on-chronic liver

failure (ACLF) will stimulate endothelium, increase vWF levels, and promote platelet microthrombi causing organ failure.

**METHODS:** In this prospective study, we correlated plasma vWF levels with organ failure, liver disease severity, sepsis, and systemic inflammatory response syndrome (SIRS) and also analyzed if vWF levels predicted in-hospital composite poor outcome (i.e. death/discharged in terminal condition/liver transplantation) in consecutive ACLF patients.

**RESULTS:** Twenty-one of the 50 ACLF patients studied had composite poor outcome. ACLF patients had markedly elevated vWF antigen and activity (sevenfold and fivefold median increase, respectively) on days 1 and 3. Median ratio of vWF to a disintegrin and metalloprotease with thrombospondin type 1 motif, member 13 (ADAMTS13) activity on day 1 was significantly higher in ACLF patients (11.2) compared to 20 compensated cirrhosis patients (3.3) and healthy volunteers (0.9). On day 1, area under ROC curve (AUROC) to predict composite poor outcome of hospital stay for ACLF patients for vWF antigen, vWF activity, and model for end-stage liver disease (MELD) score were 0.63, 0.68, and 0.74, respectively. vWF activity correlated better with liver disease severity (MELD score, ACLF grade) and organ failure (Sequential Organ Failure Assessment [SOFA] score) than vWF antigen; in contrast, neither vWF antigen nor activity correlated with platelet count, sepsis, or SIRS.

**CONCLUSIONS:** vWF levels are markedly elevated, correlate with organ failure, and predict in-hospital survival in ACLF patients. This data provides a mechanistic basis for postulating that vWF-reducing treatments such as plasma exchange may benefit ACLF patients.

DOI: 10.1007/s12664-016-0708-2

**NAT**

**PMID:**27822882

**CS**

**Putta T(1), Irodi A(1), Thangakunam B(2), Oliver A(2), Gunasingam R(3).**

Young patient with generalized lymphangiomatosis: Differentiating the differential.

Indian J Radiol Imaging. 2016 Jul-Sep;26(3):411-415.

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We present the case of a 19-year-old man who was extensively evaluated in multiple centres for long-

standing cough, dyspnea, and hemoptysis without a definitive diagnosis. His chest radiograph at presentation showed mediastinal widening, bilateral pleural effusions, and Kerley B lines. Computed tomography of the thorax showed a confluent, fluid-density mediastinal lesion enveloping the mediastinal viscera without any mass effect. There were bilateral pleural effusions, prominent peribronchovascular interstitial thickening, interlobular septal thickening and lobular areas of ground glass density with relative sparing of apices. There were a few dilated retroperitoneal lymphatics and well-defined lytic lesions in the bones. In this case report, we aim to systematically discuss the relevant differentials and arrive at a diagnosis. We also briefly discuss the treatment options and prognosis along with our patient's course in the hospital and final outcome.

DOI: 10.4103/0971-3026.190416

**NAT**

**PMCID:** PMC5036344 **PMID:**27857472

**CS**

**Qureshi IN(1), David D(2), Thangaraj KR(3), Kurien RT(1), Chowdhury SD(1), Goela(1), Dutta AK(1), Simon EG(1), Ramachandran A(3), Balasubramanian KA(3), Joseph AJ(1).**

Plasma hydrogen sulphide does not predict severity of acute pancreatitis in humans.

Indian J Gastroenterol. 2016 Nov;35(6):478-481. Epub 2016 Oct 29.

#### **Author information:**

(1)Department of Gastroenterology, Division of Gastrointestinal Sciences, Christian Medical College Hospital, Vellore, 632 004, India.

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The primary aim of this study was to assess the usefulness of plasma hydrogen sulphide (H<sub>2</sub>S) level at admission as a predictor of severity of acute pancreatitis. The secondary aims were to examine whether the level of H<sub>2</sub>S after 48 h correlated with severity and whether level of H<sub>2</sub>S correlated with pulmonary, renal or infectious complications. Plasma hydrogen sulphide was measured within 24 h of admission and 48 h later, in patients with acute pancreatitis. Patients were classified as having mild or severe pancreatitis, and H<sub>2</sub>S levels in the two groups were compared.

A total of 55 patients had H2S estimation carried out within 24 h of admission. H2S levels were similar in patients with mild (mean  $31.8 \pm 18.8$ , range 7.1 to 81.4  $\mu\text{mol/L}$ ) and severe pancreatitis (mean  $28.2 \pm 21.6$ , range 6.1 to 74.4  $\mu\text{mol/L}$ ;  $p = 0.339$ ). There was no difference found between the groups after 48 h (mild  $n = 28$ , mean  $26.8 \pm 19.4$   $\mu\text{mol/L}$ , and severe  $n = 20$ , mean  $34.6 \pm 21.0$   $\mu\text{mol/L}$ ;  $p = 0.127$ ). There was also no difference in the levels between patients with or without lung injury, kidney injury or sepsis. Performing H2S estimation to predict severity in acute pancreatitis is not beneficial.

DOI: 10.1007/s12664-016-0703-7

**NAT**

**PMID:**27796938

**CS**

**Rajadoss MP**(1), Berry CJ(1), Rebekah GJ(2), Moses V(3), Keshava SN(3), JacobKS(4), Kumar S(1), Kekre N(1), Devasia A(1).

Predictors of renal recovery in renal failure secondary to bilateral obstructive urolithiasis.

Arab J Urol. 2016 Sep 23;14(4):269-274. eCollection 2016.

#### Author information:

(1)Department of Urology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. (2)Department of Biostatistics, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. (3)Department of Radiology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. (4)Department of Psychiatry, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

**OBJECTIVES:** To identify factors predicting renal recovery in patients presenting with renal failure secondary to bilateral obstructing urolithiasis.

**PATIENTS AND METHODS:** Data from electronic records of consecutive adult patients presenting with bilateral obstructing urolithiasis between January 2007 and April 2011 were retrieved. Ultrasonography of the abdomen, and kidney, ureter, bladder (KUB study) X-ray or abdominal non-contrast computed tomography confirmed the diagnosis. Interventional radiologists placed bilateral nephrostomies. Definitive intervention was planned after reaching nadir creatinine. Renal recovery was defined as nadir creatinine of  $\leq 2$  mg/dL.

**RESULTS:** In all, 53 patients were assessed, 50 (94.3%) were male, and 18 (33.9%) were aged  $\geq 40$  years. Renal recovery was achieved in 20 patients (37.7%). A symptom duration of  $\geq 25$  days ( $P < 0.01$ ), absence of hypertension ( $P = 0.018$ ), maximum renal parenchymal thickness of  $>16.5$  mm ( $P = 0.001$ ), and haemoglobin  $>9.85$  g/dL ( $P < 0.01$ ) were significant on unadjusted analysis. Symptom duration of  $\geq 25$  days

alone remained significant after adjusted analysis. Symptom duration of  $\geq 25$  days (hazard ratio (HR) 13.83, 95% confidence interval (CI) 4.52-42.26;  $P < 0.01$ ), parenchymal thickness of  $\geq 16.5$  mm (HR 5.91, 95% CI 1.94-17.99;  $P = 0.002$ ), and absence of hypertension (HR 9.99, CI 95% 1.32-75.37;  $P = 0.026$ ) were significantly related to time to nadir creatinine. Symptom duration of  $\geq 25$  days (HR 17.44, 95% CI 2.48-122.79;  $P = 0.004$ ) alone remained significant after adjusted analysis. A symptom duration of  $\geq 25$  days ( $P = 0.007$ ) was 22-times more likely to indicate renal recovery.

**CONCLUSIONS:** Shorter symptom duration ( $\geq 25$  days) is predictive of renal recovery in renal failure secondary to bilateral obstructive urolithiasis.

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**INTL**

**PMCID:** PMC5122748 **PMID:**27900216

**CS**

**Rajan SJ**(1), Sathyendra S(1), Mathuram AJ(2).

Scrub typhus in pregnancy: Maternal and fetal outcomes.

Obstet Med. 2016 Dec;9(4):164-166. Epub 2016 May 5.

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Scrub typhus is an important unrecognized cause for undifferentiated acute febrile illness in India associated with poor fetal outcomes. Maternal and fetal outcomes among pregnant patients with scrub typhus presenting to a tertiary care university teaching hospital from January 2010 to July 2012 were studied. Scrub typhus was diagnosed by clinical criteria along with scrub ELISA positivity or an eschar. In total, 33 of 738 patients (4.5%) who were diagnosed with scrub typhus were pregnant; 57.6% were in the third trimester, 27.3% in the second, and only 15.2% in the first trimester; 69.7% required admission to intensive care. Mortality was low (3%,  $n = 1$ ) compared to 12.2% mortality reported previously. All patients were treated with Azithromycin. Poor fetal outcome was observed in 51.5% of these pregnancies with fetal loss occurring in 42.4% and preterm childbirth in 9.1%. Scrub typhus complicating pregnancy is associated with a poor fetal outcome despite treatment with Azithromycin. A majority require intensive care treatment for survival.

DOI: 10.1177/1753495X16638952

**INTL****PMCID: PMC5089339 PMID:27829876****CS**

**Rajendra A**(1), Sabnis K(2), Jeyaseelan V(3), Rupali P(2).

Paradoxical reaction (PR) in tuberculous lymphadenitis among HIV-negative patients: retrospective cohort study.

Postgrad Med J. 2016 Sep 16. pii: postgradmedj-2016-134326. doi:10.1136/postgradmedj-2016-134326. [Epub ahead of print]

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DOI: 10.1136/postgradmedj-2016-134326

**NAT****PMID:27638382****CS**

**Rajkumar P**(1), Mathew BS(2), Das S(3), Isaiah R(3), John S(4), Prabha R(5), Fleming DH(6).

Cisplatin Concentrations in Long and Short Duration Infusion: Implications for the Optimal Time of Radiation Delivery.

J Clin Diagn Res. 2016 Jul;10(7):XC01-XC04. doi: 10.7860/JCDR/2016/18181.8126. Epub 2016 Jul 1.

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**INTRODUCTION:** Cisplatin has radiosensitizing properties and the best sensitization to radiotherapy occurs with a higher plasma concentration of cisplatin. To our knowledge the optimal time sequence between chemotherapy and administration of radiation therapy, to obtain maximum effect from concurrent chemoradiation is unclear.

**AIM:** The aim of this study was to measure the two cisplatin infusion regimens in order to determine the total and free cisplatin post infusion concentration changes over time. These changes may have clinical implications on the optimum time of administration of post infusion radiation therapy.

**MATERIALS AND METHODS:** Two cohorts of patients were recruited and both, total and free plasma concentration of cisplatin following long and short durations of intravenous infusion was determined. Blood samples were collected at 0.5, 1, 1.5, 2, 3 and 5 hours from the start of the infusion in the 1hour infusion group and at 2, 3, 3.5, 4, 6 and 24 hours from the start of the infusion, in the 3 hour infusion group. Total and free cisplatin concentrations were measured using a validated HPLC-UV method.

**RESULTS:** The highest concentration of total and free cisplatin was achieved at the end of the infusion in both regimens. Total cisplatin concentration declined 30 minutes after the end of infusion in both the groups. After 1hour of discontinuing cisplatin, the free cisplatin concentration also declined significantly.

**CONCLUSION:** We conclude that radiation should be administered within 30 minutes of completion of the infusion irrespective of the duration of infusion.

DOI: 10.7860/JCDR/2016/18181.8126

**NAT****PMCID: PMC5020194 PMID:27630935****CS**

**Rajshekhar V**(1), Moorthy RK(2), Jeyaseelan V(3), John S(4), Rangad F(4), Viswanathan PN(4), Ravindran P(4), Singh R(4).

Results of a Conservative Dose Plan Linear Accelerator-Based Stereotactic Radiosurgery for Pediatric Intracranial Arteriovenous Malformations.

World Neurosurg. 2016 Nov;95:425-433. doi: 10.1016/j.wneu.2016.06.007. Epub 2016 Jun 11.

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**OBJECTIVE:** To evaluate the obliteration rate and clinical outcome following linear accelerator

(LINAC)-based stereotactic radiosurgery (SRS) for intracranial arteriovenous malformation (AVM) in pediatric patients (age  $\leq 18$  years).

**METHODS:** Factors associated with the obliteration rate and neurologic complications were studied retrospectively in pediatric patients who underwent LINAC-based SRS for AVM between June 1995 and May 2014.

**RESULTS:** The study cohort comprised 36 males and 33 females, with a median age at the time of SRS of 14 years (range, 7-18 years). The mean AVM volume was  $8.5 \pm 8.7$  cc (range, 0.6-41.8 cc). The median marginal dose of radiation delivered was 15 Gy (range, 9-20 Gy). Magnetic resonance imaging (MRI) demonstrated complete obliteration of the AVM in 44 of the 69 patients (63.8%), at a mean follow up of 27.5 months (range, 12-90 months). On subgroup analysis, 41 of the 53 AVMs of  $\leq 14$  cc in volume (77.3%) were obliterated. AVMs with a modified AVM radiosurgery score  $< 1$  had significantly shorter obliteration times from the time of SRS ( $P = .006$ ). On multivariate analysis, the mean marginal dose of radiation delivered to the AVM was the sole significant predictor of obliteration (odds ratio, 1.6; 95% confidence interval, 1 to 2.4).

**CONCLUSIONS:** A modest median marginal dose of 15 Gy (16 Gy in the obliterated AVM group vs. 12 Gy in the nonobliterated group) resulted in an obliteration rate of 66.7% after LINAC-based SRS for intracranial AVM, with low rate.

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**INTL**

**PMID:**27302562

**CS**

**Ramachandran K(1), Mani SK(2), Gopal GK(3), Rangasami S(4).**

Prevalence of Bone Mineral Density Abnormalities and Factors Affecting Bone Density in Patients with Chronic Obstructive Pulmonary Disease in a Tertiary Care Hospital in Southern India.

J Clin Diagn Res. 2016 Sep;10(9):OC32-OC34. Epub 2016 Sep 1.

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**INTRODUCTION:** Chronic Obstructive Pulmonary Disease (COPD) is a disease of wasting with airflow limitation, associated with a variety of systemic manifestations such as reduced Bone Mineral Density (BMD). There is a paucity of Indian studies on the effects of COPD on BMD.

**AIM:** This study was conducted to estimate the prevalence of osteopenia and osteoporosis in COPD patients and the correlation between bone density and severity of COPD classified according to GOLD Global initiative for chronic Obstructive Lung Disease guidelines (GOLD).

**MATERIALS AND METHODS:** A prospective study of 60 patients diagnosed to have COPD, was conducted in the outpatient department of Respiratory Medicine, at a tertiary care hospital in Southern India, between September 2012 and September 2013. BMD was measured using ultrasound bone densitometer (ACHILLES GE HEALTH CARE). Patients with a T-score between -1 and -2.5 were considered to be osteopenic while patients with a T score less than -2.5 were considered to be osteoporotic (WHO criteria).

**RESULTS:** Overall, 40 (67%) patients had an abnormal bone mineral density. A total of 21 (35%) patients were osteoporotic while 19 (33%) were osteopenic. BMD levels correlated with severity of obstruction ( $p < 0.001$ ), smoking status ( $p = 0.02$ ), age ( $p = 0.05$ ) and number of pack years ( $p = 0.001$ ).

**CONCLUSION:** Patients with COPD are at an increased risk for lower BMD and osteoporotic fractures and the risk appears to increase with disease severity. Further studies are required to assess whether routine BMD measurements in COPD patients is beneficial to diagnose osteoporosis and reduce morbidity.

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**NAT**

**PMCID:** PMC5071990 **PMID:**27790490

**CS**

**Raveendran S(1), Naik D(2), Raj Pallapati SC(1), Prakash JJ(3), Thomas BP(1), Thomas N(2).**

The clinical and microbiological profile of the diabetic hand: A retrospective study from South India. Indian J Endocrinol Metab. 2016 Sep-Oct;20(5):619-624.

**Author information:**

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**BACKGROUND:** Pyogenic Infections of the hand in diabetes are largely a tropical entity and published material in the area are rather meagre.

**PATIENTS AND METHODS:** This is a retrospective study on the pattern of hand infections and involves the microbiological profile of 39 cases of diabetes hand-related infections admitted to the hospital between the years 2004 and 2010.

**RESULTS:** This study included 39 patients, among whom 23 (59%) had necrotizing fasciitis (NF), and 16 (9-abscess and 7-tenosynovitis) had nonnecrotizing infection. Among 25 culture positive patients, polymicrobial infections were isolated in 13 (52%) patients, a single organism was isolated in 9 (36%) and 3 (12%) had sterile cultures. Out of the 41 different bacterial isolates, 51.12% were Gram-negative and 48.78% were Gram-positive. Patients with NF had a higher mean glycated hemoglobin ( $10.83 \pm 2.59$  vs.  $8.64 \pm 1.8\%$ ,  $P = 0.020$ ), when compared to the nonnecrotizing group. Patients with NF also had more polymicrobial infections ( $P = 0.017$ ), and a longer duration of hospitalization when compared to patients without NF ( $21.8 \pm 9.96$  vs.  $12.7 \pm 14.5$  days,  $P = 0.021$ ). Seven (17.94%) patients required amputation of the affected digits of which six (15.38%) had NF.

**CONCLUSION:** Patients with poor glycemic control, polymicrobial infection, delay in presentation, and a prior surgical intervention at another medical center was associated with more severe necrotizing infections. The duration of hospitalization and amputation rates was greater among patients with NF.  
DOI: 10.4103/2230-8210.190539

**NAT**

**PMCID: PMC5040040 PMID:27730070**

**CS**

**Revanappa KK(1), Moorthy RK(1), Alexander M(1), Rajshekhar V(1).**

Recovery of sympathetic skin response after central corpectomy in patients with moderate and severe cervical spondylotic myelopathy.

Br J Neurosurg. 2016 Jul 14;1-6. [Epub ahead of print]

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**BACKGROUND:** There are sparse data on the recovery of sympathetic skin response (SSR) following decompressive surgery in patients with cervical spondylotic myelopathy (CSM). We designed a study to assess SSR in patients with moderate and severe (Nurick grades 3, 4 and 5) CSM, and its recovery following central corpectomy (CC).

**METHOD:** We conducted a prospective study on 19 patients with moderate and severe CSM who

underwent CC from June 2008 to December 2010. Autonomic dysfunction was defined as the presence of 'bladder dysfunction' or 'orthostatic hypotension'. All patients underwent SSR test preoperatively and at follow-up. Functional evaluation was done using Nurick grade and modified Japanese Orthopedic Association (mJOA) score preoperatively and at follow-up.

**FINDINGS:** In the preoperative assessment, 14 of 19 (73.7%) patients had bladder dysfunction and orthostatic hypotension. SSR was absent in 13 (68.4%) patients preoperatively. At a mean follow-up of 14.5 months after CC, SSR was present in 12 of the 14 patients available for follow-up. SSR returned postoperatively in 9 of the 11 patients in whom it was absent preoperatively. Recovery of SSR postoperatively had significant correlation with improvement in Nurick grade ( $p=0.02$ ), improvement in lower limb component of mJOA score ( $p=0.001$ ) and Nurick grade recovery rate ( $p=0.008$ ).

**CONCLUSIONS:** Dysfunction of the autonomic pathways as determined by the SSR is seen in nearly 70% of patients with moderate and severe CSM but did not correlate with other autonomic functions, suggesting possibly different pathways for different autonomic functions. Following uninstrumented CC, SSR returned in almost 80% of patients in whom it was absent preoperatively and this correlated significantly with improvement in functional grade. Decompressive surgery can reverse autonomic dysfunction in most of these patients.  
DOI: 10.1080/02688697.2016.1206178

**INTL**

**PMID:27416074**

**CS**

**Rose W(1), Rajan RJ(2), Punnen A(2), Ghosh U(2).**

Distribution of Eschar in Pediatric Scrub Typhus.

J Trop Pediatr. 2016 Oct;62(5):415-20. doi: 10.1093/tropej/fmw027. Epub 2016 Apr 27.

**Author information:**

(1)Department of Pediatrics, Christian Medical College, Vellore 632004, India  
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**BACKGROUND:** Identifying an eschar in scrub typhus is useful for initiation of prompt and appropriate antibiotic therapy.

**METHODS:** The distribution of eschars in all children <15 years of age admitted with confirmed scrub typhus over a 5 year period is described.

**RESULTS:** Of 431 children admitted with scrub typhus, eschars were present in 176 (40.8%) children with the following distribution: head, face and neck, 33 (19.1%); axillae, 37 (21%); chest and abdomen, 21 (11.9%); genitalia, inguinal region and buttocks, 58 (33%); back, 8 (4.5%); upper extremities, 13 (7.4%); and lower extremities, 5 (2.8%). The commonest sites of eschars were scrotum (27 of 106; 25.5%) and axillae (15 of 106; 14.2%) in males and axillae (22 of 70; 31.4%) and groin (16 of 70; 22.9%) in females. Eschars were seen within skin folds in 100 of 176 (56.8%) children.

**CONCLUSION:** Children should be carefully examined for the presence of eschar especially in the skin folds of the genitalia, axillae and groin to make an early diagnosis of scrub typhus.

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DOI: 10.1093/tropej/fmw027

**INTL**

**PMID:**27122479

**CS**

**Rupa V(1)**, Isaac R(2), Rebekah G(3), Manoharan A(4). Association of *Streptococcus pneumoniae* nasopharyngeal colonization and other risk factors with acute otitis media in an unvaccinated Indian birth cohort.

Epidemiol Infect. 2016 Jul;144(10):2191-9. doi: 10.1017/S0950268816000248. Epub 2016 Mar 2.

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In order to study the epidemiology of acute otitis media (AOM) and *Streptococcus pneumoniae* nasopharyngeal colonization in the first 2 years of life, we followed up an unvaccinated birth cohort monthly and at visits when sick, with otoscopy to detect AOM and performed nasopharyngeal swabbing to detect *S. pneumoniae*. Serotyping of positive cultures was also performed. Of 210 babies who were enrolled at birth, 61 (29.05%) experienced 128 episodes of AOM [relative risk 2.63, 95% confidence interval (CI) 1.21-5.75] with maximum incidence in the second half of the first year of life. Episodes ranged from 1 to 7 (mean 2.1 episodes). Most (86.9%) babies with AOM had a positive culture swab giving an odds ratio (OR) of 1.93 (95% CI 1.03-3.62, P = 0.041) for this association. Other risk factors identified for AOM were

winter season (OR 3.46, 95% CI 1.56-7.30, P = 0.001), upper respiratory infection (OR 2.43, 95% CI 1.43-4.51, P = 0.005); residents of small households were less likely to develop AOM (OR 0.32, 95% CI 0.17-0.57, P < 0.01). Common *S. pneumoniae* serotypes isolated during episodes were 19, 6, 15, 35, 7, 23, 9 and 10 which indicated a theoretical coverage for pneumococcal vaccines PCV10 and PCV13 constituent serotypes of 62.8%. We conclude that AOM in Indian infants is often associated with *S. pneumoniae* colonization of the nasopharynx as well as other risk factors.

DOI: 10.1017/S0950268816000248

**INTL**

**PMID:**26931207

**CS**

**Saha A(1)**, Shanthi F X M(1), Winston A B(1), Das S(2), Kumar A(1), Michael JS(1), Balamugesh T(1). Prevalence of Hepatotoxicity From Antituberculosis Therapy: A Five-Year Experience From South India.

J Prim Care Community Health. 2016 Jul;7(3):171-4. doi: 10.1177/2150131916642431. Epub 2016 Apr 7.

**Author information:**

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**BACKGROUND:** Antituberculosis (ATT) drug-induced liver injury (DILI) is a common and serious adverse effect of tuberculosis (TB) treatment. This retrospective study was carried out to study the prevalence of DILI among patients who had received anti-TB medications and to study some of the known risk factors responsible for causing DILI.

**MATERIALS AND METHODS:** This longitudinal descriptive study was performed to evaluate cases of DILI with predefined criteria. Patients of all ages, diagnosed and treated for smear positive pulmonary TB from January 1, 2008 to December 31, 2012 and those who came for regular follow-up were included in the study. Multiple logistic regression analysis was performed to determine the association of different risk factors and DILI. The confounders considered were age, sex, weight, body mass index, doses of drugs (fixed or per kg), ATT regimens (daily or intermittent), and treatment categories.

**RESULTS:** Of the 253 patients analyzed, 24 (9.48%) developed DILI. Associations of different risk factors were insignificant; including chronic alcohol consumption, hepatitis B infection,

hepatitis C infection, HIV infection, and existing chronic TB.

CONCLUSION: DILI was not significantly associated with known risk factors in our settings.

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INTL

PMID:27056794

CS

**Saluja T**(1), Dhingra MS(2), Sharma SD(3), Gupta M(4), Kundu R(5), Kar S(6), DuttaAK(7), Silveira MD(8), Singh JV(9), Kamath VG(10), Chaudhary A(11), Rao V(12), Ravi MD(13), Murthy K(14), Arumugam R(15), Moureau A(16), Prasad R(1), PatnaikBN(1).

Association of rotavirus strains and severity of gastroenteritis in Indian children.

Hum Vaccin Immunother. 2016 Sep 29:1-6. [Epub ahead of print]

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Rotavirus is the leading cause of severe and dehydrating diarrhea in children aged under 5 years. We undertook this hospital-based surveillance study to examine the possible relationship between the severity of diarrhea and the various G-group rotaviruses circulating in India. Stool samples (n = 2,051) were systematically collected from 4,711 children aged <5 years admitted with severe acute gastroenteritis to 12 medical school centers from April 2011 to July 2012. Rotavirus testing was undertaken using a commercially available enzyme immunoassay kit for the rotavirus VP6 antigen (Premier Rotaclone Qualitative ELISA). Rotavirus positive samples were genotyped for VP7 and VP4 antigens by reverse-transcription polymerase chain reaction at a central laboratory. Of the stool samples tested for rotavirus antigen, 541 (26.4%) were positive for VP6 antigen. Single serotype infections from 377 stool samples

were compared in terms of gastroenteritis severity. Among those with G1 rotavirus infection, very severe diarrhea (Vesikari score  $\geq 16$ ) was reported in 59 (33.9%) children, severe diarrhea (Vesikari score 11-15) in 104 (59.8%), moderate (Vesikari score 6-10) and mild diarrhea (Vesikari score 0-5) in 11 (6.3%). Among those with G2 infection, very severe diarrhea was reported in 26 (27.4%) children, severe diarrhea in 46 (48.4%), and moderate and mild diarrhea in 23 (24.2%). Among those with G9 infection, very severe diarrhea was reported in 47 (54.5%) children, severe diarrhea in 29 (33.6%), and moderate and mild diarrhea in 10 (11.9%). Among those with G12 infection, very severe diarrhea was reported in 9 (40.9%) children and severe diarrhea in 13 (59.1%). The results of this study indicate some association between rotavirus serotypes and severity of gastroenteritis.

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INTL

PMID:27686522

CS

**Sato T**(1),(2), Jose J(1),(3), El-Mawardy M(1), Sulimov DS(1), Tölg R(1), RichardtG(1), Abdel-Wahab M(4).

Predictors of acute scaffold recoil after implantation of the everolimus-eluting bioresorbable scaffold: an optical coherence tomography assessment in native coronary arteries.

Int J Cardiovasc Imaging. 2016 Oct 19. [Epub ahead of print]

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This study investigated the predictors of acute recoil after implantation of everolimus-eluting BRS based on optical coherence tomography (OCT). Thirty-nine patients (56 scaffolds) were enrolled. Acute absolute recoil by quantitative coronary angiography was defined as the difference between the mean diameter of the last inflated balloon (X) and the mean lumen diameter of BRS immediately after balloon deflation (Y).

Acute percent recoil was defined as  $(X - Y) \times 100 / X$ . Plaque eccentricity (PE) and plaque composition (PC) were assessed by OCT. PC was classified into two different types: calcific (score = 1), fibrous and lipid (score = 0). Based on the mean acute scaffold recoil value of the present study, scaffolds were divided into two groups: the low acute recoil group (LAR, n = 34) and the high acute recoil group (HAR, n = 22). Acute percent and absolute recoil were  $6.4 \pm 3.0\%$  and  $0.19 \pm 0.11$  mm. PE, PC score and scaffold/artery ratio were significantly higher in HAR than in LAR. In multivariate logistic regression analysis,  $PE > 1.49$ , PC score (score 1) and scaffold/artery ratio  $> 1.07$  were significant positive predictors for the occurrence of acute scaffold recoil (OR 10.7, 95% CI 2.2-51.4,  $p < 0.01$ ; OR 5.6, 95% CI 1.9-22.0,  $p = 0.04$ ; OR 12.4, 95% CI 2.6-65.4,  $p < 0.01$ , respectively). Acute recoil of BRS is influenced by BRS sizing as well as OCT-derived plaque characteristics.

DOI: 10.1007/s10554-016-0997-7

INTL

PMID:27761749

CS

**Sato T(1),(2)**, Jose J(1),(3), El-Mawardy M(1), Sulimov DS(1), Tölg R(1), RichardtG(1), Abdel-Wahab M(4).

Neointimal response to everolimus-eluting bioresorbable scaffolds implanted at bifurcating coronary segments: insights from optical coherence tomography.

Int J Cardiovasc Imaging. 2016 Oct 18. [Epub ahead of print]

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Heterogeneity of neointimal thickness is observed after drug-eluting stents implantation in bifurcation lesions (BL). We evaluated the vascular response of everolimus-eluting bioresorbable scaffold (BRS) struts deployed at BL using optical coherence tomography (OCT). 50 patients (64 scaffolds) underwent follow-up OCT after BRS implantation. Cross-sectional areas of each BL with a side branch more than 1.5 mm were analyzed using OCT every 200  $\mu$ m. All images were divided into three regions according to shear stress: the 1/2 circumference of the vessel opposite to the

ostium (OO), the vessel wall adjacent to the ostium (AO) and the side-branch ostium (SO). The %uncovered strut and the averaged neointimal thickness (NIT) were calculated. Overall, there were significant differences in both NIT and %uncovered strut among the three regions (OO,  $119.2 \pm 68.5$   $\mu$ m vs. AO,  $94.2 \pm 35.7$   $\mu$ m vs. SO,  $80.5 \pm 41.4$   $\mu$ m,  $p = 0.03$ ; OO, 0.4 % vs. AO, 1.4 % vs. SO, 4.8 %,  $p = 0.02$ ). Scaffolds were divided into two groups: a large-ratio side-branch group (LRSB; n = 32) and a small-ratio side-branch group (SRSB; n = 32), based on the median value of the ratio of the diameter of side branch ostium (Ds) to that of the main branch (Dm). In the LRSB alone, there were significant differences in both NIT and %uncovered strut among the three regions (OO,  $128.0 \pm 61.1$   $\mu$ m vs. AO,  $97.3 \pm 34.3$   $\mu$ m vs. SO,  $75.9 \pm 39.4$   $\mu$ m,  $p < 0.01$ ; OO, 0.3 % vs. AO, 2.3 % vs. SO, 8.7 %,  $p < 0.01$ ). After BRS implantation in BL, neointimal response was pronounced at the vessel wall opposite to the side branch ostium, especially in those with large side branches.

DOI: 10.1007/s10554-016-0993-y

INTL

PMID:27757563

CS

**Satyanandan C(1)**, Singh G, Shankar A.

Lockit Plus Catheter Securement Device for Lumbar Subarachnoid Drains.

J Neurosurg Anesthesiol. 2016 Jul;28(3):277. doi: 10.1097/ANA.0000000000000237.

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DOI: 10.1097/ANA.0000000000000237

INTL

PMID:26447498

CS

**Sebastian P(1)**, Balakrishnan R(1), Yadav B(2), John S(1).

Outcome of radiotherapy for pituitary adenomas. Rep Pract Oncol Radiother. 2016 Sep-Oct;21(5):466-72.

doi:10.1016/j.rpor.2016.06.002. Epub 2016 Jul 15.

#### Author information:

(1)Department of Radiation Oncology, Christian Medical College, Vellore, India. (2)Department of Biostatistics, Christian Medical College, Vellore, India.

AIM: The aim of this study was to analyze the outcome and toxicities and its correlation to patient related and treatment related factors.

**BACKGROUND:** Pituitary adenomas are treated by radiation therapy (RT) as one of the modalities along with surgery and medical therapy. RT to pituitary adenomas is a challenge due to adjacent dose limiting structures such as optic apparatus and hypothalamus.

**MATERIALS AND METHODS:** Between January 2004 and December 2010, 94 patients treated for pituitary adenoma with RT who had hospital records of a minimum follow-up of 1 year were included in the analysis. Tests of correlation were done with regards to treatment factors.

**RESULTS:** Male preponderance was noted in our patient population. Nonfunctioning and functioning tumors were equal in number in this series. Hypopituitarism was associated in 58.5% of patients prior to RT. Radiological tumor progression was seen in one patient (1/94) who had a nonfunctioning tumor. Among functioning tumors, biochemical remission was seen in 93.6% of patients at a median follow-up of 6 years.

**CONCLUSIONS:** Visual complication was seen in 5.3% of patients and worsening or new onset hypopituitarism was seen in 6.4%. Conventional 3-field technique was associated with significantly more visual complication compared to Stereotactic Radiation Therapy (SRT) technique. Doses  $\leq 50.4$  Gy showed a trend of reduced rate of visual and endocrine complications with no compromise in efficacy.

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**INTL**

**PMCID:** PMC4950161 **PMID:** 27489518

**CS**

**Sen** I(1), Stephen E(2), Agarwal S(2), Rebekah G(3), Nair SC(4).

Analytical performance of a point-of-care device in monitoring patients on oral anticoagulation with vitamin K antagonists.

Phlebology. 2016 Oct;31(9):660-7. doi: 10.1177/0268355515608569. Epub 2015 Sep 27.

**Author information:**

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**BACKGROUND:** [Please check the following sentence for clarity: "Point-of-care devices measuring international normalized ratio have clinical appeal, reports of 'off-label' in-hospital/primary care use report improved time to intervention/dose adjustment."]Point-of-care devices measuring

international normalized ratio have clinical appeal, reports of 'off-label' in-hospital/primary care use report improved time to intervention/dose adjustment. We evaluated the accuracy and precision of a device for such multiple patient use compared to a reference laboratory.

**METHODS:** The point-of-care international normalized ratio result of patients on oral anticoagulation at the Vascular Surgery clinic was compared to the reference to check for statistical and clinical correlation. This was a prospective case-control study design with sample size calculated for sensitivity of 87.5%, precision 5% and desired confidence level 95%.

**RESULTS:** There were 168 patients tested; 55% were male, the mean age was 45.4. Sixty per cent were in the target international normalized ratio range. Tests were done for statistical and clinical correlation. The international normalized ratio range using the point-of-care device was 0.8-7.5 (reference lab 0.8-10), mean international normalized ratio was  $2.22 \pm 1.6$  (point-of-care device) compared to  $2.46 \pm 1.3$  (reference lab). The mean absolute difference was  $0.79 \pm 0.92$  and the mean relative difference was  $8.1\% \pm 1.03$ . Data was analysed using a Bland-Altman plot yielding a mean of 0.738 (standard deviation 0.92). Concordance between the tests was 75% with  $r^2 = 0.52$  on linear regression. Using an error grid plot, excellent clinical correlation was seen in 63.8%. In 5.4% major corrective action was needed but potentially missed if relying on the point-of-care device.

**CONCLUSION:** The accuracy and precision of this point-of-care device is moderate. It may have potential utility only where access to a reference lab is difficult.

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DOI: 10.1177/0268355515608569

**INTL**

**PMID:** 26415605

**CS**

**Shalimar**(1), Saraswat V(2), Singh SP(3), Duseja A(4), Shukla A(5), Eapen CE(6), Kumar D(7), Pandey G(2), Venkataraman J(8), Puri P(9), Narayanswami K(7), Dhiman RK(4), Thareja S(7), Nijhawan S(10), Bhatia S(5), Zachariah U(6), Sonika U(1), Varghese T(11), Acharya SK(12).

Acute-on-chronic liver failure in India: The Indian National Association for Study of the Liver consortium experience.

J Gastroenterol Hepatol. 2016 Oct;31(10):1742-1749. doi: 10.1111/jgh.13340.

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**BACKGROUND AND AIM:** The aim of this study was to analyze etiologies and frequency of hepatic and extrahepatic organ failures (OFs) and outcome of acute-on-chronic liver failure (ACLF) at 10 tertiary centers in India.

**METHODS:** In this retrospective study (2011-2014), patients satisfying Asian Pacific Association for the Study of the Liver definition of ACLF were included. Etiology of acute precipitating insult and chronic liver disease and outcomes were assessed. Occurrence and severity of OF were assessed by chronic liver failure-sequential organ failure assessment score.

**RESULTS:** The mean ( $\pm$ SD) age of 1049 consecutive ACLF patients was  $44.7 \pm 12.2$  years; Eighty-two percent were men. Etiology of acute precipitants included alcohol 35.7%, hepatitis viruses (hepatitis A, hepatitis B, and hepatitis E) 21.4%, sepsis 16.6%, variceal bleeding 8.4%, drugs 5.7%, and cryptogenic 9.9%. Among causes of chronic liver disease, alcohol was commonest 56.7%, followed by cryptogenic and hepatitis viruses. Predictors of survival were analyzed for a subset of 381 ACLF patients; OF's liver, renal, coagulation, cerebral, respiratory, and failure were seen in 68%, 32%, 31.5%, 22.6%, 14.5%, and 15%, respectively. Fifty-seven patients had no OF, whereas 1, 2, 3, 4, and 5 OFs were recorded in 126, 86, 72, 28, and 12 patients, respectively. The mortality increased progressively with increasing number of OFs (12.3% with no OF, 83.3% with five OFs). During a median hospital stay of 8 days, 42.6% (447/1049) of patients died. On multivariate analysis by Cox proportional hazard model, elevated serum creatinine (hazard ratio [HR] 1.176), advanced hepatic encephalopathy (HR 2.698), and requirement of ventilator support (HR 2.484) were independent predictors of mortality.

**CONCLUSIONS:** Alcohol was the commonest etiology of ACLF. Within a mean hospital stay of 8 days, 42% patients died. OFs independently predicted survival.

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**INTL**

**PMID:**26989861

**CS**

**Shankar C(1), Nabarro LE(1), Anandan S(1), Veeraraghavan B(1).**

Minocycline and Tigecycline: What Is Their Role in the Treatment of Carbapenem-Resistant Gram-Negative Organisms?

Microb Drug Resist. 2016 Aug 26. [Epub ahead of print]

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Carbapenem-resistant organisms are increasingly common worldwide, particularly in India and are associated with high mortality rates especially in patients with severe infection such as bacteremia. Existing drugs such as carbapenems and polymyxins have a number of disadvantages, but remain the mainstay of treatment. The tetracycline class of antibiotics was first produced in the 1940s. Minocycline, tetracycline derivative, although licensed for treatment of wide range of infections, has not been considered for treatment of multidrug-resistant organisms until recently and needs further in vivo studies. Tigecycline, a derivative of minocycline, although with certain disadvantages, has been frequently used in the treatment of carbapenem-resistant organisms. In this article, we review the properties of minocycline and tigecycline, the common mechanisms of resistance, and assess their role in the management of carbapenem-resistant organisms.

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**INTL**

**PMID:**27564414

**CS**

**Shetty S(1), Kapoor N(1), Bondu JD(2), Thomas N(1), Paul TV(1).**

Bone turnover markers: Emerging tool in the management of osteoporosis.

Indian J Endocrinol Metab. 2016 Nov-Dec;20(6):846-852.

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Bone is a dynamic tissue which undergoes constant remodeling throughout the life span. Bone turnover is balanced with coupling of bone formation and resorption at various rates leading to continuous remodeling of bone. A study of bone turnover markers (BTMs) provides an insight of the dynamics of bone turnover in many metabolic bone disorders. An increase in bone turnover seen with aging and pathological states such as osteoporosis leads to deterioration of bone microarchitecture and thus contributes to an increase in the risk of fracture independent of low bone mineral density (BMD). These microarchitectural alterations affecting the bone quality can be assessed by BTMs and thus may serve as a complementary tool to BMD in the assessment of fracture risk. A systematic search of literature regarding BTMs was carried out using the PubMed database for the purpose of this review. Various reliable, rapid, and cost-effective automated assays of BTMs with good sensitivity are available for the management of osteoporosis. However, BTMs are subjected to various preanalytical and analytical variations necessitating strict sample collection and assays methods along with utilizing ethnicity-based reference standards for different populations. Estimation of fracture risk and monitoring the adherence and response to therapy, which is a challenge in a chronic, asymptomatic disease such as osteoporosis, are the most important applications of measuring BTMs. This review describes the physiology of bone remodeling, various conventional and novel BTMs, and BTM assays and their role in the assessment of fracture risk and monitoring response to treatment with antiresorptive or anabolic agents.

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**NAT**

**PMID:**27867890

**CS**

**Shetty S(1)**, Kapoor N(1), Dian Bondu J(2), Antonisamy B(3), Thomas N(1), PaulTV(4).

Bone turnover markers and bone mineral density in healthy mother-daughter pairs from South India.

Clin Endocrinol (Oxf). 2016 Nov;85(5):725-732. doi: 10.1111/cen.13173. Epub 2016 Sep 5.

**Author information:**

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Bone turnover markers (BTMs) provide important insights into the dynamics of bone remodelling and are subjected to preanalytical and ethnic variations in addition to influence of genetic and environmental factors.

**AIM/OBJECTIVES:** To derive ethnicity specific reference range for BTMs and to study their correlation with Bone Mineral Density (BMD) in a cohort of healthy postmenopausal women and their premenopausal daughters and to look at the impact of maternal bone mineral status on daughters bone health.

**MATERIAL AND METHODS:** This community based cross sectional study included 300 subjects (150 mother-daughter pairs). Demographic details were collected. Fasting blood and a second void morning urine samples were obtained for measurement of BTMs (sCTX, sPTNP1, sOC and urine DPD respectively) and bone mineral parameters. BMD was measured by DXA scan.

**RESULTS:** Osteoporosis was seen in 44.7% of the postmenopausal women. Ethnicity specific reference ranges of BTMs were derived for the study population. Significant inverse correlation was found between all BTMs (except urine DPD) and BMD ( $P < 0.05$ ). Daughters of mothers with osteoporosis at spine and femoral neck had lower BMD, compared to daughters of mothers without osteoporosis ( $P = 0.03$  &  $0.05$ ).

**CONCLUSION:** Apart from deriving the ethnicity specific reference range for BTMs and finding a significant inverse correlation between BTM and BMD, this study found significantly lower BMD in daughters of mothers with osteoporosis at spine and femoral neck implicating the probable interplay of genetic, epigenetic and similar environmental factors.

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**INTL**

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**CS**

**Simon EG(1,)(2)**, Samuel S(2), Ghosh S(3), Moran GW(2).

Ustekinumab: a novel therapeutic option in Crohn's disease.

Expert Opin Biol Ther. 2016 Aug;16(8):1065-74. doi:10.1080/14712598.2016.1205582.

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(1)a Department of Gastroenterology, Christian Medical College, Vellore, India. (2)b NIHR Nottingham Digestive Diseases Biomedical Research Unit, Nottingham University Hospitals NHS Trust and University of Nottingham,

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**INTRODUCTION:** Although anti-tumour necrosis factor (TNF) agents have caused a paradigm shift in the management of moderate-to-severe Crohn's, they are sometimes associated with diminished or absent response in a considerable proportion of patients. Hence agents targeting pathways other than TNF are needed. Ustekinumab is a monoclonal antibody directed against the p40 subunit of IL-12 and 23.

**AREAS COVERED:** This manuscript summarises the available evidence on the efficacy and safety of Ustekinumab in Crohn's disease through data available from randomised controlled trials and compassionate use programs across the world.

**EXPERT OPINION:** Current literature strongly supports the fact that ustekinumab is clinically efficacious and reasonably safe for induction and maintenance of remission in moderate-to-severe Crohn's disease.

DOI: 10.1080/14712598.2016.1205582

**INTL**

**PMID:**27341173

**CS**

**Singh G(1), Mariappan R, Gautham AK.**

Buttressing the Pediatric Endotracheal Tube in Neonates: A Simple but Useful Technique.

J Neurosurg Anesthesiol. 2016 Nov 30. [Epub ahead of print]

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**INTL**

**PMID:**27906764

**CS**

**Singh M(1), Ponniah M(2), Jacob KS(3).**

A nested case-control study to determine the incidence and factors associated with unanticipated admissions following day care surgery.

Indian J Anaesth. 2016 Nov;60(11):833-837.

**Author information:**

(1)Department of Neurological Sciences, Neurosciences Critical Care Unit, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Anaesthesia, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Psychiatry, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND AND AIMS:** Day care surgery offers respite from hospitalisation for specific surgical procedures and has many advantages. However, occasionally patients who undergo such surgery require hospitalisation for unanticipated

complications. We aimed to determine their incidence and to identify factors associated with unanticipated admissions in a tertiary care hospital in South India.

**METHODS:** During the 3-month study, 63 cases requiring admission and 126 randomly selected controls were taken from the 776 procedures that were performed were compared. The variables studied were patients' demographic characteristics, pre-operative medical illness, personal habits, American Society of Anesthesiologists status, the diagnosis and surgical procedures, time since last meal, duration of anaesthesia and surgery, experience of the surgeon and anaesthetist, and intraoperative management (techniques, drugs, monitoring, etc.). Univariate and bivariate statistics were used to determine factors associated with unanticipated admissions.

**RESULTS:** The incidence of unanticipated admissions following day care surgery was 8.11%. The reasons for admission were anaesthetic (33.33%), surgical (15.87%), medical (6.34%) and social (44.44%). The factors significantly associated with unanticipated admissions included duration of anaesthesia more than 50 min (odds ratio [OR]: 3.179; 95% confidence interval [CI]: 1.503-6.722), and starting the last case after 3 pm (OR: 10.095; 95% CI: 2.418-42.148).

**CONCLUSION:** Unanticipated admissions following day care surgery occur mainly due to anaesthetic, surgical, medical and social reasons.

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**NAT**

**PMCID:** PMC5125187 **PMID:**27942057

**CS**

**Sivakumar R(1), Balakrishnan V(1), Gowri P(2), Visalakshi J(3).**

Leptospiral Uveitis: Usefulness of Clinical Signs as Diagnostic Predictors.

Ocul Immunol Inflamm. 2016 Sep 6:1-8. [Epub ahead of print]

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**PURPOSE:** To analyze the diagnostic predictive ability of clinical variables.

**METHODS:** Demographic and clinical variables of 172 serologically proven leptospiral uveitis patients were compared with 200 controls of non-leptospiral uveitis. Multiple logistic regression

analysis identified diagnostic predictors. A receiver operating characteristic curve tested the performance of the model.

**RESULTS:** Of all variables, male gender, farming as an occupation, and clinical features such as non-granulomatous panuveitis, hypopyon, and vitreous infiltration in the absence of retinochoroiditis constituted the predictive parameters, with the sensitivity and specificity of 86% and 90.7%, respectively.

**CONCLUSIONS:** Multiple logistic analysis detected clinically diagnostic predictors that can assist primary care ophthalmologists. Clinical diagnosis can further be confirmed by serology at tertiary care centers.

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**INTL**

**PMID:**27598430

**CS**

**Srinivas MN(1), Amogh VN(2), Gautam MS(3), Prathyusha IS(4), Vikram NR(1), RetnamMK(1), Balakrishna BV(1), Kudva N(1).**

A Prospective Study to Evaluate the Reliability of Thyroid Imaging Reporting and Data System in Differentiation between Benign and Malignant Thyroid Lesions.

J Clin Imaging Sci. 2016 Feb 26;6:5. doi: 10.4103/2156-7514.177551. eCollection2016.

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(1)Department of Radiodiagnosis, MV Jayaram Medical College and Research Hospital, Hoskote, Bengaluru, Karnataka, India. (2)Department of Radiodiagnosis, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Community Medicine, Bangalore Medical College, Bengaluru, Karnataka, India. (4)Department of Community Medicine, Rangaraya Medical College, Kakinada, Andhra Pradesh, India.

**OBJECTIVES:** To evaluate diagnostic reliability of the daily use of thyroid imaging reporting and data system (TIRADS) classification proposed by Kwak et al., in differentiating between a benign and a malignant thyroid lesion, to calculate inter-observer variability in the interpretation of each of the TIRADS ultrasound features and to evaluate role of TIRADS system in reducing unnecessary biopsies of benign lesions.

**MATERIALS AND METHODS:** Three hundred and sixty-five patients with clinically suspected thyroid lesions during the period from November 1, 2011, to August 31, 2015, were prospectively scanned on gray-scale and Doppler imaging by six radiologists separately. We used GE VOLUSON 730 PRO machine (GE healthcare, Milwaukee, USA) equipped with a 7.5-12 MHz high-frequency linear array transducer with color and power Doppler capability. We evaluated five

sonological features: Internal composition, echogenicity, margins, presence and type of calcification, and shape of the lesion. Based on the TIRADS proposed by Kwak et al., we determined categories of the thyroid lesions. The diagnostic performance of TIRADS classification system was evaluated by comparison with the fine-needle aspiration cytology (FNAC) reports which were subsequently obtained after taking informed consent from the patients. All follicular neoplasms on FNAC were further followed up with excision biopsy and histology. The cytopathological report was used as the standard final diagnosis for comparison. The P value and odds ratio were determined to quantify how strongly the presence or absence of a particular ultrasound feature was associated with benignity or malignancy in the study population. The risk of malignancy was stratified for each TIRADS category-based on the total number of benign and malignant lesions in that category. Cervical lymph nodes were also evaluated for their size, loss of the central, echogenic hilum, presence of irregular and indistinct margin, microcalcification, and necrotic changes. Cohen's Kappa coefficient was determined separately for each of the five TIRADS malignant features to study the inter-observer agreement. Furthermore, the percentage of benign cases that were accurately determined by TIRADS which could have avoided unnecessary FNAC was determined.

**RESULTS:** The risk of malignancy in TIRADS categories 1 and 2 was found to be 0%, 0.64% in category 3, 4.76% in category 4A, 66.67% in category 4B, 83.33% in category 4C, and 100% in category 5. Out of the five suspicious sonological features, irregular margins showed the highest positive predictive value (95.45%) for malignancy followed by taller than wide shape (92.86%), microcalcifications (66.67%), marked hypoechogenicity (54.55%), and solid composition (48.15%). The specificity of three sonological features (completely cystic structure, hyperechogenicity, and macrocalcification) in classifying a nodule as benign was 100%. Loss of central echogenic hilum, presence of an irregular and indistinct margin, microcalcification and necrosis were found to have sensitivity of 100%, 63.63%, 27.27%, and 9.09%, respectively and specificity of 95.7%, 98.5%, 100%, and 100%, respectively for cervical lymph node to be malignant. The Kappa value for taller than wide shape, microcalcification, marked hypoechogenicity, solid composition, and irregular margins was 1.0 (95% confidence interval [CI]: 1-1), 1.0 (95% CI: 1-1), 0.90 (95% CI: 0.82-1), 0.88 (95% CI: 0.77-0.92), and 0.82 (95% CI: 0.64-1),

respectively. The estimated decrease in unnecessary FNACs was found to be 43.83-86.30%.

**CONCLUSIONS:** TIRADS proposed by Kwak et al., combined with evaluation for sonological features of malignant lymph nodes is a valuable, safe, widely available, and easily reproducible imaging tool to stratify the risk of a thyroid lesion and helps in precluding unnecessary FNACs in a significant number of patients. TIRADS features convincingly show comparable results in the interpretation of TIRADS features more so, in the hands of radiologists experienced in thyroid imaging.

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**INTL**

**PMCID: PMC4785791 PMID:27014501**

**CS**

**Srivastava A(1), van den Berg HM(2).**

Standardizing patient outcomes measurement to improve haemophilia care.

Haemophilia. 2016 Sep;22(5):651-3. doi: 10.1111/hae.13072. Epub 2016 Aug 26.

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DOI: 10.1111/hae.13072

**INTL**

**PMID:27562189**

**CS**

**Sudhakar SV(1), Muthusamy K(2), Mani S(3), Gibikote S(3), Shroff M(4).**

Imaging in Pediatric Demyelinating and Inflammatory Diseases of Brain- Part 2.

Indian J Pediatr. 2016 Sep;83(9):965-82. doi: 10.1007/s12098-016-2052-z. Epub 2016 Apr 30.

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Imaging plays an important role in diagnosis, management, prognostication and follow up of pediatric demyelinating and inflammatory diseases of brain and forms an integral part of the diagnostic criteria. This article reviews the spectrum of aquaporinopathies with an in-depth discussion on

present criteria and differentiation from other demyelinating diseases with clinical vignettes for illustration; the latter part of article deals with the spectrum of CNS vasculitis.

DOI: 10.1007/s12098-016-2052-z

**NAT**

**PMID:27130513**

**CS**

**Sudhakar SV(1), Muthusamy K(2), Mani S(3), Gibikote S(3), Shroff M(4).**

Imaging in Pediatric Demyelinating and Inflammatory Diseases of the Brain- Part1.

Indian J Pediatr. 2016 Sep;83(9):952-64. doi: 10.1007/s12098-015-1916-y. Epub 2015 Dec 4.

**Author information:**

(1)Department of Radiodiagnosis, Christian Medical College and Hospital, Vellore, Tamil Nadu, 632004, India. sniya.sudhakar@gmail.com.

(2)Department of Neurology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

(3)Department of Radiodiagnosis, Christian Medical College and Hospital, Vellore, Tamil Nadu, 632004, India. (4)Department of Pediatric Neuroimaging, Hospital for Sick Children, Toronto, Canada.

Imaging plays an important role in the diagnosis, management, prognostication and follow up of pediatric demyelinating and inflammatory diseases of the brain and forms an integral part of the diagnostic criteria. Conventional and advanced MR imaging is the first and only reliable imaging modality. This article reviews the typical and atypical imaging features of common and some uncommon demyelinating and inflammatory diseases with emphasis on the criteria for categorization. Imaging protocols and the role of advanced imaging techniques are also covered appropriately.

DOI: 10.1007/s12098-015-1916-y

**NAT**

**PMID:26634264**

**CS**

**Sukumaran D(1), Cherian AG(1), Das S(2), Winston A B(1), Kumar A(1), Shanthi FxM(1).**

Drug Prescribing Pattern During Intranatal Period in a Secondary Care Hospital in South India: A Retrospective Study.

J Prim Care Community Health. 2016 Apr;7(2):113-7. doi: 10.1177/2150131915627768. Epub 2016 Jan 29.

**NAT**

**PMID:26634264**

**CS**

**Sukumaran D(1), Cherian AG(1), Das S(2), Winston A B(1), Kumar A(1), Shanthi FxM(1).**

Drug Prescribing Pattern During Intranatal Period in a Secondary Care Hospital in South India: A Retrospective Study.

J Prim Care Community Health. 2016 Apr;7(2):113-7. doi: 10.1177/2150131915627768. Epub 2016 Jan 29.

10.1177/2150131915627768. Epub 2016 Jan 29.

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 saibaldas123@gmail.com.

**BACKGROUND:** During delivery, drugs being prescribed cause concerns due to their harmful effects on lactation as well as potential adverse reactions on the mother. This retrospective study was performed to evaluate the drug prescribing pattern during normal delivery in a secondary care hospital in India.

**MATERIALS AND METHODS:** This cross-sectional retrospective study included 3 months of patient's medical records.

**RESULTS:** A total of 2222 drugs, comprising 51 different types of drugs were prescribed to 313 mothers undergoing normal delivery. Most of these drugs are safe in lactation. Ten types of drugs would have been better avoided, but they possibly did not cause harm because of their limited short-term use only during the intranatal period.

**CONCLUSION:** This study reflects a good, safe, and rational medication practice during normal delivery for various common ailments in a secondary care hospital and can be cited as an example for similar settings.

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**INTL**

**PMID:**26825325

**CS**

**Sunkara SK**(1), Antonisamy B(2), Selliah HY(2), Kamath MS(2).

Pre-term birth and low birth weight following preimplantation genetic diagnosis:analysis of 88 010 singleton live births following PGD and IVF cycles.

Hum Reprod. 2016 Dec 15. [Epub ahead of print]

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 (2)Christian Medical College Hospital, Vellore, Tamil Nadu, India.

**STUDY QUESTION:** Is PGD associated with the risk of adverse perinatal outcomes such as pre-term birth (PTB) and low birth weight (LBW)? **SUMMARY**

**ANSWER:** There was no increase in the risk of adverse perinatal outcomes of PTB, and LBW following PGD compared with autologous IVF.

**WHAT IS KNOWN ALREADY:** Pregnancies resulting from ART are associated with a higher risk of pregnancy complications compared with spontaneously conceived pregnancies. The possible reason of adverse obstetric outcomes following ART

has been attributed to the underlying infertility itself and embryo specific epigenetic modifications due to the IVF techniques. It is of interest whether interventions such as embryo biopsy as performed in PGD affect perinatal outcomes.

**STUDY DESIGN, SIZE, DURATION:** Anonymous data were obtained from the Human Fertilization and Embryology Authority (HFEA), the statutory regulator of ART in the UK. The HFEA has collected data prospectively on all ART performed in the UK since 1991. Data from 1996 to 2011 involving a total of 88 010 singleton live births were analysed including 87 571 following autologous stimulated IVF ± ICSI and 439 following PGD cycles.

**PARTICIPANTS/MATERIALS, SETTING, METHODS:** Data on all women undergoing either a stimulated fresh IVF ± ICSI treatment cycle or a PGD cycle during the period from 1996 to 2011 were analysed to compare perinatal outcomes of PTB and LBW among singleton live births. Logistic regression analysis was performed adjusting for female age category, year of treatment, previous IVF cycles, infertility diagnosis, number of oocytes retrieved, whether IVF or ICSI was used and day of embryo transfer.

**MAIN RESULTS AND THE ROLE OF CHANCE:** There was no increase in the risk of PTB and LBW following PGD versus autologous stimulated IVF ± ICSI treatment, unadjusted odds of PTB (odds ratio (OR) 0.68, 95% CI: 0.46-0.99) and LBW (OR 0.56, 95% CI: 0.37-0.85). After adjusting for the potential confounders, there was again no increase in the risk of the adverse perinatal outcomes following PGD: PTB (adjusted odds ratio (aOR) 0.66, 95% CI: 0.45-0.98) and LBW (aOR 0.58, 95% CI: 0.38-0.88).

**LIMITATIONS, REASONS FOR CAUTION:** Although the analysis was adjusted for a number of important confounders, the data set had no information on confounders such as smoking, body mass index and the medical history of women during pregnancy to allow adjustment. There was no information on the stage of embryo at biopsy, whether blastomere or trophectoderm biopsy. **WIDER IMPLICATIONS FOR THE FINDINGS:** The demonstration that PGD is not associated with higher risk of PTB and LBW provides reassurance towards its current expanding application.

**STUDY FUNDING/COMPETING INTERESTS:** No funding was obtained. There are no competing interests to declare.

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**INTL**

**PMID:**27979918

**CS**

**Takeuchi M**(1), Dahabreh IJ(2), Nihashi T(3), Iwata M(4), Varghese GM(5), TerasawaT(1).

Nuclear Imaging for Classic Fever of Unknown Origin: Meta-Analysis.

J Nucl Med. 2016 Dec;57(12):1913-1919. Epub 2016 Jun 23.

**Author information:**

(1)Department of Emergency and General Internal Medicine, Fujita Health University School of Medicine, Toyoake, Japan terasawa@fujita-hu.ac.jp motokit@fujita-hu.ac.jp. (2)Center for Evidence-based Medicine, Brown University, Providence, Rhode Island. (3)Department of Radiology, Nagoya University Graduate School of Medicine, Nagoya, Japan; and. (4)Department of Emergency and General Internal Medicine, Fujita Health University School of Medicine, Toyoake, Japan. (5)Department of Infectious Diseases, Christian Medical College, Vellore, India.

Several studies have assessed nuclear imaging tests for localizing the source of fever in patients with classic fever of unknown origin (FUO); however, the role of these tests in clinical practice remains unclear. We systematically reviewed the test performance, diagnostic yield, and management decision impact of nuclear imaging tests in patients with classic FUO. **METHODS:** We searched PubMed, Scopus, and other databases through October 31, 2015, to identify studies reporting on the diagnostic accuracy or impact on diagnosis and management decisions of (18)F-FDG PET alone or integrated with CT ((18)F-FDG PET/CT), gallium scintigraphy, or leukocyte scintigraphy. Two reviewers extracted data. We quantitatively synthesized test performance and diagnostic yield and descriptively analyzed evidence about the impact on management decisions.

**RESULTS:** We included 42 studies with 2,058 patients. Studies were heterogeneous and had methodologic limitations. Diagnostic yield was higher in studies with higher prevalence of neoplasms and infections. Nonneoplastic causes, such as adult-onset Still's disease and polymyalgia rheumatica, were less successfully localized. Indirect evidence suggested that (18)F-FDG PET/CT had the best test performance and diagnostic yield among the 4 imaging tests; summary sensitivity was 0.86 (95% confidence interval [CI], 0.81-0.90), specificity 0.52 (95% CI, 0.36-0.67), and diagnostic yield 0.58 (95% CI, 0.51-0.64). Evidence on direct comparisons of alternative imaging

modalities or on the impact of tests on management decisions was limited.

**CONCLUSION:** Nuclear imaging tests, particularly (18)F-FDG PET/CT, can be useful in identifying the source of fever in patients with classic FUO. The contribution of nuclear imaging may be limited in clinical settings in which infective and neoplastic causes are less common. Studies using standardized diagnostic algorithms are needed to determine the optimal timing for testing and to assess the impact of tests on management decisions and patient-relevant outcomes.

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**INTL**

**PMID:**27339873

**CS**

**Tergestina M**(1), Rebekah G(2), Job V(3), Simon A(4), Thomas N(1).

A randomized double-blind controlled trial comparing two regimens of vitamin D supplementation in preterm neonates.

J Perinatol. 2016 Sep;36(9):763-7. doi: 10.1038/jp.2016.70. Epub 2016 May 5.

**Author information:**

(1)Department of Neonatology, Christian Medical College, Vellore, India. (2)Department of Biostatistics, Christian Medical College, Vellore, India. (3)Department of Biochemistry, Christian Medical College, Vellore, India. (4)Department of Child Health, Christian Medical College, Vellore, India.

**OBJECTIVE:** To compare the efficacy of 400 vs 1000 IU oral vitamin D supplementation in preterm neonates of 27 to 34 weeks gestation.

**METHODS:** This double-blind randomized controlled trial allocated preterm babies to receive either 400 or 1000 IU of vitamin D3 (n=60 in each group). Primary outcome was prevalence of vitamin D insufficiency (serum vitamin D levels < 20 ng ml<sup>-1</sup>) at 40 weeks of corrected gestational age (CGA).

**RESULTS:** At term CGA vitamin D insufficiency was significantly lower in the 1000 IU group than in the 400 IU group (2% vs 64.6%, P=0.001). Although elevated vitamin D levels were seen in 9.8% of babies on 1000 IU per day, this was not associated with clinical or biochemical evidence of toxicity.

**CONCLUSION:** Supplementing preterm babies with 1000 IU of vitamin D3 daily decreases the prevalence of vitamin D insufficiency at term CGA.

Excess levels of vitamin D may occur at this dose in some babies.

DOI: 10.1038/jp.2016.70

**INTL**

**PMID:**27149055

**CS**

**Thomas N(1)**, Bygbjerg IB(2).

Does being born low birth weight affect the ability to exercise?

Indian J Endocrinol Metab. 2016 Nov-Dec;20(6):741-743.

**Author information:**

(1)Department of Endocrinology, Diabetes and Metabolism, Unit-1, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of International Health, University of Copenhagen, Copenhagen, Denmark.

DOI: 10.4103/2230-8210.192920

**NAT**

**PMID:**27867871

**CS**

**Thomas R(1)**, Chacko AG(2).

Principles in Skull Base Reconstruction following Expanded Endoscopic Approaches.

J Neurol Surg B Skull Base. 2016 Aug;77(4):358-63. doi: 10.1055/s-0036-1579543.Epub 2016 Feb 26.

**Author information:**

(1)Department of ENT, Christian Medical College, Vellore, India. (2)Department of Neurosurgery, Christian Medical College, Vellore, India.

**OBJECTIVES:** This study aims to describe the types of anterior skull base defects following expanded endoscopic approaches (EEA) and to outline the techniques involved in the repair of these defects.

**DESIGN:** We retrospectively analyzed 63 cases of endoscopic skull base reconstruction (ESBR) following tumor excision, done from September 2011 to January 2015. These tumors consisted of 14 pituitary adenomas, 20 craniopharyngiomas, and 29 other miscellaneous tumors. The classification of skull base defects by Tabae et al and the classification of cerebrospinal fluid (CSF) leaks by Esposito et al were considered during the ESBR. Recurrence of CSF leak was considered as failure of reconstruction.

**RESULTS:** The 63 skull base defects included in this study occurred following EEA for tumor excision. Failure of reconstruction occurred in 6 six patients. All were successfully repaired, however, three patients in this series died due to tumor-related complications.

**CONCLUSION:** The adherence to the general principles of reconstruction, appreciating the subtle differences in the nature of the various defects and the ability to

adopt different strategies are the prerequisites for the successful closure of skull base defects.

DOI: 10.1055/s-0036-1579543

**INTL**

**PMCID:** PMC4949070 **PMID:**27441162

**CS**

**Thomas R(1)**, Girishan S(2), Chacko AG(2).

Endoscopic Transmaxillary Transposition of Temporalis Flap for Recurrent Cerebrospinal Fluid Leak Closure.

J Neurol Surg B Skull Base. 2016 Dec;77(6):445-448. Epub 2016 Mar 31.

**Author information:**

(1)Department of Otorhinolaryngology, Christian Medical College, Vellore, Tamil Nadu, India.

(2)Department of Neurosurgery, Christian Medical College, Vellore, Tamil Nadu, India.

To describe the technique of endoscopic transmaxillary temporalis Objective muscle flap transposition for the repair of a persistent postoperative sphenoidal The repair of a recurrent cerebrospinal fluid cerebrospinal fluid leak. Design leak for a patient who had undergone endoscopic transsphenoidal excision of an invasive silent corticotroph Hardy C and Knosp Grade IV pituitary adenoma was undertaken. The patient had completed postoperative radiotherapy for the residual tumor and presented with cerebrospinal fluid leak, 1 year later. The initial two attempts to repair the cerebrospinal fluid leak with free grafts failed. Therefore, an endoscopic transmaxillary transposition of the temporalis muscle The endoscopic flap was attempted to stop the cerebrospinal fluid leak. Results transmaxillary transposition of the vascularized temporalis muscle flap onto the cerebrospinal fluid leak repair site resulted in successful closure of the Endoscopic transmaxillary transposition of cerebrospinal fluid leak. Conclusion the temporalis flap resulted in closure of recurrent cerebrospinal fluid leak in a patient with recurrent pituitary adenoma, who had undergone previous surgery and radiotherapy. This technique has advantages over the endoscopic transpterygoid transposition of the same flap and could be used as a complementary technique in selected patients.

**INTL**

**PMCID:** PMC5112164 **PMID:**27857869

**CS**

**Turel MK(1)**, Rajshekhar V(1).

Letter to editor: Wrong level surgery for intradural thoracic spinal tumour.

Br J Neurosurg. 2016 Aug;30(4):468-9. doi: 10.1080/02688697.2016.1199791. Epub 2016 Jun 22.

**Author information:**

(1) Department of Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

DOI: 10.1080/02688697.2016.1199791

**INTL**

**PMID:**27331423

**CS**

**Varghese GM**(1), Raj D(1), Francis MR(2), Sarkar R(2), Trowbridge P(3), Muliylil(4).

Epidemiology & risk factors of scrub typhus in south India.

Indian J Med Res. 2016 Jul;144(1):76-81. doi: 10.4103/0971-5916.193292.

**Author information:**

(1) Department of Medicine 1 & Infectious Diseases, Christian Medical College & Hospital, Vellore, India.

(2) Department of Gastrointestinal Sciences, Christian Medical College & Hospital, Vellore, India.

(3) Department of Geographic Medicine & Infectious Diseases, Tufts Medical Center, Boston, USA.

(4) Department of Community Health, Christian Medical College & Hospital, Vellore, India.

**BACKGROUND & OBJECTIVES:** Scrub typhus is a major public health threat in South and Southeastern Asian countries including India. Understanding local patterns of disease and factors that place individuals at risk is pivotal to future preventive measures against scrub typhus. The primary aim of this study was to identify specific epidemiological and geographical factors associated with an increased risk of developing scrub typhus in this region.

**METHODS:** We mapped 709 patients from Tamil Nadu, Andhra Pradesh and Telangana who were admitted to the Christian Medical College (CMC) Hospital, Vellore, Tamil Nadu, India, for the period 2006-2011, assessed seasonality using monthly counts of scrub typhus cases, and conducted a case-control study among a subset of patients residing in Vellore.

**RESULTS:** The geographic distribution of cases at CMC Hospital clusters around the Tamil Nadu-Andhra Pradesh border. However, distinct hotspots clearly exist distal to this area, near Madurai and the coast in Tamil Nadu, and in the Northeast of Andhra Pradesh. Seasonally, the highest numbers of cases were observed in the cooler months of the year, i.e. September to January. In the case-control analysis, cases were more likely to be agricultural laborers (OR 1.79, 95% CI 1.01 - 3.15), not wear a shirt at home (OR 4.23, 95% CI 1.12 - 16.3), live in houses adjacent to bushes or shrubs (OR 1.95, 95% CI 1.08 - 3.53), and

live in a single room home (OR 1.75, 95% CI 1.02 - 3.01). On binary logistic regression, the first three of these variables were statistically significant.

**INTERPRETATION & CONCLUSIONS:** With the growing number of cases detected in India, scrub typhus is fast emerging as a public health threat and further research to protect the population from this deadly infection is essential. Health education campaigns focusing on the agricultural workers of Southern India, especially during the cooler months of the year, can serve as an important public health measure to control infection.

DOI: 10.4103/0971-5916.193292

**NAT**

**PMCID:** PMC5116902 **PMID:**27834329

**CS**

**Varghese V**(1), Saravana Kumar G(2), Krishnan V(3).

Effect of various factors on pull out strength of pedicle screw in normal and osteoporotic cancellous bone models.

Med Eng Phys. 2016 Dec 8. pii: S1350-4533(16)30293-4.

doi:10.1016/j.medengphy.2016.11.012. [Epub ahead of print]

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Pedicle screws are widely used for the treatment of spinal instability by spine fusion. Screw loosening is a major problem of spine fusion, contributing to delayed patient recovery. The present study aimed to understand the factor and interaction effects of density, insertion depth and insertion angle on pedicle screw pull out strength and insertion torque. A pull out study was carried out on rigid polyurethane foam blocks representing osteoporotic to normal bone densities according to the ASTM-1839 standard. It was found that density contributes most to pullout strength and insertion torque. The interaction effect is significant ( $p < 0.05$ ) and contributes 8% to pull out strength. Axial pullout strength was 34% lower than angled pull out strength in the osteoporotic bone model. Insertion angle had no

significant effect ( $p > 0.05$ ) on insertion torque. Pullout strength and insertion torque had no significant correlation ( $p > 0.05$ ) in the case of the extremely osteoporotic bone model.

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DOI: 10.1016/j.medengphy.2016.11.012

INTL

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CS

**Velayutham P(1)**, Rajshekhar V(1), Chacko AG(1), Krothapalli Babu S(2).

Influence of Tumor Location and Other Variables on Predictive Value of Intraoperative Myogenic Motor-Evoked Potentials in Spinal Cord Tumor Surgery.

World Neurosurg. 2016 Aug;92:264-72. doi: 10.1016/j.wneu.2016.04.117. Epub 2016 May 6.

#### Author information:

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**OBJECTIVE:** To study the influence of tumor location (cervical vs. thoracic; extramedullary vs. intramedullary) on predictive value of intraoperative myogenic motor-evoked potentials (iMEP) changes in patients undergoing surgery for spinal cord tumors. **METHODS:** Three hundred patients retrospective data (91 intramedullary) and 209 (intradural extramedullary) with successful iMEP recordings were analyzed. Responses to transcranial electrical stimulation were recorded from the lower limb muscles. Preoperative clinical variables, iMEPs changes, and postoperative neurologic deficits were noted. Associations between categorical variables and outcome were analyzed with the Fisher exact test.

**RESULTS:** Of the 300 patients 28 (9.3%) had significant intraoperative worsening of iMEPs. New postoperative deficits occurred in 23 of these 28 patients. False-positive decreases in iMEPs were observed in 5 patients. There was a significant association between changes in iMEP and postoperative new motor deficits ( $P \leq 0.0001$ ). Multivariate analysis showed that patients with changes in iMEP undergoing surgery for thoracic segment tumors, with longer duration of symptoms ( $>12$  months) and older age ( $\geq 21.5$  years) were more likely to suffer postoperative neurological decline (odds ratio 4.1,  $P \leq 0.001$  and odds ratio 5.4  $P \leq 0.0001$ , respectively). The sensitivity of iMEPs was 100% and specificity 98.2%. The positive and negative predictive values were 82% and 100%; however, the sensitivity and specificity is similar in thoracic

intramedullary (TIM) ( $n = 53$ ) and cervical intramedullary tumors ( $n = 38$ ) (both were 100% and 97%). The positive predictive value was significantly greater for TIM tumors (93% vs. 50%). **CONCLUSIONS:** A strong association was observed between worsening of iMEPs and postoperative new neurological deficits in patients with TIM tumor.

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INTL

PMID:27157282

CS

**Vinotha T(1)**, Anitha T(1), Ajit S(1), Rachel C(1), Abraham P(1).

The Role of Completion Surgery in Ovarian Cancer. J Obstet Gynaecol India. 2016 Oct;66(Suppl 1):435-40. doi:10.1007/s13224-015-0796-4. Epub 2015 Nov 4.

#### Author information:

(1)Department of Gynaec Oncology, Christian Medical College and Hospital, Vellore, Tamil Nadu 632004 India.

**INTRODUCTION:** Patients referred with inadequately staged ovarian malignancies present a clinical dilemma. We report our experience with completion surgery in ovarian cancer.

**AIMS AND OBJECTIVES:** To determine the benefits and risks of completion surgery in women with ovarian cancer who presented after having had inadequate primary surgery.

**METHODS:** A retrospective case series of 30 women with ovarian cancer and one with fallopian tube cancer who had inadequate primary surgery underwent completion surgery at gynaecologic oncology unit in a tertiary level hospital in Tamil Nadu, India. Electronic medical records of patients with ovarian cancer who underwent completion surgery between January 2011 and September 2014 for ovarian were reviewed. Forty-five patients with initial inadequate surgery were identified of whom 31 underwent completion surgery; the remaining 14 did not return to our hospital.

**RESULTS:** Thirty-one women with a mean age of 37 years (17-53) and median parity of 2 (0-4) with inadequately staged ovarian malignancy underwent completion surgery. Complex ovarian mass was the most common indication for initial surgery (94%). The tumours were epithelial in 27 (87%), germ cell in 3 (10%) and sex cord stromal in 1 (3%). In view of extensive disease at presentation, 19% (6/31) were referred for neoadjuvant chemotherapy and underwent

interval debulking. With regard to surgical complexity, 52 % (16/31), 38 % (12/31) and 10 % (3/31) underwent simple, intermediate and complex surgeries, respectively. Optimal cytoreduction (R0 and R1) was performed in 25 patients (81 %). Twelve (39 %) had upstaging of disease. Six patients required no further adjuvant treatment following surgical restaging. Complications included bladder injury (1), iliac vessel injury (1) and surgical site infections (2). During the study period of 45 months, 7 patients (23 %) presented with disease recurrence. There were 2 recorded deaths.

**CONCLUSIONS:** In inadequately staged ovarian malignancies, completion surgery should be considered based on the patients' performance status and disease assessment. Considering the low specificity of imaging and Ca 125, completion surgery provides information to plan adjuvant therapy, besides allowing optimal cytoreduction but delays initiation of adjuvant therapy.

DOI: 10.1007/s13224-015-0796-4

**NAT**

**PMCID:** PMC5016422 **PMID:**27651643

**CS**

**Winston A B(1)**, Das Adhikari D(2), Das S(1), Vazhudi K(1), Kumar A(1), ShanthiM(1), Agarwal I(3).

Drug poisoning in the community among children: a nine years' experience from a tertiary care center in south India.

Hosp Pract (1995). 2016 Dec 16. [Epub ahead of print]

**Author information:**

(1)a Paediatric Emergency, Department of Paediatrics, Christian Medical College, Vellore. (2)b Department of Pharmacology and Clinical Pharmacology, Christian Medical College, Vellore. (3)c Child Health 2, Department of Paediatrics, Christian Medical College, Vellore.

**OBJECTIVES:** This study was performed to determine the incidence, demographic distribution, types and outcomes across various drug poisonings among children from south India. **METHODS:** This retrospective study included children less than 16 years who presented to the Pediatric Emergency Department with drug poisoning from the 1(st) of October 2004 to the 30th of September 2013. **RESULTS:** Out of the total 997 poisoning cases, 366 (36.71%) were contributed by drugs; mainly antiepileptics, central nervous system depressants, psychotropics, analgesic-antipyretics and natural drugs. Males and children of < 5 years were mostly affected. Although many children developed complications and required intensive care unit admissions, the total mortality rate was less than 1%.

The incidence of drug poisoning showed a decreasing trend over the last 4 years. **CONCLUSION:** This study for the first time gives an elaborative insight into pediatric drug poisoning over a nine-year period from a Pediatric Emergency Department tertiary care center in south India. DOI: 10.1080/21548331.2017.1273734

**INTL**

**PMID:**27985284

**CS**

**Yenuberi H(1)**, Abraham A(2), Sebastian A(2), Benjamin SJ(3), Jeyaseelan V(4), Mathews JE(5).

A randomised double-blind placebo-controlled trial comparing stepwise oral misoprostol with vaginal misoprostol for induction of labour.

Trop Doct. 2016 Oct;46(4):198-205. Epub 2016 Jan 19.

**Author information:**

(1)Registrar, Department of Obstetrics and Gynaecology, Christian Medical College, Vellore, Tamil Nadu, India. (2)Assistant Professor, Department of Obstetrics and Gynaecology, Christian Medical College, Vellore, Tamil Nadu, India. (3)Associate Professor, Department of Obstetrics and Gynaecology, Christian Medical College, Vellore, Tamil Nadu, India. (4)Lecturer, Department of Biostatistics, Christian Medical College, Vellore, Tamil Nadu, India. (5)Professor, Department of Obstetrics and Gynaecology, Christian Medical College, Vellore, Tamil Nadu, India [coronistrial@yahoo.co.in](mailto:coronistrial@yahoo.co.in).

A comparison of induction of labour (IOL) using three doses of 25 µg vaginal misoprostol inserted at intervals of 4 h or more with a stepwise oral regime starting with 50 µg followed by two doses of 100 µg was studied in a double-blind placebo-controlled trial in a tertiary centre in South India. Primary outcome was vaginal delivery in 24 h. Significantly more women in the first group required oxytocin augmentation and a third dose of the drug than women in the second group. Uterine tachysystole and other maternal and neonatal complications were similar. Thus it is concluded that women induced with oral, as compared to vaginal misoprostol are more likely to labour without oxytocin. © The Author(s) 2016. DOI: 10.1177/0049475515624856

**INTL**

**PMID:**26787644

**CS**

**Alarcon Falconi TM**(1), Kulinkina AV(1), Mohan VR(2), Francis MR(3), Kattula D(3), Sarkar R(3), Ward H(4), Kang G(3), Balraj V(2), Naumova EN(5).

Quantifying tap-to-household water quality deterioration in urban communities in Vellore, India: The impact of spatial assumptions.

Int J Hyg Environ Health. 2017 Jan;220(1):29-36. doi: 10.1016/j.ijheh.2016.09.019. Epub 2016 Oct 3.

#### Author information:

(1)Department of Civil & Environmental Engineering, Tufts University, Medford, MA, USA. (2)Department of Community Health, Christian Medical College, Vellore, Tamil Nadu, India. (3)Division of Gastrointestinal Sciences, Christian Medical College, Vellore, Tamil Nadu, India. (4)Division of Gastrointestinal Sciences, Christian Medical College, Vellore, Tamil Nadu, India; Department of Geographic Medicine, Tufts Medical Center, Boston, MA, USA. (5)Department of Civil & Environmental Engineering, Tufts University, Medford, MA, USA; Division of Gastrointestinal Sciences, Christian Medical College, Vellore, Tamil Nadu, India; Friedman School of Nutrition Science & Policy, Tufts University, Boston, MA, USA. Electronic address: [elena.naumova@tufts.edu](mailto:elena.naumova@tufts.edu).

Municipal water sources in India have been found to be highly contaminated, with further water quality deterioration occurring during household storage. Quantifying water quality deterioration requires knowledge about the exact source tap and length of water storage at the household, which is not usually known. This study presents a methodology to link source and household stored water, and explores the effects of spatial assumptions on the association between tap-to-household water quality deterioration and enteric infections in two semi-urban slums of Vellore, India. To determine a possible water source for each household sample, we paired household and tap samples collected on the same day using three spatial approaches implemented in GIS: minimum Euclidean distance; minimum network distance; and inverse network-distance weighted average. Logistic and Poisson regression models were used to determine associations between water quality deterioration and household-level characteristics, and between diarrheal cases and water quality deterioration. On average, 60% of households had higher fecal coliform concentrations in household samples than at source taps. Only the weighted average approach detected a higher risk of water quality deterioration for households that do not purify water and that have animals in the home (RR=1.50 [1.03, 2.18], p=0.033); and showed that households with water quality deterioration were more likely to report diarrheal cases (OR=3.08 [1.21, 8.18], p=0.02).

Studies to assess contamination between source and household are rare due to methodological challenges and high costs associated with collecting paired samples. Our study demonstrated it is possible to derive useful spatial links between samples post hoc; and that the pairing approach affects the conclusions related to associations between enteric infections and water quality deterioration. Copyright © 2016 Elsevier GmbH. All rights reserved. DOI: 10.1016/j.ijheh.2016.09.019

**INTL**

**PMID:**27773615

**EPDM**

**Awadhalla MS**(1), Asokan GV(2), Matooq A(3), Kirubakaran R(4)

Declining trends in injuries and ambulance calls for road traffic crashes in

Bahrain post new traffic laws of 2015.

*J Epidemiol Glob Health*. 2016 Jun;6(2):59-65. doi: 10.1016/j.jegh.2016.02.004. Epub 2016 Mar 16.

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(1)University of Bahrain, College of Health Sciences, Nursing Department-WHO Collaborating Centre for Nursing Development, P.O. Box: 32038, Salmana, Bahrain. Electronic address: [msabri@uob.edu.bh](mailto:msabri@uob.edu.bh). (2)College of Health Sciences, University of Bahrain, PO Box 32038, Salmana, Bahrain. (3)International Training Centre, WHO Collaborating Centre for Nursing Development, College of Health Sciences, University of Bahrain, PO Box 32038, Salmana, Bahrain. (4)South Asian Cochrane Center and Network, Christian Medical College, Vellore, Tamil Nadu,

India. Road traffic crashes (RTC) are of serious global health concern. To identify whether the number of ambulance calls, injuries, and deaths has declined after the implementation of the new traffic law (NTL) 2015 in Bahrain, de-identified administrative RTC data obtained from the tertiary care center, and the General Directorate of Traffic (GDT) of Bahrain were used. A quasi-experimental design was employed to trend the impact of the NTL on RTC and associated healthcare events. Bahrainis and non-Bahrainis who met with RTC, either in a vehicle or as a pedestrian, between February 8 and May 8 in 2013, 2014 (pre NTL), and 2015 (post NTL) were included in the study. Our results show a reduction in the number of ambulance calls from vehicular and pedestrian RTC victims. The ambulance calls from pedestrian RTC victims were <10% compared to the number of ambulance calls from vehicular RTC victims. There was a

significant reduction in minor injuries post 2015, whereas no obvious difference was seen for serious injuries and deaths. A longer follow-up study to confirm the sustained decline in RTI enforcing a zero tolerance policy toward traffic transgressions, and raising public awareness on the "critical four minutes" and "golden hour" is recommended. Copyright © 2016 Ministry of Health, Saudi Arabia. Published by Elsevier Ltd. All rights reserved. DOI: 10.1016/j.jegh.2016.02.004

**INTL**

**PMID:**26994440

**EPDM**

**Connor NE**(1), Islam MS, Arvay ML, Baqui AH, Zaidi AK, Soofi SB, Panigrahi P, Bose A, Islam M, El Arifeen S, Saha SK, Qazi SA; ANISA Methods Group.

**Collaborators:** Uddin A, Hossain B, Rahman QS, Hossain T, Winchell JM, Diaz MH, Shang N, Choi Y, Schrag SJ, Kumar A, Kumar V, Billah A, Mullany L, Santosham M, Begum N, Roth DE, Crook D, Luby SP, Kazi AM, Ahmed I, Qureshi SM, Ahmed S, Bhutta ZA. Methods Employed in Monitoring and Evaluating Field and Laboratory Systems in the ANISA Study: Ensuring Quality.

*Pediatr Infect Dis J.* 2016 May;35(5 Suppl 1):S39-44. doi:10.1097/INF.0000000000001105.

**Author information:**

(1)From the \*Centre for Child and Adolescent Health, International Centre for Diarrhoeal Disease Research, Dhaka, Bangladesh; †Child Health Research Foundation, Dhaka, Bangladesh; ‡Centers for Disease Control and Prevention, Atlanta, Georgia; §Department of International Health, International Center for Maternal and Newborn Health, Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University, Baltimore, Maryland; ¶The Aga Khan University, Karachi, Pakistan; ||Center for Global Health and Development, College of Public Health, University of Nebraska Medical Center, Omaha, Nebraska; \*\*Christian Medical College, Vellore, India; and ††Department of Maternal, Newborn, Child and Adolescent Health, World Health Organization, Geneva, Switzerland.

**BACKGROUND:** The Aetiology of Neonatal Infection in South Asia (ANISA) study maintains operations in Bangladesh, India and Pakistan. We developed and deployed a multilayered monitoring system to measure performance indicators of field sites and laboratory operations. This system allows for real-time provision of feedback to study site teams and project stakeholders. The goal of this monitoring and evaluation system is to promote optimal performance and consistency in protocol application at all sites over the course of the study, thereby safeguarding the

validity of project findings. This article describes each of the interdependent monitoring layers that were conceptualized, developed and employed by the ANISA coordination team. **METHODS:** Layers of monitoring include site-level, central and database-related activities along with periodic site visitation. We provide a number of real-world examples of how feedback from the ANISA monitoring system directly informs a number of crucial decisions and course corrections during the project. **CONCLUSION:** The ANISA monitoring system represents a transparent, understandable and practical resource for development of project monitoring systems in complex multisite health research projects. DOI: 10.1097/INF.0000000000001105

**INTL**

**PMID:**27070063

**EPDM**

**Davis AM**(1), Sampilo M(2), Gallagher KS(3), Dean K(4), Saroja MB(5), Yu Q(6), He J(6), Sporn N(7). Treating rural paediatric obesity through telemedicine vs. telephone: Outcomes from a cluster randomized controlled trial.

*J Telemed Telecare.* 2016 Mar;22(2):86-95. doi:10.1177/1357633X15586642. Epub 2015 May 29.

**Author information:**

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**OBJECTIVE:** The objective of the current study was to examine the feasibility of telemedicine vs. telephone for the delivery of a multidisciplinary weekly family-based behavioural group intervention to treat paediatric obesity delivered to families living in rural areas using a randomized controlled trial methodology. **METHODS:** 103 rural children and their families were recruited. Feasibility measures included participant satisfaction, session attendance and retention. Treatment outcome measures included child Body Mass Index z-score (BMIz), parent BMI, 24-hour dietary recalls, accelerometer data, the child

behavior checklist and the behavioral pediatrics feeding assessment scale. RESULTS: Participants were highly satisfied with the intervention both via telemedicine and via telephone. Completion rates were much higher than for other paediatric obesity intervention programmes, and both methodologies were highly feasible. There were no differences in telemedicine and telephone groups on primary outcomes. CONCLUSION: Both telemedicine and telephone intervention appear to be feasible and acceptable methods of delivering paediatric obesity treatment to rural children. © The Author(s) 2015. DOI: 10.1177/1357633X15586642

INTL

PMCID: PMC4830380 PMID:26026186

EPDM

**Devika S, Jeyaseelan L**(1), Sebastian G.

Analysis of sparse data in logistic regression in medical research: A newer approach.

J Postgrad Med. 2016 Jan-Mar;62(1):26-31. doi: 10.4103/0022-3859.173193.

**Author information:**

(1)Department of Biostatistics, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND AND OBJECTIVE:** In the analysis of dichotomous type response variable, logistic regression is usually used. However, the performance of logistic regression in the presence of sparse data is questionable. In such a situation, a common problem is the presence of high odds ratios (ORs) with very wide 95% confidence interval (CI) (OR: >999.999, 95% CI: <0.001, >999.999). In this paper, we addressed this issue by using penalized logistic regression (PLR) method. **MATERIALS AND METHODS:** Data from case-control study on hyponatremia and hiccups conducted in Christian Medical College, Vellore, Tamil Nadu, India was used. The outcome variable was the presence/absence of hiccups and the main exposure variable was the status of hyponatremia. Simulation dataset was created with different sample sizes and with a different number of covariates. **RESULTS:** A total of 23 cases and 50 controls were used for the analysis of ordinary and PLR methods. The main exposure variable hyponatremia was present in nine (39.13%) of the cases and in four (8.0%) of the controls. Of the 23 hiccup cases, all were males and among the controls, 46 (92.0%) were males. Thus, the complete separation between gender and the disease group led into an infinite OR with 95% CI (OR: >999.999, 95% CI: <0.001, >999.999) whereas there was a finite and consistent regression coefficient for gender (OR: 5.35; 95% CI: 0.42, 816.48) using PLR. After adjusting for all the confounding variables, hyponatremia entailed 7.9

(95% CI: 2.06, 38.86) times higher risk for the development of hiccups as was found using PLR whereas there was an overestimation of risk OR: 10.76 (95% CI: 2.17, 53.41) using the conventional method. Simulation experiment shows that the estimated coverage probability of this method is near the nominal level of 95% even for small sample sizes and for a large number of covariates. **CONCLUSIONS:** PLR is almost equal to the ordinary logistic regression when the sample size is large and is superior in small cell values. DOI: 10.4103/0022-3859.173193

NAT

PMCID: PMC4944325 PMID:26732193

EPDM

**Easow Mathew M**(1), Sharma A, Aravindakshan R. Splenectomy for people with thalassaemia major or intermedia.

Cochrane Database Syst Rev. 2016 Jun 14;(6):CD010517.

doi:10.1002/14651858.CD010517.pub2.

**Author information:**

(1)South Asian Cochrane Network &amp; Center, Prof. BV Moses Center for Evidence-Informed Health Care and Health Policy, Christian Medical College, Carman Block II Floor, CMC Campus, Bagayam, Vellore, Tamil Nadu, India, 632002.

**BACKGROUND:** Thalassaemia is a genetic disease of the haemoglobin protein in red blood cells. It is classified into thalassaemia minor, intermedia and major, depending on the severity of the disease and the genetic defect. Thalassaemia major and intermedia require frequent blood transfusions to compensate for the lack of well-functioning red blood cells, although this need is significantly less in thalassaemia intermedia. Damaged or defective red blood cells are normally eliminated in the spleen. In people with thalassaemia there is a large quantity of defective red blood cells which results in an enlarged hyperfunctioning spleen (splenomegaly). Removal of the spleen may thus prolong red blood cell survival by reducing the amount of red blood cells removed from circulation and may ultimately result in the reduced need for blood transfusions. **OBJECTIVES:** To assess the efficacy and safety of splenectomy in people with beta-thalassaemia major or intermedia. **SEARCH METHODS:** We searched the Cochrane Cystic Fibrosis and Genetic Disorders Review Group's Haemoglobinopathies Trials Register, compiled from searches of electronic databases and the handsearching of journals and conference abstract books. We also searched the reference lists of relevant articles and reviews. Date of the most recent search: 25 April

2016. SELECTION CRITERIA: We included randomised controlled studies and quasi-randomised controlled studies of people of any age with thalassaemia major or intermedia, evaluating splenectomy in comparison to conservative treatment (transfusion therapy and iron chelation) or other forms of splenectomy compared to each other (laparoscopic, open, radio-frequency). DATA COLLECTION AND ANALYSIS: Two authors independently selected and extracted data from the single included study using a customised data extraction form and assessed the risk of bias. MAIN RESULTS: One study, including 28 participants was included in the review; the results were described, primarily, in a narrative manner. The study assessed the feasibility of splenectomy using laparoscopy in comparison to open surgery. Given the lack of detail regarding the study methods beyond randomisation, the overall risk of bias for this study was unclear. The study was carried out over a period of 3.5 years, with each participant followed up only until discharge (less than one week after the intervention); it did not assess the majority of the outcomes outlined in this review (including two of the three primary outcomes, frequency of transfusion and quality of life). A total of three serious post-operative adverse events (the review's third primary outcome) were reported in the laparoscopic splenectomy group (one case of atelectasis and two cases of bleeding), compared to two events of atelectasis in the open surgery group; however, there were no significant differences between the groups for either atelectasis, risk ratio 0.50 (95% confidence interval 0.05 to 4.90) or for bleeding, risk ratio 5.00 (95% confidence interval 0.26 to 95.61). In addition, the study also reported three serious cases of intra-operative bleeding in the laparoscopic group which mandated conversion to open surgery, although the difference between groups was not statistically significant, risk ratio 7.00 (95% confidence interval 0.39 to 124.14). These effect estimates are based on very small numbers and hence are unreliable and imprecise. From this small study, there appeared to be an advantage for the laparoscopic approach, in terms of post-operative hospital stay, although the group difference was not large (median difference of 1.5 days,  $P = 0.03$ ). AUTHORS' CONCLUSIONS: The review was unable to find good quality evidence, in the form of randomised controlled studies, regarding the efficacy of splenectomy for treating thalassaemia major or intermedia. The single included study provided little information about the efficacy of splenectomy, and compared open surgery and laparoscopic methods. Further studies need to evaluate the long-term effectiveness of splenectomy and the comparative advantages of surgical methods. Due to a lack of high quality evidence from randomised controlled studies, well-conducted

observational studies may be used to answer this question. DOI:

10.1002/14651858.CD010517.pub2

**INTL**

**PMID:**27296775

**EPDM**

**George C(1), Lalitha AR(2), Antony A(2), Kumar AV(2), Jacob KS(3).**

Antenatal depression in coastal South India: Prevalence and risk factors in the community.

Int J Soc Psychiatry. 2016 Mar;62(2):141-7. doi: 10.1177/0020764015607919. Epub 2015 Oct 6.

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**BACKGROUND:** Antenatal depression is a highly prevalent disorder with serious implications on maternal and child outcomes. There are few studies examining this in low-middle-income community settings. **AIMS:** To determine the prevalence of antenatal depression in women from a coastal rural background in Kerala and Tamil Nadu and to determine its associated factors. **MATERIALS AND METHODS:** In this cross-sectional community-based study, in 202 antenatal women, standard interview and diagnostic criteria (Clinical Interview Schedule-Revised (CIS-R)) were employed for identifying depression and examining a wide range of putative clinical and sociocultural risk factors including domestic violence. **RESULTS:** There was a 16.3% prevalence of depression among the 202 women sampled. The possible risk factors after stepwise backward regression were pressure to have a male child, 11.48 (2.36-55.78); financial difficulties, 8.23 (2.49-27.22); non-arranged marriage, 6.05 (1.72-21.23); history of miscarriage-still birth, 5.77 (1.55-21.43) and marital conflict, 9.55 (2.34-38.98). **CONCLUSION:** There is a need to develop strategies for recognition and appropriate intervention for antenatal depression, in the context of locally relevant risk factors, so as to improve both maternal and child outcomes. © The Author(s) 2015. DOI: 10.1177/0020764015607919

**INTL**

**PMID:**26443716

**EPDM**

**Gopi T, Ranjith J, Anandan S, Balaji V(1).** Epidemiological characterization of *Streptococcus pneumoniae* from India using multilocus sequence typing. *Indian J Med Microbiol.* 2016 Jan-Mar;34(1):17-21. doi: 10.4103/0255-0857.174113.

#### Author information:

(1)Department of Clinical Microbiology, Christian Medical College and Hospital, Vellore - 632 004, Tamil Nadu, India.

**OBJECTIVE:** The aim of this study was to utilize the multilocus sequence typing (MLST) technique to characterise *Streptococcus pneumoniae* among clinical isolates in India. MLST was used to determine clonality, to establish genetic relatedness, to check for correlation between serotypes and sequence types (STs) and its relevance associated with antibiotic resistance. **METHODS:** Forty consecutive invasive *S. pneumoniae* isolates in children <5 years were characterised. Preliminary identification of serotype and antibiotic susceptible profile was followed with MLST technique to identify the STs of the isolates. STs were then analysed for clonality using an eBURST algorithm and genetic relatedness using Sequence Type Analysis and Recombinational Tests version 2 software. **RESULTS:** The most common ST was ST63. Among the forty isolates, we identified nine novel STs, six of which had known alleles but in new combinations, three of which had new alleles in their sequence profile. The new STs assigned were 8501-8509. One clonal complex was found among the 40 strains characterised. The most common serotypes in this study were serotype 19F, 14 and 5. Non-susceptibility to penicillin and erythromycin was observed in 2.5% and 30% of the isolates, respectively. **CONCLUSION:** This study shows a significant number of novel STs among the 40 isolates characterised (9/40, 22.5%), however, internationally recognised strains were also circulating in India, indicating, there could be greater geographical variation in pneumococcal STs in India. Molecular epidemiology data is essential to understand the population dynamics of *S. pneumoniae* in India before the introduction of pneumococcal vaccines in NIP in India. DOI: 10.4103/0255-0857.174113

**NAT**

**PMID:**26776113

**EPDM**

**Guerra M(1), Prina AM(2), Ferri CP(3), Acosta D(4), Gallardo S(5), Huang Y(6), Jacob KS(7), Jimenez-Velazquez IZ(8), Llibre Rodriguez JJ(9), Liu Z(6), Salas A(10), Sosa AL(11), Williams JD(12), Uwakwe R(13), Prince M(2).**

A comparative cross-cultural study of the prevalence of late life depression in low and middle income countries.

*J Affect Disord.* 2016 Jan 15;190:362-8. doi: 10.1016/j.jad.2015.09.004. Epub 2015 Oct 23.

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**BACKGROUND:** Current estimates of the prevalence of depression in later life mostly arise from studies carried out in Europe, North America and Asia. In this study we aimed to measure the prevalence of depression using a standardized method in a number of low and middle income countries (LMIC). **METHODS:** A one-phase cross-sectional survey involving over 17,000 participants aged 65 years and over living in urban and rural catchment areas in 13 sites from 9 countries (Cuba, Dominican Republic, Puerto Rico, Mexico, Venezuela, Peru, China, India and Nigeria). Depression was assessed and compared using ICD-10 and EURO-D criteria. **RESULTS:** Depression prevalence varied across sites according to diagnostic criteria. The lowest prevalence was observed for ICD-10 depressive episode (0.3 to 13.8%). When using the EURO-D depression scale, the prevalence was higher and ranged from 1.0% to 38.6%. The crude prevalence was particularly high in the Dominican Republic and in rural India. ICD-10 depression was also associated with increased age and being female. **LIMITATIONS:** Generalisability of findings outside of catchment

areas is difficult to assess. **CONCLUSIONS:** Late life depression is burdensome, and common in LMIC. However its prevalence varies from culture to culture; its diagnosis poses a significant challenge and requires proper recognition of its expression. Copyright © 2015 The Authors. Published by Elsevier B.V. All rights reserved. DOI: 10.1016/j.jad.2015.09.004

**INTL**

**PMCID:** PMC4679114 **PMID:**26544620

**EPDM**

**Islam MS**(1), Baqui AH, Zaidi AK, Bhutta ZA, Panigrahi P, Bose A, Soofi SB, KaziAM, Mitra DK, Isaac R, Nanda P, Connor NE, Roth DE, Qazi SA, El Arifeen S, SahaSK; ANISA Methods Group.

Collaborators: Ahmed A, Hossain B, Islam M, Hossain T, Rahman QS, Diaz MH, Winchell J, Shang N, Crook D, Kumar V, Kumar A, Luby SP, Mullany L, Santosham M, Choi Y, Qureshi SM, Ahmed I, Ahmed S, Mahmud A, Begum N, Schrag SJ.

Infection Surveillance Protocol for a Multicountry Population-based Study in South Asia to Determine the Incidence, Etiology and Risk Factors for Infections Among Young Infants of 0 to 59 Days Old.

*Pediatr Infect Dis J.* 2016 May;35(5 Suppl 1):S9-15.

doi:10.1097/INF.0000000000001100.

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**BACKGROUND:** Insufficient knowledge of the etiology and risk factors for community-acquired neonatal infection in low-income countries is a barrier to designing appropriate intervention strategies for these settings to reduce the burden and treatment of young infant infection. To address these gaps, we are conducting the Aetiology of Neonatal Infection in South Asia (ANISA) study among young infants in Bangladesh, India and Pakistan. The objectives of ANISA are to establish a comprehensive surveillance system for registering newborns in study catchment

areas and collecting data on bacterial and viral etiology and associated risk factors for infections among young infants aged 0-59 days. **METHODS:** We are conducting active surveillance in 1 peri-urban and 4 rural communities. During 2 years of surveillance, we expect to enroll an estimated 66,000 newborns within 7 days of their birth and to follow-up them until 59 days of age. Community health workers visit each young infant in the study area 3 times in the first week of life and once a week thereafter. During these visits, community health workers assess the newborns using a clinical algorithm and refer young infants with signs of suspected infection to health care facilities where study physicians reassess them and provide care if needed. On physician confirmation of suspected infection, blood and respiratory specimens are collected and tested to identify the etiologic agent. **CONCLUSIONS:** ANISA is one of the largest initiatives ever undertaken to understand the etiology of young infant infection in low-income countries. The data generated from this surveillance will help guide evidence-based decision making to improve health care in similar settings. DOI: 10.1097/INF.0000000000001100

**INTL**

**PMID:**27070072

**EPDM**

**Jacob A**(1), Thomas L(1), Stephen K(1), Marconi S(1), Noel J(2), Jacob KS(2), Prasad J(1).

Nutritional status and intellectual development in children: A community-based study from rural Southern India.

*Natl Med J India.* 2016 Mar-Apr;29(2):82-4.

**Author information:**

(1)Department of Community Health, Christian Medical College, Vellore 632002, Tamil Nadu, India. (2)Department of Psychiatry, Christian Medical College, Vellore 632002, Tamil Nadu, India.

**BACKGROUND:** There is a dearth of recent data on the relationship between nutritional status and intellectual development among children in India. To determine whether such a relationship exists, we studied children in a rural area of Tamil Nadu. **METHODS:** We stratified villages in Kaniyambadi block, Tamil Nadu, and recruited consecutive children who satisfied the study criteria. We assessed nutritional status by measuring height and weight and recording chronological age, and calculated indices weight-for-age, height-for-age, weight-for-height and their Z scores. We assessed intellectual development using the Indian adaptation of the Vineland Social Maturity Scale.

We used a case-control framework to determine the relationship and logistic regression to adjust for common confounders. RESULTS: We recruited 114 children between the ages of 12 and 72 months. Z score means (weight-for-age -1.36; height-for-age -1.42; weight-for-height -0.78) were much less than 0 and indicate undernutrition. Z score standard deviations (weight-for-age 1.04; height-for-age 1.18; weightfor- height 1.06) were within the WHO recommended range for good quality of nutrition data suggesting reduced measurement errors and incorrect reporting of age. The frequency distributions of population Z scores suggest high undernutrition, wasting and medium stunting. A tenth of the population (9.6%) had values to suggest borderline/below average intelligence (social quotient <89). Lower height-forage, height-for-age Z score and weight-for-height Z score were significantly associated with a lower social quotient. These relationships remained statistically significant after adjusting for sex and socioeconomic status using logistic regression. CONCLUSION: Chronic undernutrition, wasting and stunting and their association with lower intellectual development demand an urgent re-assessment of national food policies and programmes.

**NAT**

**PMID:**27586211

**EPDM**

**Jean SS**(1), Coombs G(2), Ling T(3), Balaji V(4), Rodrigues C(5), Mikamo H(6), KimMJ(7), Rajasekaram DG(8), Mendoza M(9), Tan TY(10), Kiratisin P(11), Ni Y(12), Weinman B(13), Xu Y(14), Hsueh PR(15).

Epidemiology and antimicrobial susceptibility profiles of pathogens causing urinary tract infections in the Asia-Pacific region: Results from the Study for Monitoring Antimicrobial Resistance Trends (SMART), 2010-2013.

Int J Antimicrob Agents. 2016 Apr;47(4):328-34.

doi:10.1016/j.ijantimicag.2016.01.008. Epub 2016 Feb 17.

#### **Author information:**

(1)Emergency Medicine, Department of Emergency and Critical Care Medicine, Wan Fang Hospital, Taipei Medical University, Taipei, Taiwan; Department of Emergency, School of Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan. (2)Royal Perth Hospital, Perth, WA, Australia. (3)Prince of Wales Hospital, Shatin, New Territories, Hong Kong, China. (4)Christian Medical College, Vellore, India. (5)P.D. Hinduja National Hospital & Medical Research Center, Mumbai, India. (6)Aichi Medical University Hospital, Nagakute, Japan. (7)Korea University Anam Hospital, Seoul, South Korea. (8)Hospital Sultanah Aminah Johin Bahru, Johor Bahru, Malaysia.

(9)Philippine General Hospital, Manila, Philippines. (10)Changi General Hospital, Singapore. (11)Siriraj Hospital, Bangkok-Noi, Thailand. (12)Ruijin Hospital, Shanghai, China. (13)Merck Sharp & Dohme, Whitehouse Station, NJ, USA. (14)Peking Union Medical College Hospital, Beijing, China. (15)Departments of Laboratory Medicine and Internal Medicine, National Taiwan University Hospital, National Taiwan University College of Medicine, Taipei, Taiwan. Electronic address: [hsporen@ntu.edu.tw](mailto:hsporen@ntu.edu.tw).

A total of 9599 isolates of Gram-negative bacteria (GNB) causing urinary tract infections (UTIs) were collected from 60 centres in 13 countries in the Asia-Pacific region from 2010-2013. These isolates comprised Enterobacteriaceae species (mainly *Escherichia coli*, *Klebsiella pneumoniae*, *Proteus mirabilis*, *Klebsiella oxytoca*, *Enterobacter cloacae* and *Morganella morganii*) and non-fermentative GNB species (predominantly *Pseudomonas aeruginosa* and *Acinetobacter baumannii*). In vitro susceptibilities were determined by the agar dilution method and susceptibility profiles were determined using the minimum inhibitory concentration (MIC) interpretive breakpoints recommended by the Clinical and Laboratory Standards Institute in 2015. Production of extended-spectrum  $\beta$ -lactamases (ESBLs) amongst *E. coli*, *K. pneumoniae*, *P. mirabilis* and *K. oxytoca* isolates was determined by the double-disk synergy test. China, Vietnam, India, Thailand and the Philippines had the highest rates of GNB species producing ESBLs and the highest rates of cephalosporin resistance. ESBL production and hospital-acquired infection (isolates obtained  $\geq 48$  h after admission) significantly compromised the susceptibility of isolates of *E. coli* and *K. pneumoniae* to ciprofloxacin, levofloxacin and most  $\beta$ -lactams, with the exception of imipenem and ertapenem. However, >87% of ESBL-producing *E. coli* strains were susceptible to amikacin and piperacillin/tazobactam, indicating that these antibiotics might be appropriate alternatives for treating UTIs due to ESBL-producing *E. coli*. Fluoroquinolones were shown to be inappropriate as empirical therapy for UTIs. Antibiotic resistance is a serious problem in the Asia-Pacific region. Therefore, continuous monitoring of evolutionary trends in the susceptibility profiles of GNB causing UTIs in Asia is crucial. Copyright © 2016 Elsevier B.V. and the International Society of Chemotherapy. All rights reserved. DOI: 10.1016/j.ijantimicag.2016.01.008

**INTL**

**PMID:**27005459

**EPDM**

**John J**(1), Van Aart CJ(2), Grassly NC(2).

The Burden of Typhoid and Paratyphoid in India: Systematic Review and Meta-analysis.

PLoS Negl Trop Dis. 2016 Apr 15;10(4):e0004616. doi:10.1371/journal.pntd.0004616. eCollection 2016.

#### Author information:

(1)Department of Community Health, Christian Medical College, Vellore, India. (2)Department of Infectious Disease Epidemiology, Imperial College London, London, United Kingdom.

**BACKGROUND:** Typhoid is an important public health challenge for India, especially with the spread of antimicrobial resistance. The decision about whether to introduce a public vaccination programme needs to be based on an understanding of disease burden and the age-groups and geographic areas at risk. **METHODS:** We searched Medline and Web of Science databases for studies reporting the incidence or prevalence of typhoid and paratyphoid fever confirmed by culture and/or serology, conducted in India and published between 1950 and 2015. We used binomial and Poisson mixed-effects meta-regression models to estimate prevalence and incidence from hospital and community studies, and to identify risk-factors. **RESULTS:** We identified 791 titles and abstracts, and included 37 studies of typhoid and 18 studies of paratyphoid in the systematic review and meta-analysis. The estimated prevalence of laboratory-confirmed typhoid and paratyphoid among individuals with fever across all hospital studies was 9.7% (95% CI: 5.7-16.0%) and 0.9% (0.5-1.7%) respectively. There was significant heterogeneity among studies ( $p$ -values<0.001). Typhoid was more likely to be detected among clinically suspected cases or during outbreaks and showed a significant decline in prevalence over time (odds ratio for each yearly increase in study date was 0.96 (0.92-0.99) in the multivariate meta-regression model). Paratyphoid did not show any trend over time and there was no clear association with risk-factors. Incidence of typhoid and paratyphoid was reported in 3 and 2 community cohort studies respectively (in Kolkata and Delhi, or Kolkata alone). Pooled estimates of incidence were 377 (178-801) and 105 (74-148) per 100,000 person years respectively, with significant heterogeneity between locations for typhoid ( $p$ <0.001). Children 2-4 years old had the highest incidence. **CONCLUSIONS:** Typhoid remains a significant burden in India, particularly among young children, despite apparent declines in prevalence. Infant immunisation with newly-licensed conjugate vaccines could address this challenge. DOI: 10.1371/journal.pntd.0004616

**INTL**

**PMCID: PMC4833325 PMID:27082958**

#### EPDM

**John TJ**(1), Das M.

Outbreaks of Hypoglycemic Encephalopathy in Muzaffarpur, India: Are These Caused by Toxins in Litchi Fruit?: The Point.

Indian Pediatr. 2016 May 8;53(5):399.

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**NAT**

**PMID:27254048**

#### EPDM

**Kulinkina AV**(1), Mohan VR(2), Francis MR(3), Kattula D(3), Sarkar R(3), PlummerJD(4), Ward H(3),(5), Kang G(3), Balraj V(2), Naumova EN(1),(3).

Seasonality of water quality and diarrheal disease counts in urban and rural settings in south India.

Sci Rep. 2016 Feb 12;6:20521. doi: 10.1038/srep20521.

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(1)Department of Civil and Environmental Engineering, Tufts University, Medford, MA, USA.

(2)Department of Community Health, Christian Medical College, Vellore, Tamil Nadu, India.

(3)Division of Gastrointestinal Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

(4)Department of Civil and Environmental Engineering, Worcester Polytechnic Institute, Worcester, MA, USA. (5)Division of Geographic Medicine and Infectious Diseases, Tufts Medical Center, Boston, MA, USA.

The study examined relationships among meteorological parameters, water quality and diarrheal disease counts in two urban and three rural sites in Tamil Nadu, India. Disease surveillance was conducted between August 2010 and March 2012; concurrently water samples from street-level taps in piped distribution systems and from household storage containers were tested for pH, nitrate, total dissolved solids, and total and fecal coliforms. Methodological advances in data collection (concurrent prospective disease surveillance and environmental monitoring) and analysis (preserving temporality within the data through time series analysis) were used to quantify independent effects of meteorological conditions and water quality on diarrheal risk. The utility of a

local calendar in communicating seasonality is also presented. Piped distribution systems in the study area showed high seasonal fluctuations in water quality. Higher ambient temperature decreased and higher rainfall increased diarrheal risk with temperature being the predominant factor in urban and rainfall in rural sites. Associations with microbial contamination were inconsistent; however, disease risk in the urban sites increased with higher median household total coliform concentrations. Understanding seasonal patterns in health outcomes and their temporal links to environmental exposures may lead to improvements in prospective environmental and disease surveillance tailored to addressing public health problems. DOI: 10.1038/srep20521

**INTL**

**PMCID: PMC4751522 PMID:26867519**

**EPDM**

**Laprise C(1,)(2), Madathil SA(2,)(3), Allison P(1,)(2), Abraham P(4), Raghavendran A(4), Shahul HP(2), Thekkepurakkal AS(2), Castonguay G(2), Coutlée F(5), Schlecht NF(6), Rousseau MC(2,)(3), Franco EL(1,)(2), Nicolau B(1,)(2).**

No role for human papillomavirus infection in oral cancers in a region in southern India.

Int J Cancer. 2016 Feb 15;138(4):912-7. doi: 10.1002/ijc.29827. Epub 2015 Sep 14.

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Oral cancer is a major public health issue in India with ~ 77,000 new cases and 52,000 deaths yearly. Paan chewing, tobacco and alcohol use are strong risk factors for this cancer in India. Human papillomaviruses (HPVs) are also related to a subset of head and neck cancers (HNCs). We examined the association between oral HPV and oral cancer in a sample of Indian subjects participating in a hospital-based case-control study. We recruited incident oral cancer cases (N = 350) and controls frequency-matched by age and sex (N = 371) from two main referral hospitals in Kerala, South India.

Sociodemographic and behavioral data were collected by interviews. Epithelial cells were sampled using Oral CDx® brushes from the oral cancer site and the normal mucosa. Detection and genotyping of 36 HPV genotypes were done using a polymerase chain reaction protocol. Data collection procedures were performed by qualified dentists via a detailed protocol with strict quality control, including independent HPV testing in India and Canada. HPV DNA was detected in none of the cases or controls. Associations between oral cancer and risk factors usually associated with HPV infection, such as oral sex and number of lifetime sexual partners, were examined by logistic regression and were not associated with oral cancer. Lack of a role for HPV infection in this study may reflect cultural or religious characteristics specific to this region in India that are not conducive to oral HPV transmission. A nationwide representative prevalence study is needed to investigate HPV prevalence variability among Indian regions. © 2015 UICC. DOI: 10.1002/ijc.29827

**INTL**

**PMID:26317688**

**EPDM**

**Menon VK(1), George S(1), Sarkar R(1), Giri S(1), Samuel P(2), Vivek R(1), Saravanabavan A(1), Liakath FB(1), Ramani S(1), Iturriza-Gomara M(3), Gray JJ(3), Brown DW(3), Estes MK(4), Kang G(1).**

Norovirus Gastroenteritis in a Birth Cohort in Southern India.

PLoS One. 2016 Jun 10;11(6):e0157007. doi: 10.1371/journal.pone.0157007. eCollection 2016.

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**BACKGROUND:** Noroviruses are an important cause of gastroenteritis but little is known about disease and re-infection rates in community settings in Asia. **METHODS:** Disease, re-infection rates, strain prevalence and genetic susceptibility to noroviruses were investigated in a birth cohort of 373 Indian children followed up for three years. Stool samples from 1856 diarrheal episodes and 147 vomiting only episodes were screened for norovirus by RT-PCR. Norovirus positivity was

correlated with clinical data, secretor status and ABO blood group. RESULTS: Of 1856 diarrheal episodes, 207 (11.2%) were associated with norovirus, of which 49(2.6%) were norovirus GI, 150(8.1%) norovirus GII, and 8 (0.4%) were mixed infections with both norovirus GI and GII. Of the 147 vomiting only episodes, 30 (20.4%) were positive for norovirus in stool, of which 7 (4.8%) were norovirus GI and 23 (15.6%) GII. At least a third of the children developed norovirus associated diarrhea, with the first episode at a median age of 5 and 8 months for norovirus GI and GII, respectively. Norovirus GI.3 and GII.4 were the predominant genotypes (40.3% and 53.0%) with strain diversity and change in the predominant sub-cluster over time observed among GII viruses. A second episode of norovirus gastroenteritis was documented in 44/174 (25.3%) ever-infected children. Children with the G428A homozygous mutation for inactivation of the FUT2 enzyme (se428se428) were at a significantly lower risk (48/190) of infection with norovirus ( $p = 0.01$ ). CONCLUSIONS: This is the first report of norovirus documenting disease, re-infection and genetic susceptibility in an Asian birth cohort. The high incidence and apparent lack of genogroupII specific immunity indicate the need for careful studies on further characterization of strains, asymptomatic infection and shedding and immune response to further our understanding of norovirus infection and disease. DOI: 10.1371/journal.pone.0157007

INTL

PMCID: PMC4902233 PMID:27284939

EPDM

**Oommen AM**(1), Abraham VJ(2), George K(2), Jose VJ(3).

Rising trend of cardiovascular risk factors between 1991-1994 and 2010-2012: A repeat cross sectional survey in urban and rural Vellore.

Indian Heart J. 2016 May-Jun;68(3):263-9. doi: 10.1016/j.ihj.2015.09.014. Epub 2016 Jan 13.

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**BACKGROUND:** Repeat cross sectional surveys document the trend of prevalence rates for non-communicable diseases and their risk factors. In this study, we compare the prevalence rates for risk factors for cardiovascular disease in urban and rural Vellore between 1991-1994 and 2010-2012. **METHODS:** Cross sectional survey was carried out in 1991-1994 in a rural block in Vellore district and in

Vellore town, to study the prevalence of cardiovascular risk factors among adults aged 30-60 years. A repeat survey was done in 2010-2012 using the WHO STEPS method. In both surveys, socio-demographic and behavioral history, physical measurements, biochemical measurements, and medical history were obtained. Age adjusted rates were used to compare the rates in the two surveys. RESULTS: In the rural areas, there was a three times increase in diabetes and body mass index (BMI)  $\geq 25\text{kg/m}^2$  (overweight/obese) with a doubling of the prevalence of hypertension. In urban areas there was a tripling of diabetes, doubling of proportion with BMI  $\geq 25\text{kg/m}^2$  and 50% increase in prevalence of hypertension. While the proportion of male current smokers reduced by 50% in both rural and urban Vellore, lifetime abstainers to alcohol decreased in the rural area from 46.8% to 37.5% ( $p < 0.001$ ). CONCLUSIONS: There has been an alarming rise in diabetes, hypertension, and overweight/obese with an even greater increase in rural areas. Alcohol use is increasing while smoking is on the decline. Primary prevention programs are required urgently to stem the rising incidence of non-communicable diseases in India. Copyright © 2015 Cardiological Society of India. Published by Elsevier B.V. All rights reserved. DOI: 10.1016/j.ihj.2015.09.014

NAT

PMCID: PMC4911447 PMID:27316476

EPDM

**Paul NS**(1), Asirvatham M(1).

Geriatric health policy in India: The need for scaling-up implementation.

J Family Med Prim Care. 2016 Apr-Jun;5(2):242-247.

**Author information:**

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In an anticipation of the rising geriatric population in India, the Central government constituted the National Policy for Older Persons in 1999 to promote the health and welfare of senior citizens in India. A major strategy of this policy is to encourage families to take care of their older family members. The policy also encourages voluntary organizations to supplement the care provided by the family and provide care and protection to vulnerable elderly people. The implementation of this policy, particularly in the rural areas, has been negligible and calls for a scaling-up of programs to address the physical,

psychological, and social needs of the poor. Due to breakdown of the joint family system and the migration of the younger generation to the towns and cities, the elderly parents in the villages are left to fend for themselves. Too old to work and with little or no source of income, the elders are struggling even to satisfy their basic needs. This article primarily focuses on the various facets of elderly care in India. As a fledgling nation in elderly care, we should take cues from other nations who have pioneered in this field and should constantly evolve to identify and face the various challenges that come up, especially from rural India. The Rural Unit for Health and Social Affairs Department of a well-known Medical College in South India has developed a "senior recreation day care" model which proves to be a useful replicable model to improve the quality of life and nutritional status of the elderly in the lower rungs of society. More than a decade since its inception, it is now the right time to assess the implementation of our geriatric health policy and scale-up programs so that the elderly in our country, irrespective of urban and rural, will have a dignified and good quality life. DOI: 10.4103/2249-4863.192333

**NAT**

**PMCID: PMC5084541 PMID:27843821**

**EPDM**

**Premkumar P(1), Antonisamy B(2), Mathews J(3), Benjamin S(3), Regi A(3), JoseR(3), Kuruvilla A(4), Mathai M(5).**

Birth weight centiles by gestational age for twins born in south India.

BMC Pregnancy Childbirth. 2016 Mar 24;16:64. doi: 10.1186/s12884-016-0850-y.

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**BACKGROUND:** Birth weight centile curves are commonly used as a screening tool and to assess the position of a newborn on a given reference distribution. Birth weight of twins are known to be less than those of comparable singletons and twin-specific birth weight centile curves are recommended for use. In this study, we aim to construct gestational age specific birth weight centile curves for twins born in south India.**METHODS:** The study was conducted at

the Christian Medical College, Vellore, south India. The birth records of all consecutive pregnancies resulting in twin births between 1991 and 2005 were reviewed. Only live twin births between 24 and 42 weeks of gestation were included. Birth weight centiles for gestational age were obtained using the methodology of generalized additive models for location, scale and shape (GAMLSS). Centiles curves were obtained separately for monochorionic and dichorionic twins. **RESULTS:** Of 1530 twin pregnancies delivered during the study period (1991-2005), 1304 were included in the analysis. The median gestational age at birth was 36 weeks (1st quartile 34, 3rd quartile 38 weeks). Smoothed percentile curves for birth weight by gestational age increased progressively till 38 weeks and levels off thereafter. Compared with dichorionic twins, monochorionic twins had lower birth weight for gestational age from after 27 weeks. **CONCLUSIONS:** We provide centile values of birth weight at 24 to 42 completed weeks of gestation for twins born in south India. These charts could be used both in routine clinical assessments and epidemiological studies. DOI: 10.1186/s12884-016-0850-y

**INTL**

**PMCID: PMC4806424 PMID:27012538**

**EPDM**

**Premkumar R(1), Pothen J(2), Rima J(3), Arole S(4).**

Prevalence of hypertension and prehypertension in a community-based primary health care program villages at central India.

Indian Heart J. 2016 May-Jun;68(3):270-7. doi: 10.1016/j.ihj.2015.08.013. Epub 2016 Jan 13.

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**OBJECTIVE:** The objective of this study is to evaluate the effects of a community-based effort in a rural area of central India to decrease the

prevalence of hypertension among the middle-aged and older population by using multiple blood pressure measurements. **METHODS:** With a prevalence of 16.8% (error of 3.36, and 95% confidence interval) from a recent study in a nearby district, the sample size required for this study was 495 subjects. A proportionally stratified random sample design was used. With maps of ten villages, where in a community-based health project had been in place for many years, 20 households and 20 backups were randomly selected from a list of all households. Multiple BP measurements were obtained and categorized and one-month period prevalence was calculated. Statistical analyses of frequency and percentage were performed. **RESULTS:** Approximately one-fifth of the population above 40 years of age in central India where a community-based approach is in place was hypertensive. This is significantly lower than the previously documented prevalence rate of one-third or even more prevalence rate in India. The attribute of caste and religion, a specific rural Indian characteristic did not have any significant bearing on the above results. The prevalence tended to increase progressively with age until 70 years, after which it declined. Multiple blood pressure measurements may yield an accurate prevalence of hypertension. **CONCLUSION:** With the documented evidences from India, the current reduced prevalence of hypertension could have been influenced by the community-based interventions in this population. Copyright © 2015 Cardiological Society of India. Published by Elsevier B.V. All rights reserved. DOI: 10.1016/j.ihj.2015.08.013

**NAT**

**PMCID: PMC4911430 PMID:27316477**

**EPDM**

**Pricilla RA**(1), David KV(2), Siva R(3), Vimala TJ(4), Rahman SP(2), Sankarapandian V(2).

Satisfaction of antenatal mothers with the care provided by nurse-midwives in an urban secondary care unit.

J Family Med Prim Care. 2016 Apr-Jun;5(2):420-423.

**Author information:**

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**BACKGROUND:** The satisfaction of antenatal women to antenatal services has rarely been studied in India.

In a nation with a maternal mortality ratio of 178/100,000 live births, it is crucial to explore all avenues to reduce it. **AIMS:** Our study aims to assess the pregnant women's satisfaction with regard to antenatal care services provided by nurse-midwives in an urban health center in South India. **METHODS:** We administered a satisfaction of care questionnaire to 200 consecutive antenatal women attending the nurse run antenatal clinics from April 2014 to November 2014. The data entry was done using Epi-Data system and the analysis by SPSS version 16. **STATISTICAL ANALYSIS USED:** The absolute distribution of each of the question in the satisfaction of care questionnaire was calculated as proportions. The relationship between satisfaction of care and parity, number of visits, years of experience of the care provider and mother's education was tested using Mann-Whitney test for two independent groups. **RESULTS:** The mean age of the mothers was 23.5 years. More than 95% of the mothers expressed satisfaction with the number of antenatal visits components of antenatal care. Only 31.8% of the mothers were satisfied with the health education on family planning. There was no significant relationship between satisfaction of care and parity of mothers or years of experience of care provider. **CONCLUSIONS:** Pregnant women attending a nurse run antenatal care service have positively expressed satisfaction of care provided therein. DOI: 10.4103/2249-4863.192359

**NAT**

**PMCID: PMC5084573 PMID:27843853**

**EPDM**

**Ramakrishna BS**(1), Makharia GK(2), Chetri K(3), Dutta S(4), Mathur P(5), AhujaV(2), Amarchand R(6), Balamurugan R(1), Chowdhury SD(1), Daniel D(7), Das A(4), George G(1), Gupta SD(8), Krishnan A(6), Prasad JH(9), Kaur G(10), PugazhendhiS(1), Pulimood A(1), Ramakrishna K(1), Verma AK(1).

Prevalence of Adult Celiac Disease in India: Regional Variations and Associations.

Am J Gastroenterol. 2016 Jan;111(1):115-23. doi: 10.1038/ajg.2015.398. Epub 2016Jan 5.

**Author information:**

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India Institute of Medical Sciences, New Delhi, India. (7)Department of Transfusion Medicine, Christian Medical College, Vellore, India. (8)Department of Pathology, All India Institute of Medical Sciences, New Delhi, India. (9)Department of Community Health, Christian Medical College, Vellore, India. (10)Department of Transfusion Medicine and Immunohematology, All India Institute of Medical Sciences, New Delhi, India.

**OBJECTIVES:** Although celiac disease (CeD) affects 1% of people in the northern part of India, it is believed to be uncommon in the southern and northeastern parts because of significant differences in dietary pattern and ethnicity. We estimated the prevalence of CeD in these three populations. In a subset, we also investigated differences in the prevalence of HLA-DQ2/8 allelotype and dietary grain consumption. **METHODS:** A total of 23,331 healthy adults were sampled from three regions of India-northern (n=6207), northeastern (n=8149), and southern (n=8973)-and screened for CeD using IgA anti-tissue transglutaminase antibody. Positive tests were reconfirmed using a second ELISA. CeD was diagnosed if the second test was positive and these participants were further investigated. A subsample of participants was tested for HLA-DQ2/-DQ8 and underwent detailed dietary evaluation. **RESULTS:** Age-adjusted prevalence of celiac autoantibodies was 1.23% in northern, 0.87% in northeastern, and 0.10% in southern India ( $P < 0.0001$ ). Prevalence of CeD and latent CeD, respectively, was 8.53/1,000 and 3.70/1,000 in northern, 4.66/1,000 and 3.92/1,000 in northeastern, and 0.11/1,000 and 1.22/1,000 in the southern part. The population prevalence of genes determining HLA-DQ2 and/or -DQ8 expression was 38.1% in northern, 31.4% in northeastern, and 36.4% in southern India. Mean daily wheat intake was highest in northern (455 g) compared with northeastern (37 g) or southern part (25 g), whereas daily rice intake showed an inverse pattern. **CONCLUSIONS:** CeD and latent CeD were most prevalent in northern India and were the least in southern India. The prevalence correlated with wheat intake and did not reflect differences in the genetic background. DOI: 10.1038/ajg.2015.398

**INTL**

**PMID:**26729543

**EPDM**

**Rogawski ET**(1), Meshnick SR(1), Becker-Dreps S(2), Adair LS(3), Sandler RS(4), Sarkar R(5), Kattula D(5), Ward HD(6), Kang G(5), Westreich DJ(1).

Reduction in diarrhoeal rates through interventions that prevent unnecessary antibiotic exposure early in life in an observational birth cohort.

J Epidemiol Community Health. 2016 May;70(5):500-5. doi:10.1136/jech-2015-206635. Epub 2015 Nov 30.

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**BACKGROUND:** Antibiotic treatment early in life is often not needed and has been associated with increased rates of subsequent diarrhoea. We estimated the impact of realistic interventions, which would prevent unnecessary antibiotic exposures before 6 months of age, on reducing childhood diarrhoeal rates. **METHODS:** In data from a prospective observational cohort study conducted in Vellore, India, we used the parametric g-formula to model diarrhoeal incidence rate differences contrasting the observed incidence of diarrhoea to the incidence expected under hypothetical interventions. The interventions prevented unnecessary antibiotic treatments for non-bloody diarrhoea, vomiting and upper respiratory infections before 6 months of age. We also modelled targeted interventions, in which unnecessary antibiotic use was prevented only among children who had already stopped exclusive breast feeding. **RESULTS:** More than half of all antibiotic exposures before 6 months (58.9%) were likely unnecessary. The incidence rate difference associated with removing unnecessary antibiotic use before 6 months of age was -0.28 (95% CI -0.46 to -0.08) episodes per 30 child-months. This implies that preventing unnecessary antibiotic exposures in just 4 children would reduce the incidence of diarrhea by 1 from 6 months to 3 years of age. **CONCLUSIONS:** Interventions to reduce unnecessary antibiotic use among young children could result in an important reduction in diarrhoeal rates. This work provides an example application of statistical methods which can further the aim of presenting epidemiological findings that are relevant to public health practice. Published by the BMJ

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**NAT**

**PMCID: PMC5030489 PMID:26621194**

**EPDM**

**Salas A**(1), Acosta D(2), Ferri CP(3), Guerra M(4), Huang Y(5), Jacob KS(6), Jimenez-Velazquez IZ(7), Libre Rodriguez JJ(8), Sosa AL(9), Uwakwe R(10), Williams JD(11), Jotheeswaran AT(12), Liu Z(5), Lopez Medina AM(13), Salinas-Contreras RM(9), Prince MJ(14).

The Prevalence, Correlates, Detection and Control of Diabetes among Older People in Low and Middle Income Countries. A 10/66 Dementia Research Group Population-Based Survey.

PLoS One. 2016 Feb 25;11(2):e0149616.

doi: 10.1371/journal.pone.0149616.eCollection 2016.

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**BACKGROUND:** Little is known of the epidemiology of diabetes among older people in low and middle income countries. We aimed to study and compare prevalence, social patterning, correlates, detection, treatment and control of diabetes among older people in Latin America, India, China and Nigeria. **METHODS:**

Cross-sectional surveys in 13 catchment area sites in nine countries. Diagnosed diabetes was assessed in all sites through self-reported diagnosis. Undiagnosed diabetes was assessed in seven Latin American sites through fasting blood samples (glucose  $\geq$  7 mmol/L). **RESULTS:** Total diabetes prevalence in catchment sites in Cuba (prevalence 24.2%, SMR 116), Puerto Rico (43.4%, 197), and urban (27.0%, 125), and rural Mexico (23.7%, 111) already exceeds that in the USA, while that in Venezuela (20.9%, 100) is similar. Diagnosed diabetes prevalence varied very widely, between low prevalences in sites in rural China (0.9%), rural India (6.6%) and Nigeria (6.0%). and 32.1% in Puerto Rico, explained mainly by access to health services. Treatment coverage varied substantially between sites. Diabetes control (40 to 61% of those diagnosed) was modest in the Latin American sites where this was studied. Diabetes was independently associated with less education, but more assets. Hypertension, central obesity and hypertriglyceridaemia, but not hypercholesterolaemia were consistently associated with total diabetes. **CONCLUSIONS:** Diabetes prevalence is already high in most sites. Identifying undiagnosed cases is essential to quantify population burden, particularly in least developed settings where diagnosis is uncommon. Metabolic risk factors and associated lifestyles may play an important part in aetiology, but this requires confirmation with longitudinal data. Given the high prevalence among older people, more population research is indicated to quantify the impact of diabetes, and to monitor the effect of prevention and health system strengthening on prevalence, treatment and control. DOI: 10.1371/journal.pone.0149616

**INTL**

**PMCID: PMC4767439 PMID:26913752**

**EPDM**

**Simon SS**(1), Ramachandra SS(2), Abdullah DD(2), Islam MN(2), Kalyan CG(2).

Lessons learned from the disruption of dental training of Malaysian students studying in Egypt during the Arab spring.

Educ Health (Abingdon). 2016 May-Aug;29(2):124-7. doi: 10.4103/1357-6283.188753.

#### Author information:

(1) Department of Dental Surgery, Christian Medical College and Hospital, Vellore, Tamil Nadu,

India. (2)Faculty of Dentistry, SEGi University, Petaling Jaya, Selangor, Malaysia.

**BACKGROUND:** Political crisis and worsening security situation in Egypt in late 2013 resulted in Malaysian students who were pursuing their dental education in Egypt being recalled home to Malaysia. The Ministry of Higher Education in Malaysia took steps to integrate these students into public and private universities in Malaysia. **METHODS:** We used a questionnaire and informal interviews to learn from students returning from Egypt about their experiences transitioning from dental schools in Egypt to Malaysia. **RESULTS:** We discuss the challenges students faced with regards to credit transfer, pastoral care, the differences in the curriculum between the dental faculties of the two nations, and the financial implications of this disruption of their training. **DISCUSSION:** We live in a fragile world where similar political situations will surely arise again. The approaches used by the Malaysian government and the lessons learned from these students may help others. The perspectives of these students may help educators reintegrate expatriate students who are displaced by political instability back into the education system of their own countries. DOI: 10.4103/1357-6283.188753

**INTL**

**PMID:**27549650

**EPDM**

**Tanmoy AM**(1), Ahmed AN(1),(2), Arumugam R(3), Hossain B(1), Marzan M(1), SahaS(1), Arifeen SE(1),(4), Baqui AH(1),(5), Black RE(5), Kang G(3), Saha SK(1),(6).

Rotavirus Surveillance at a WHO-Coordinated Invasive Bacterial Disease Surveillance Site in Bangladesh: A Feasibility Study to Integrate Two Surveillance Systems.

PLoS One. 2016 Apr 20;11(4):e0153582.

doi: 10.1371/journal.pone.0153582.eCollection 2016.

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The World Health Organization (WHO) currently coordinates rotavirus diarrhea and invasive bacterial disease (IBD) surveillance at 178 sentinel sites in 60 countries. However, only 78 sites participate in both surveillance systems using a common sentinel site. Here, we explored the feasibility of extending a WHO-IBD surveillance platform to generate data on the burden of rotaviral diarrhea and its epidemiological characteristics to prepare the countries to measure the impact of rotaviral vaccine. A six-month (July to December, 2012) surveillance, managed by IBD team, collected stool samples and clinical data from under-five children with acute watery diarrhea at an IBD sentinel site. Samples were tested for rotavirus antigen by ELISA and genotyped by PCR at the regional reference laboratory (RRL). Specimens were collected from 79% (n=297) of eligible cases (n=375); 100% of which were tested for rotavirus by ELISA and 54% (159/297) of them were positive. At RRL, all the cases were confirmed by PCR and genotyped (99%; 158/159). The typing results revealed the predominance of G12 (40%; 64/159) genotype, followed by G1 (31%; 50/159) and G9 (19%; 31/159). All in all, this exploratory surveillance collected the desired demographic and epidemiological data and achieved almost all the benchmark indicators of WHO, starting from enrollment number to quality assurance through a number of case detection, collection, and testing of specimens and genotyping of strains at RRL. The success of this WHO-IBD site in achieving these benchmark indicators of WHO can be used by WHO as a proof-of-concept for considering integration of rotavirus surveillance with WHO-IBD platforms, specifically in countries with well performing IBD site and no ongoing rotavirus surveillance.

DOI: 10.1371/journal.pone.0153582

**INTL**

**PMCID:** PMC4838211 **PMID:**27096958

**EPDM**

**Alexander V**(1), Sindhu KN(1), Zechariah P(1), Resu AV(1), Nair SR(1), Kattula D(2), Mohan VR(1), Alex T RG(3).

Occupational safety measures and morbidity among welders in Vellore, Southern India.

Int J Occup Environ Health. 2016 Oct;22(4):300-306. Epub 2016 Sep 28.

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Sciences, Christian Medical College, Vellore, India. (3)c Department of General Medicine, Christian Medical College, Vellore, India.

**BACKGROUND:** Welders in the unorganized occupational sector in the economically developing world are exposed to respiratory, skin, eye, ear, and neurological problems exacerbated by non-usage of personal protective equipment (PPE).

**OBJECTIVE:** To study the frequency of health problems and the usage of PPE among welders in unorganized welding units in Vellore, India. **METHODS:** A cross-sectional survey was conducted among 150 welders to determine the frequency of skin, ear, eye, and respiratory morbidity and the usage of PPE. A group of 150 non-welders were chosen for comparison.

**RESULTS:** Significant differences in the frequency of skin burns, redness, hyper pigmentation, itching, eye injuries, and sensorineural deafness were observed among the welders and non-welders ( $P < 0.001$ ). Hypertension was noted in 12.6% of the welders as compared to 0.7% among the non-welders. None of the welders used appropriate PPE. For welders, low educational attainment was associated with an increased risk of eye injury ( $P < 0.05$ ,  $OR = 0.29$ ). There was also a significant difference between sensorineural deafness and a welder having less than 10 years of welding work experience ( $P < 0.001$ ,  $OR = 18.18$ ) which could probably be accounted for by the healthy worker effect. **CONCLUSION:** Welders in this sample experienced a significant skin, eye, and ear morbidity accentuated by the non-usage of PPE. All worked without formal training and were unaware of the safe working guidelines that exist, but are not implemented for the welders in India. DOI: 10.1080/10773525.2016.1228287

**INTL**

**PMCID:** PMC5137558 **PMID:** 27682579

**EPDM**

**Ambikapathi R**(1),(2), **Kosek MN**(2), **Lee GO**(2), **Mahopo C**(3), **Patil CL**(4), **Maciel BL**(5), **Turab A**(6), **Islam MM**(7), **Ulak M**(8), **Bose A**(9), **Paredes Olortegui M**(10), **Pendergast LL**(11), **Murray-Kolb LE**(12), **Lang D**(1), **McCormick BJ**(1), **CaulfieldLE**(13).

How multiple episodes of exclusive breastfeeding impact estimates of exclusivebreastfeeding duration: report from the eight-site MAL-ED birth cohort study. *Matern Child Nutr.* 2016 Oct;12(4):740-56. doi: 10.1111/mcn.12352. Epub 2016 Aug 8.

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Nutrition, Department of International Health, The Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA.(3)Department of Nutrition, School of Health Sciences, University of Venda, Thohoyandou, Limpopo Province, South Africa. (4)Department of Women, Children and Family Health Science, College of Nursing, University of Illinois at Chicago, Chicago, Illinois, USA. (5)Department of Nutrition, State University of Ceará, Fortaleza, Ceará, Brazil. (6)Department of Paediatrics and Child Health, Aga Khan University, Karachi, Pakistan. (7)Centre for Nutrition and Food Security, International Centre for Diarrhoeal Disease Research, Dhaka, Bangladesh. (8)Department of Child Health and Institute of Medicine, Tribhuvan University, Kathmandu, Nepal. (9)Christian Medical College, Vellore, India. (10)Biomedical Investigations Unit AB PRISMA, Iquitos, Peru. (11)School Psychology Program, Temple University, Philadelphia, Pennsylvania, USA. (12)Department of Nutritional Sciences, The Pennsylvania State University, State College, Pennsylvania, USA. (13)Center for Human Nutrition, Department of International Health, The Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA. [icaulfi1@jhu.edu](mailto:icaulfi1@jhu.edu).

The duration of exclusive breastfeeding (EBF) is often defined as the time from birth to the first non-breast milk food/liquid fed (EBFLONG), or it is estimated by calculating the proportion of women at a given infant age who EBF in the previous 24 h (EBFDHS). Others have measured the total days or personal prevalence of EBF (EBFPREV), recognizing that although non-EBF days may occur, EBF can be re-initiated for extended periods. We compared breastfeeding metrics in the MAL-ED study; infants' breastfeeding trajectories were characterized from enrollment (median 7 days, IQR: 4, 12) to 180 days at eight sites. During twice-weekly surveillance, caretakers were queried about infant feeding the prior day. Overall, 101 833 visits and 356 764 child days of data were collected from 1957 infants. Median duration of EBFLONG was 33 days (95% CI: 32-36), compared to 49 days based on the EBFDHS. Median EBFPREV was 66 days (95% CI: 62-70). Differences were because of the return to EBF after a non-EBF period. The median number of returns to EBF was 2 (IQR: 1, 3). When mothers re-initiated EBF (second episode), infants gained an additional 18.8 days (SD: 25.1) of EBF, and gained 13.7 days (SD: 18.1) (third episode). In settings where women report short gaps in EBF, programmes should work with women to return to EBF. Interventions could positively influence the

duration of these additional periods of EBF and their quantification should be considered in impact evaluation studies. © 2016 John Wiley & Sons Ltd. © 2016 The Authors. Maternal & Child Nutrition published by John Wiley & Sons Ltd. DOI: 10.1111/mcn.12352

**INTL**

**PMCID: PMC5095788 PMID:27500709**

**EPDM**

**Amour C**, Gratz J, Mduma E, Svensen E, Rogawski ET, McGrath M, Seidman JC, McCormick BJ, Shrestha S, Samie A, Mahfuz M, Qureshi S, Hotwani A, Babji S, Trigoso DR, Lima AA, Bodhidatta L, Bessong P, Ahmed T, Shakoor S, Kang G, Kosek M, Guerrant RL, Lang D, Gottlieb M, Houpt ER, Platts-Mills JA; Epidemiology and Impact of Campylobacter Infection in Children in 8 Low-Resource Settings: Results From the MAL-ED Study. Etiology, Risk Factors, and Interactions of Enteric Infections and Malnutrition and the Consequences for Child Health and Development Project (MAL-ED) Network Investigators. Clin Infect Dis. 2016 Nov 1;63(9):1171-1179. Epub 2016 Aug 7.

**Collaborators:**

Acosta AM, de Burga RR, Chavez CB, Flores JT, Olotegui MP, Pinedo SR, Salas MS, Trigoso DR, Vasquez AO, Ahmed I, Alam D, Ali A, Bhutta ZA, Qureshi S, Rasheed M, Soofi S, Turab A, Zaidi AK, Bodhidatta L, Mason CJ, Babji S, Bose A, George AT, Hariraju D, Jennifer MS, John S, Kaki S, Kang G, Karunakaran P, Koshy B, Lazarus RP, Muliyl J, Raghava MV, Raju S, Ramachandran A, Ramadas R, Ramanujam K, Rose A, Roshan R, Sharma SL, Sundaram S, Thomas RJ, Pan WK, Ambikapathi R, Carreon JD, Charu V, Doan V, Graham J, Hoest C, Knobler S, Lang DR, McCormick BJ, McGrath M, Miller MA, Mohale A, Nayyar G, Psaki S, Rasmussen Z, Richard SA, Seidman JC, Wang V, Blank R, Gottlieb M, Tountas KH, Amour C, Bayyo E, Mduma ER, Mvungi R, Nshama R, Pascal J, Swema BM, Yarrot L, Ahmed T, Ahmed AM, Haque R, Hossain I, Islam M, Mahfuz M, Mondal D, Tofail F, Chandyo RK, Shrestha PS, Shrestha R, Ulak M, Bauck A, Black R, Caulfield L, Checkley W, Kosek MN, Lee G, Schulze K, Yori PP, Murray-Kolb LE, Ross AC, Schaefer B, Simons S, Pendergast L, Abreu CB, Costa H, Di Moura A, Filho JQ, Havt A, Leite ÁM, Lima AA, Lima NL, Lima IF, Maciel BL, Medeiros PH, Moraes M, Mota FS, Oriá RB, Quetz J, Soares AM, Mota RM, Patil CL, Bessong P, Mahopo C, Maphula A, Nyathi E, Samie A, Barrett L, Dillingham R, Gratz J, Guerrant RL, Houpt E, Petri WA Jr, Platts-Mills J, Scharf R, Shrestha B, Shrestha SK, Strand T, Svensen E. Enteropathogen infections have been associated with enteric  
BACKGROUND: dysfunction and impaired growth in children in low-resource settings. In a multisite birth

cohort study (MAL-ED), we describe the epidemiology and impact of Campylobacter infection in the first 2 years of life. Children were actively followed up until 24 months of age. Diarrheal METHODS: and nondiarrheal stool samples were collected and tested by enzyme immunoassay for Campylobacter Stool and blood samples were assayed for markers of intestinal permeability and inflammation. A total of 1892 children had 7601 diarrheal and 26 267 nondiarrheal RESULTS: stool samples tested for Campylobacter We describe a high prevalence of infection, with most children (n = 1606; 84.9%) having a Campylobacter-positive stool sample by 1 year of age. Factors associated with a reduced risk of Campylobacter detection included exclusive breastfeeding (risk ratio, 0.57; 95% confidence interval, .47-.67), treatment of drinking water (0.76; 0.70-0.83), access to an improved latrine (0.89; 0.82-0.97), and recent macrolide antibiotic use (0.68; 0.63-0.74). A high Campylobacter burden was associated with a lower length-for-age Z score at 24 months (-1.82; 95% confidence interval, -1.94 to -1.70) compared with a low burden (-1.49; -1.60 to -1.38). This association was robust to confounders and consistent across sites. Campylobacter infection was also associated with increased intestinal permeability and intestinal and systemic inflammation. Campylobacter was prevalent across diverse settings and associated CONCLUSIONS: with growth shortfalls. Promotion of exclusive breastfeeding, drinking water treatment, improved latrines, and targeted antibiotic treatment may reduce the burden of Campylobacter infection and improve growth in children in these settings. © The Author 2016. Published by Oxford University Press for the Infectious Diseases Society of America. DOI: 10.1093/cid/ciw542

**INTL**

**PMCID: PMC5064165 PMID:27501842**

**EPDM**

**Azad K**(1), Mathews J(2).

Preventing newborn deaths due to prematurity Best Pract Res Clin Obstet Gynaecol. 2016 Oct;36:131-144. doi:10.1016/j.bpobgyn.2016.06.001. Epub 2016 Jun 24.

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Obstetrics & Gynaecology, Christian Medical College, Ida Scudder Road, Vellore 632 004, India.

Preterm births (PTBs), defined as births before 37 weeks of gestation account for the majority of deaths in the newborn period. Prediction and prevention of PTB is challenging. A history of preterm labour or second trimester losses and accurate measurement of cervical length help to identify women who would benefit from progesterone and cerclage. Fibronectin estimation in the cervicovaginal secretions of a symptomatic woman with an undilated cervix can predict PTB within 10 days of testing. Antibiotics should be given to women with preterm prelabour rupture of membranes but tocolysis has a limited role in the management of preterm labour. Antenatal corticosteroids to prevent complications in the neonate should be given only when gestational age assessment is accurate. PTB is considered imminent, maternal infection and the preterm newborn can receive adequate care. Magnesium sulphate for fetal neuroprotection should be given when delivery is imminent. After birth, most babies respond to simple interventions essential newborn care, basic care for feeding support, infections and breathing difficulties. Newborns weighing 2000 g or less, benefit from KMC. Babies, who are clinically unstable or cannot be given KMC may be nursed in an incubator or under a radiant warmer. Treatment modalities include oxygen therapy, CPAP, surfactant and assisted ventilation. Copyright © 2016. Published by Elsevier L

**INTL**

**PMID:**27545716

**EPDM**

**Baxi R**(1), Vasan SK(1),(2), Hansdak S(3), Samuel P(4), Jeyaseelan V(4), Geethanjali FS(5), Murray RR(1), Venkatesan P(1), Thomas N(1).

Parental determinants of metabolic syndrome among adolescent Asian Indians: Across-sectional analysis of parent-offspring trios.

J Diabetes. 2016 Jul;8(4):494-501. doi: 10.1111/1753-0407.12319. Epub 2015 Jul

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**BACKGROUND:** The aim of the present study was to investigate the relationship between parental metabolic syndrome (MS) and the risk of MS and associated abnormalities in adolescent offspring. **METHODS:** This cross-sectional study was performed on 304 adolescents (12-16 years; 236 children with at least one parent and 124 father-mother-child trios) recruited from four schools representing different socioeconomic strata from Vellore, India. Anthropometric data was collected and blood pressure, blood glucose, and lipids were measured. **RESULTS:** The prevalence of MS in adolescent offspring, fathers, and mothers was 3.3%, 52.5%, and 48.7% respectively. The most commonly observed metabolic abnormality among adolescents was lower high-density lipoprotein. Maternal waist circumference (WC) was strongly correlated with adolescent body mass index ( $P = 0.007$ ), WC ( $P < 0.001$ ), serum triglycerides ( $P = 0.02$ ), and systolic ( $P = 0.005$ ) and diastolic ( $P = 0.01$ ) blood pressure. Maternal MS status was significantly associated with a greater risk of central obesity (WC odds ratio [OR] 2.02; 95% confidence interval [CI] 1.21-3.17) in offspring. Both parents having MS conferred a significant effect on the child's WC (OR 1.21; 95% CI 1.72-2.07) and increased risk of MS (OR 6.19; 95% CI 1.64-23.26). **CONCLUSIONS:** This study highlights the possible heritable parental components that may contribute to the MS phenotype in offspring: MS in adolescent offspring is related to parental MS status, and maternal traits reflect offspring adiposity and metabolic traits more strongly than paternal factors. Therefore, adolescent children of parents with MS should be targets for primordial prevention of cardiometabolic disease. © 2015 Ruijin Hospital, Shanghai Jiaotong University School of Medicine and John Wiley & Sons Australia, Ltd. DOI: 10.1111/1753-0407.12319

**INTL**

**PMID:**26040846

**EPDM**

**Brinda EM**(1), Rajkumar AP(2), Attermann J(3), Gerdtham UG(4), Enemark U(1), Jacob KS(5).

Health, Social, and Economic Variables Associated with Depression Among Older People in Low and Middle Income Countries: World Health Organization Study on Global Ageing and Adult Health.

Am J Geriatr Psychiatry. 2016 Dec;24(12):1196-1208. doi:10.1016/j.jagp.2016.07.016. Epub 2016 Jul 25.

**Author information:**

(1)Section for Health Promotion and Health Services Research, Department of Public Health,

Aarhus University, Aarhus, Denmark. (2)Department of Old Age Psychiatry, Institute of Psychiatry, Psychology, & Neuroscience, King's College London, London, UK; Mental Health of Older Adults and Dementia Clinical Academic Group, South London and Maudsley NHS Foundation Trust, London, UK. Electronic address: Anto.Rajamani@kcl.ac.uk. (3)Section of Epidemiology, Department of Public Health, Aarhus University, Aarhus, Denmark. (4)Health Economics Unit, Department of Clinical Sciences, Lund University, Lund, Sweden; Institute of Economic Research, Health Economics & Management, Lund University, Lund, Sweden. (5)Department of Psychiatry, Christian Medical College, Vellore, India.

**OBJECTIVE:** Although depression among older people is an important public health problem worldwide, systematic studies evaluating its prevalence and determinants in low and middle income countries (LMICs) are sparse. The biopsychosocial model of depression and prevailing socioeconomic hardships for older people in LMICs have provided the impetus to determine the prevalence of geriatric depression; to study its associations with health, social, and economic variables; and to investigate socioeconomic inequalities in depression prevalence in LMICs. **METHODS:** The authors accessed the World Health Organization Study on Global AGEing and Adult Health Wave 1 data that studied nationally representative sample from six large LMICs (N = 14,877). A computerized algorithm derived depression diagnoses. The authors assessed hypothesized associations using survey multivariate logistic regression models for each LMIC and pooled their risk estimates by meta-analyses and investigated related socioeconomic inequalities using concentration indices. **RESULTS:** Cross-national prevalence of geriatric depression was 4.7% (95% CI: 1.9%-11.9%). Female gender, illiteracy, poverty, indebtedness, past informal-sector occupation, bereavement, angina, and stroke had significant positive associations, whereas pension support and health insurance showed significant negative associations with geriatric depression. Pro-poor inequality of geriatric depression were documented in five LMICs. **CONCLUSIONS:** Socioeconomic factors and related inequalities may predispose, precipitate, or perpetuate depression among older people in LMICs. Relative absence of health safety net places socioeconomically disadvantaged older people in LMICs at risk. The need for population-based public health interventions and policies to prevent and to manage geriatric depression effectively in LMICs cannot be overemphasized. Copyright © 2016 American Association for Geriatric Psychiatry. Published

by Elsevier Inc. All rights reserved. DOI: 10.1016/j.jagp.2016.07.016

**INTL**

**PMID:** 27743841

**EPDM**

**Flenady V**(1,)(2), Wojcieszek AM(3,)(4), Fjeldheim I(5), Friberg IK(5), Nankabirwa V(6,)(7), Jani JV(5,)(7), Myhre S(5), Middleton P(4,)(8), Crowther C(8,)(9), Ellwood D(4,)(10), Tudehope D(3), Pattinson R(11), Ho J(12), Matthews J(13), Bermudez Ortega A(14), Venkateswaran M(5,)(7), Chou D(15), Say L(15), Mehl G(15), Frøen JF(4,)(5,)(7). eRegistries: indicators for the WHO Essential Interventions for reproductive, maternal, newborn and child health.

BMC Pregnancy Childbirth. 2016 Sep 30;16(1):293.

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**BACKGROUND:** Electronic health registries - eRegistries - can systematically collect relevant information at the point of care for reproductive, maternal, newborn and child health (RMNCH). However, a suite of process and outcome

indicators is needed for RMNCH to monitor care and to ensure comparability between settings. Here we report on the assessment of current global indicators and the development of a suite of indicators for the WHO Essential Interventions for use at various levels of health care systems nationally and globally. METHODS: Currently available indicators from both household and facility surveys were collated through publicly available global databases and respective survey instruments. We then developed a suite of potential indicators and associated data points for the 45 WHO Essential Interventions spanning preconception to newborn care. Four types of performance indicators were identified (where applicable): process (i.e. coverage) and outcome (i.e. impact) indicators for both screening and treatment/prevention. Indicators were evaluated by an international expert panel against the eRegistries indicator evaluation criteria and further refined based on feedback by the eRegistries technical team. RESULTS: Of the 45 WHO Essential Interventions, only 16 were addressed in any of the household survey data available. A set of 216 potential indicators was developed. These indicators were generally evaluated favourably by the panel, but difficulties in data ascertainment, including for outcome measures of cause-specific morbidity and mortality, were frequently reported as barriers to the feasibility of indicators. Indicators were refined based on feedback, culminating in the final list of 193 total unique indicators: 93 for preconception and antenatal care; 53 for childbirth and postpartum care; and 47 for newborn and small and ill baby care. CONCLUSIONS: Large gaps exist in the availability of information currently collected to support the implementation of the WHO Essential Interventions. The development of this suite of indicators can be used to support the implementation of eRegistries and other data platforms, to ensure that data are utilised to support evidence-based practice, facilitate measurement and accountability, and improve maternal and child health outcomes. DOI: 10.1186/s12884-016-1049-y

**INTL****PMCID: PMC5045645 PMID:27716088****EPDM**

**Francis MR(1), Sarkar R(1), Roy S(1), Jaffar S(2), Mohan VR(3), Kang G(1), BalrajV(4).**

Effectiveness of Membrane Filtration to Improve Drinking Water: A Quasi-Experimental Study from Rural Southern India.

Am J Trop Med Hyg. 2016 Nov 2;95(5):1192-1200. Epub 2016 Sep 6.

**Author information:** (1)Division of Gastrointestinal Sciences, Christian Medical College, Vellore, India. (2)London School of Hygiene and Tropical Medicine,

London, United Kingdom. (3)Department of Community Health, Christian Medical College, Vellore, India. (4)Society for Applied Studies, Vellore, India. [vinoharbalraj@gmail.com](mailto:vinoharbalraj@gmail.com).

Since point-of-use methods of water filtration have shown limited acceptance in Vellore, southern India, this study evaluated the effectiveness of decentralized membrane filtration 1) with safe storage, 2) without safe storage, versus 3) no intervention, consisting of central chlorination as per government guidelines, in improving the microbiological quality of drinking water and preventing childhood diarrhea. Periodic testing of water sources, pre-/postfiltration samples, and household water, and a biweekly follow up of children less than 2 years of age was done for 1 year. The membrane filters achieved a log reduction of 0.86 (0.69-1.06), 1.14 (0.99-1.30), and 0.79 (0.67-0.94) for total coliforms, fecal coliforms, and *Escherichia coli*, respectively, in field conditions. A 24% (incidence rate ratio, IRR [95% confidence interval, CI] = 0.76 [0.51-1.13]; P = 0.178) reduction in diarrheal incidence in the intervention village with safe storage and a 14% (IRR [95% CI] = 1.14 [0.75-1.77]; P = 0.530) increase in incidence for the intervention village without safe storage versus no intervention village was observed, although not statistically significant. Microbiologically, the membrane filters decreased fecal contamination; however, provision of decentralized membrane-filtered water with or without safe storage was not protective against childhood diarrhea. © The American Society of Tropical Medicine and Hygiene. DOI: 10.4269/ajtmh.15-0675

**INTL****PMCID: PMC5094238 PMID:27601525****EPDM**

**George S(1),(2), Levecke B(2), Kattula D(1), Velusamy V(1), Roy S(1), GeldhofP(2), Sarkar R(1), Kang G(1).**

Molecular Identification of Hookworm Isolates in Humans, Dogs and Soil in a Tribal Area in Tamil Nadu, India.

PLoS Negl Trop Dis. 2016 Aug 3;10(8):e0004891. doi: 10.1371/journal.pntd.0004891.eCollection 2016.

**Author information:**

(1)Department of Gastrointestinal Sciences, Christian Medical College, Vellore, India. (2)Department of Virology, Parasitology and Immunology, Ghent University, Merelbeke, Belgium.

**BACKGROUND:** Hookworms (*Necator americanus* and *Ancylostoma duodenale*) remain a major public health problem worldwide. Infections with hookworms (e.g., *A. caninum*, *A. eylanicum* and *A. braziliense*) are also prevalent in dogs, but the role of dogs as a reservoir for zoonotic hookworm infections in humans needs to be further explored. **METHODOLOGY/PRINCIPAL FINDINGS:** As part of an open-label community based cluster-randomized trial in a tribal area in Tamil Nadu (India; 2013-2015), a total of 143 isolates of hookworm eggs from human stool were speciated based on a previously described PCR-RFLP methodology. The presence of hookworm DNA was confirmed in 119 of 143 human samples. *N. americanus* (100%) was the most prevalent species, followed by *A. caninum* (16.8%) and *A. duodenale* (8.4%).

Because of the high prevalence of *A. caninum* in humans, dog samples were also collected to assess the prevalence of *A. caninum* in dogs. In 68 out of 77 canine stool samples the presence of hookworms was confirmed using PCR-RFLP. In dogs, both *A. caninum* (76.4%) and *A. ceylanicum* (27.9%) were identified. Additionally, to determine the contamination of soil with zoonotic hookworm larvae, topsoil was collected from defecating areas. Hookworm DNA was detected in 72 out of 78 soil samples that revealed presence of hookworm-like nematode larvae. In soil, different hookworm species were identified, with animal hookworms being more prevalent (*A. ceylanicum*: 60.2%, *A. caninum*: 29.4%, *A. duodenale*: 16.6%, *N. americanus*: 1.4%, *A. braziliense*: .4%).

**CONCLUSIONS/SIGNIFICANCE:** In our study we regularly detected the presence of *A. caninum* DNA in the stool of humans. Whether this is the result of infection is currently unknown but it does warrant a closer look at dogs as a potential reservoir. DOI: 10.1371/journal.pntd.0004891

**INTL**

**PMCID:** PMC4972381 **PMID:** 27486798

**EPDM**

**Inbaraj LR**(1), Rose A(2), George K(2), Bose A(2).

Incidence and Impact of Unintentional Childhood Injuries: A Community Based Study in Rural South India.

Indian J Pediatr. 2016 Nov 19. [Epub ahead of print]

**Author information:**

(1)Department of Community Health, Bangalore Baptist Hospital, Bangalore, Karnataka, 560024, India. leeberk2003@gmail.com. (2)Department of Community Health, Christian Medical College, Vellore, Tamil Nadu, India.

**OBJECTIVE:** To estimate the incidence of unintentional childhood injuries and to assess the impact of injury during childhood.

**METHODS:** This is a cross sectional study, conducted in 13 clusters of a rural block in Vellore. Children were screened by two-stage cluster sampling method by two weeks and three months recall method. The primary caregivers of injured children were administered a questionnaire to assess the impact of the injury.

**RESULTS:** Childhood injury related morbidity was 292.5 per 1000 y. Children between 10 and 14 y (4.6%) and boys (4.5%) had a higher rate of injury. Fall (43.1 %) was the most common cause of injury followed by RTIs (Road Traffic Incidents- 27.6%). Work absenteeism for primary caregivers ranged from 1 to 60 (IQR 2-7) days. Sickness absenteeism ranged from 1 to 45 d with a mean of 7.64 (IQR 2-7) days. Half of the children missed school after an injury. The days spent with temporary disability ranged from 1 to 60 d with a mean of 11.79 (IQR 2-7) d and 7.73% had permanent disability.

**CONCLUSIONS:** Unintentional childhood injury is a neglected public health problem which leads to sickness absenteeism and disability. Boys and older children are the most common victims of injury. There is a need for establishing state or nationwide injury registries to help understand accurate estimates of disability-adjusted life year (DALY) and loss of productivity.

DOI: 10.1007/s12098-016-2260-6

**NAT**

**PMID:** 27864749

**EPDM**

**Iqbal F**(1), Kujan O, Bowley DM, Keighley MR, Vaizey CJ.

Quality of Life After Ostomy Surgery in Muslim Patients: A Systematic Review of the Literature and Suggestions for Clinical Practice.

J Wound Ostomy Continence Nurs. 2016 Jul-Aug;43(4):385-91.

doi:10.1097/WON.000000000000235.

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Theology and Religion, University of Durham, Durham, United Kingdom. Carolynne J. Vaizey, MD, MBChB, FRCS, FCS (SA), Sir Alan Parks Physiology Unit, St Marks Hospital, Harrow, London, United Kingdom.

**PURPOSE:** To determine factors that influence health-related quality of life (HRQOL) after ostomy surgery in Muslim patients. **METHODS:** A systematic literature review of published data was carried out using MeSH terms ("Muslim" OR "Islam") AND ("stoma" OR "ostomy" OR "colostomy" OR "ileostomy") AND "quality of life" AND "outcomes." **RESULTS:** Twelve studies enrolling 913 subjects were deemed suitable for inclusion in the review. HRQOL was found to be particularly impaired in Muslims; this impairment went beyond that experienced by non-Muslim patients. Factors associated with this difference included psychological factors, social isolation, underreporting of complications, and sexual dysfunction leading to breakdown of marital relations as well as diminished religious practices.

**CONCLUSION:** Muslims requiring ostomies should receive preoperative counseling by surgeons and ostomy nurses. These discussions should also include faith leaders and/or hospital chaplains. Ongoing support after surgery can be extended into the community and encompass family doctors and faith leaders. Additional research exploring HRQOL after surgery in Muslims living in Western societies is indicated. DOI: 10.1097/WON.0000000000000235

**INTL**

**PMID:**27196687

**EPDM**

**Lee GO(1)**, Richard SA, Kang G, Houpt ER, Seidman JC, Pendergast LL, Bhutta ZA, Ahmed T, Mduma ER, Lima AA, Bessong P, Jennifer MS, Hossain MI, Chandyo RK, Nyathi E, Lima IF, Pascal J, Soofi S, Ladaporn B, Guerrant RL, Caulfield LE, Black RE, Kosek MN; MAL-ED Network Investigators.

A Comparison of Diarrheal Severity Scores in the MAL-ED Multisite Community-Based Cohort Study.

J Pediatr Gastroenterol Nutr. 2016 Nov;63(5):466-473.

**Author information**

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Africa §§Centre for International Health, University of Bergen, Bergen, Norway ||||Department of Child Health, Institute of Medicine, Tribhuvan University, Kathmandu, Nepal ¶¶Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand.

**OBJECTIVES:** There is a lack of consensus on how to measure diarrheal severity. Within the context of a multisite, prospective cohort study, we evaluated the performance of a modified Vesikari score (MAL-ED), 2 previously published scores (Clark and CODA [a diarrheal severity score (Community Diarrhea) published by Lee et al]), and a modified definition of moderate-to-severe diarrhea (MSD) based on dysentery and health care worker diagnosed dehydration. **METHODS:** Scores were built using maternally reported symptoms or fieldworker-reported clinical signs obtained during the first 7 days of a diarrheal episode. The association between these and the risk of hospitalization were tested using receiver operating characteristic analysis. Severity scores were also related to illness etiology, and the likelihood of the episode subsequently becoming prolonged or persistent. **RESULTS:** Of 10,159 episodes from 1681 children, 143 (4.0%) resulted in hospitalization. The area under the curve of each score as a predictor of hospitalization was 0.84 (95% confidence interval: 0.81, 0.87) (Clark), 0.85 (0.82, 0.88) (MAL-ED), and 0.87 (0.84, 0.89) (CODA). Severity was also associated with etiology and episode duration. Although families were more likely to seek care for severe diarrhea, approximately half of severe cases never reached the health system. **CONCLUSIONS:** Community-based diarrheal severity scores are predictive of relevant child health outcomes. Because they require no assumptions about health care access or utilization, they are useful in refining estimates of the burden of diarrheal disease, in estimating the effect of disease control interventions, and in triaging children for referral in low- and middle-income countries in which the rates of morbidity and mortality after diarrhea remain high. DOI: 10.1097/MPG.0000000000001286 +

**INTL**

**PMCID:** PMC5084640 **PMID:**27347723

**EPDM**

**Lizneva D(1)**, Kirubakaran R(2), Mykhalchenko K(3), Suturina L(4), Chernukha G(5), Diamond MP(6), Azziz R(7).

Phenotypes and body mass in women with polycystic ovary syndrome identified in referral versus unselected populations: systematic review and meta-analysis.

Fertil Steril. 2016 Nov;106(6):1510-1520.e2. doi:10.1016/j.fertnstert.2016.07.1121. Epub 2016 Aug 13.

#### Author information:

(1)Department of Obstetrics and Gynecology, Medical College of Georgia, Augusta University, Augusta, Georgia; Medical Company IDK, Samara, Russian Federation; Department of Reproductive Health Protection, Scientific Center of Family Health and Human Reproduction, Irkutsk, Russian Federation. (2)Cochrane South Asia, BV Moses Center for Evidence-Informed Health Care and Health Policy, Christian Medical College, Vellore, India. (3)Department of Obstetrics and Gynecology, Maimonides Medical Center, Brooklyn, New York. (4)Department of Reproductive Health Protection, Scientific Center of Family Health and Human Reproduction, Irkutsk, Russian Federation. (5)Department of Gynecological Endocrinology, Scientific Center for Obstetrics, Gynecology and Perinatology, Moscow, Russian Federation. (6)Department of Obstetrics and Gynecology, Medical College of Georgia, Augusta University, Augusta, Georgia. (7)Department of Obstetrics and Gynecology, Medical College of Georgia, Augusta University, Augusta, Georgia; Department of Medicine, Medical College of Georgia, Augusta University, Augusta, Georgia. Electronic address: [razziz@augusta.edu](mailto:razziz@augusta.edu).

**OBJECTIVE:** To compare the prevalence of polycystic ovary syndrome (PCOS) phenotypes and obesity among patients detected in referral versus unselected populations. **DESIGN:** Systematic review and meta-analysis. **SETTING:** Not applicable. **PATIENT(S):** Thirteen thousand seven hundred ninety-six reproductive-age patients with PCOS, as defined by the extended Rotterdam 2003 criteria. **INTERVENTION(S):** Review of PUBMED, EMBASE, and Cochrane Library, 2003-2016. Only observational studies were included. Data were extracted using a web-based, piloted form and combined for meta-analysis. **MAIN OUTCOME MEASURE(S):** PCOS phenotypes were classified as follows: phenotype A clinical and/or biochemical hyperandrogenism (HA) + oligo-/anovulation (OA) + polycystic ovarian morphology (PCOM); phenotype B, HA+OA; phenotype C, HA+PCOM; and phenotype D, OA+PCOM. **RESULT(S):** Forty-one eligible studies, reporting on 43 populations, were identified. Pooled estimates of detected PCOS phenotype prevalence were consequently documented in referral versus unselected populations, as [1] phenotype A, 50% (95% confidence interval [CI], 46%-54%) versus 19% (95% CI, 13%-27%); [2] phenotype B, 13% (95% CI, 11%-17%) versus 25% (95% CI, 15%-37%); [3] phenotype C, 14% (95% CI, 12%-16%) versus 34%

(95% CI, 25-46%); and [4] phenotype D, 17% (95% CI, 13%-22%) versus 19% (95% CI, 14%-25%). Differences between referral and unselected populations were statistically significant for phenotypes A, B, and C. Referral PCOS subjects had a greater mean body mass index (BMI) than local controls, a difference that was not apparent in unselected PCOS. **CONCLUSION(S):** The prevalence of more complete phenotypes in PCOS and mean BMI were higher in subjects identified in referral versus unselected populations, suggesting the presence of significant referral bias. Copy right © 2016 American Society for Reproductive Medicine. Published by Elsevier Inc. All rights reserved. DOI: 10.1016/j.fertnstert.2016.07.1121

**INTL**

**PMID:**27530062

**EPDM**

**Mathew A**(1), Srinivasan R, Venugopal S, Kang G. Direct Medical Costs in Children with Rotavirus and Non-rotavirus Diarrhea Admitted to a Pediatric Intensive Care Unit and High Dependency Unit in Delhi. Indian Pediatr. 2016 Jul 8;53(7):639-41.

#### Author information:

(1)Department of Pediatrics, St. Stephens Hospital, Delhi; and Division of Gastrointestinal Sciences, Christian Medical College, Vellore, Tamil Nadu; India. Correspondence to: Dr. Ann Mathew, Department of Pediatrics, St Stephens Hospital, Delhi, India. [drannmathew@gmail.com](mailto:drannmathew@gmail.com).

**OBJECTIVE:** To estimate direct medical costs of diarrheal hospitalization of children <5 years admitted in pediatric intensive care unit (PICU) or high dependency unit (HDU).

**METHODS:** Analysis of medical records and hospital bills of 84 children during two time frames, 2005-08 and 2012-14.

**RESULTS:** Direct medical costs in PICU increased from INR 17,941 to INR 50,663 per child for rotavirus diarrhea and INR 11,614 to INR 27,106 for non-rotavirus diarrhea, and in HDU from approximately INR 5,800 to INR 10,500 per child for all-cause diarrhea between the two time frames.

**CONCLUSIONS:** Costs of PICU and HDU care are high and should be included in cost-effectiveness analysis of vaccination.

**NAT**

**PMID:**27508544

**EPDM**

**Mathew MA**(1), Venugopal S, Arora R, Kang G.  
Leveraging the National Rotavirus Surveillance  
Network for Monitoring Intussusception.  
*Indian Pediatr.* 2016 Jul 8;53(7):635-8.

**Author information:**

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Medical College, Vellore; and #Epidemiology and  
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Medical Research, New Delhi: India. Correspondence  
to: Dr Gagandeep Kang, Division of Gastrointestinal  
Sciences, Christian Medical College, Vellore, Tamil  
Nadu, India.

**OBJECTIVE:** To assess feasibility of monitoring  
intussusception by hospitals participating in the  
National Rotavirus Surveillance Network.

**METHODS:** Questionnaire-based survey in 28  
hospitals. One hospital with electronic records  
selected for detailed data analysis.

**RESULTS:** There was 75% response to the  
questionnaire. Few network hospitals were suitable  
for monitoring intussusception in addition to ongoing  
activities, but there was at least one potential sentinel  
hospital in each region. The hospital selected for  
detailed data analysis of cases of intussusception  
reported an incidence rate of 112 per 100,000 child  
years in infants. Over 90% of intussusceptions were  
managed without surgery.

**CONCLUSIONS:** Selection of sentinel hospitals for  
intussusception surveillance is feasible and necessary,  
but will require training, increased awareness and  
referral.

**NAT**

**PMID:**27508543

**EPDM**

**Mehendale S**(1), Venkatasubramanian S, Girish  
Kumar CP, Kang G, Gupte MD, Arora R.

Expanded Indian National Rotavirus Surveillance  
Network in the Context of Rotavirus Vaccine  
Introduction.

*Indian Pediatr.* 2016 Jul 8;53(7):575-81.

**Author information:**

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National Institute of Epidemiology, Indian Council of  
Medical Research, II Main Road, TNHB, Ayapakkam,  
Chennai 600077, India. sanjaymehendale@icmr.org.in.

**OBJECTIVE:** To extend a nation-wide rotavirus  
surveillance network in India, and to generate

geographically representative data on rotaviral  
disease burden and prevalent strains.

**DESIGN:** Hospital-based surveillance.

**SETTING:** A comprehensive multicenter, multi-  
state hospital based surveillance network was  
established in a phased manner involving 28  
hospital sites across 17 states and two union  
territories in India.

**PATIENTS:** Cases of acute diarrhea among  
children below 5 years of age admitted in the  
participating hospitals.

**RESULTS:** During the 28 month study period  
between September 2012 and December 2014,  
11898 children were enrolled and stool samples  
from 10207 children admitted with acute diarrhea  
were tested; 39.6% were positive for rotavirus.  
Highest positivity was seen in Tanda (60.4%) and  
Bhubaneswar (60.4%) followed by Midnapore  
(59.5%). Rotavirus infection was seen more  
among children aged below 2 years with highest  
(46.7%) positivity in the age group of 12-23  
months. Cooler months of September to February  
accounted for most of the rotavirus associated  
gastroenteritis, with highest prevalence seen  
during December to February (56.4%). 64% of  
rotavirus-infected children had severe to very  
severe disease. G1 P[8] was the predominant  
rotavirus strain (62.7%) during the surveillance  
period.

**CONCLUSION:** The surveillance data highlights the  
high rotaviral disease burden in India. The  
network will continue to be a platform for  
monitoring the impact of the vaccine.

**NAT**

**PMID:**27508533

**EPDM**

**Miller E**(1), John TJ(2),(3).

Sailing in Uncharted Waters: Carefully Navigating  
the Polio Endgame.

*PLoS Med.* 2016 Oct 4;13(10):e1002141. doi:  
10.1371/journal.pmed.1002141.eCollection 2016.

**Author information:**

(1)Immunisation Hepatitis and Blood Safety  
Department, Public Health England, London,  
United Kingdom. (2)Child Health Foundation, New  
Delhi, India. (3)Department of Clinical Virology,  
Christian Medical College, Vellore, India.

In a Perspective linked to the research article by  
Isobel Blake and colleagues, Elizabeth Miller and  
T. Jacob John discuss the path towards global polio  
eradication and the challenges, strategies, and  
necessary precautions around oral polio vaccine  
cessation. DOI: 10.1371/journal.pmed.1002141

**INTL**

**PMCID:** PMC5049750 **PMID:**27701414

**EPDM**

**Nandi A**(1), Barter DM, Prinja S, John TJ.  
The Estimated Health and Economic Benefits of Three Decades of Polio Elimination Efforts in India.  
Indian Pediatr. 2016 Aug 7;53 Suppl 1:S7-S13.

**Author information:**

(1)Center for Disease Dynamics, Economics and Policy, Washington, USA; \*School of Public Health, Chandigarh, India; and #Retired Professor of Clinical Virology, Christian Medical College, Vellore, TN, India. Correspondence to: Dr Arindam Nandi, The Center for Disease Dynamics, Economics and Policy, Washington, USA. nandi@cddep.org.

**OBJECTIVE:** In March 2014, India, the country with historically the highest burden of polio, was declared polio free, with no reported cases since January 2011. We estimate the health and economic benefits of polio elimination in India with the oral polio vaccine (OPV) during 1982-2012.

**METHODS:** Based on a pre-vaccine incidence rate, we estimate the counterfactual burden of polio in the hypothetical absence of the national polio elimination program in India. We attribute differences in outcomes between the actual (adjusted for under-reporting) and hypothetical counterfactual scenarios in our model to the national polio program. We measure health benefits as averted polio incidence, deaths, and disability adjusted life years (DALYs). We consider two methods to measure economic benefits: the value of statistical life approach, and equating one DALY to the Gross National Income (GNI) per capita.

**RESULTS:** We estimate that the National Program against Polio averted 3.94 million (95% confidence interval [CI]: 3.89-3.99 million) paralytic polio cases, 393,918 polio deaths (95% CI: 388,897- 398,939), and 1.48 billion DALYs (95% CI: 1.46-1.50 billion). We also estimate that the program contributed to a \$1.71 trillion (INR 76.91 trillion) gain (95% CI: \$1.69-\$1.73 trillion [INR 75.93-77.89 trillion]) in economic productivity between 1982 and 2012 in our base case analysis. Using the GNI and DALY method, the economic gain from the program is estimated to be \$1.11 trillion (INR 50.13 trillion) (95% CI: \$1.10-\$1.13 trillion [INR 49.50-50.76 trillion]) over the same period.

**CONCLUSION:** India accrued large health and economic benefits from investing in polio elimination efforts. Other programs to control/eliminate more vaccine-preventable diseases are likely to contribute to large health and economic benefits in India.

**NAT****PMID:**27771633**EPDM**

**Oommen AM**(1), Abraham VJ(2), George K(2), Jose VJ(2).

Prevalence of coronary heart disease in rural and urban Vellore: A repeatcross-sectional survey.  
Indian Heart J. 2016 Jul-Aug;68(4):473-9. doi: 10.1016/j.ihj.2015.11.015. Epub 2016 Jan 11.

**Author information:**

(1)Associate Professor, Department of Community Health, Christian Medical College, Vellore, Tamil Nadu 632002, India. Electronic address: anuoommen@cmcvellore.ac.in. (2)Department of Community Health, Christian Medical College, Vellore, Tamil Nadu 632002, India.

**BACKGROUND:** With the increase of cardiovascular risk factors in India, the prevalence of coronary heart disease (CHD) is also expected to rise. A cross-sectional study in 2010-2012 assessed the prevalence and risk factors for CHD in urban and rural Vellore, Tamil Nadu. The secondary objectives were to compare the current prevalence with the prevalence of CHD in the same areas in 1991-1994.

**METHODS:** A cross-sectional survey was carried out among adults aged 30-64 years to determine the prevalence of CHD (previously diagnosed disease, symptoms detected using Rose angina questionnaire, or ischemic changes on electrocardiography). The study used the WHO STEPS method in addition to the Rose angina questionnaire and resting electrocardiography and was conducted in nine clusters of a rural block in Vellore district and 48 wards of Vellore town. The results were compared with a similar study in the same area in 1991-1994.

**RESULTS:** The prevalence of CHD was 3.4% (95% CI: 1.6-5.2%) among rural men, 7.4% (95% CI: 4.7-10.1%) among rural women, 7.3% (95% CI: 5.7-8.9%) among urban men, and 13.4% (95% CI: 11.2-15.6%) among urban women in 2010-2012. The age-adjusted prevalence in rural women tripled and in urban women doubled, with only a slight increase among males, between 1991-1994 and 2010-2012.

**CONCLUSIONS:** The large increase in prevalence of CHD, among both pre- and post-menopausal females, suggests the need for further confirmatory studies and interventions for prevention in both rural and urban areas.

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DOI: 10.1016/j.ihj.2015.11.015

**NAT****PMCID:** PMC4990735 **PMID:**27543468**EPDM**

**Paul SS(1), Ramamurthy PH(1), Kumar R(1), Ashirvatham M(1), John KR(2), IsaacR(1).**

Seniors' Recreation Centers in Rural India: Need of the Hour.

Indian J Community Med. 2016 Jul-Sep;41(3):219-22.  
doi: 10.4103/0970-0218.183585.

**Author information:**

(1)Department of Rural Unit for Health and Social Affairs (RUHSA), Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Community Medicine, SRM Medical College Hospital and Research Centre, SRM University, Kancheepuram, Tamil Nadu, India.

**AIM:** To empower and bring the underprivileged senior citizens in the rural areas to the mainstream of life through setting up of model "senior citizens' recreation centers" that can be replicated in the other parts of the country.

**MATERIALS AND METHODS:** Six senior citizens' recreation centers are run in six villages under a community health program of a leading Medical College in South India, which were started by looking into their perceived needs and in a location where organized self-help women groups (SHGs) showed willingness to take the role of caretakers. Together there are 140 members in 6 centers and the most deserving members were identified using a participatory rural appraisal (PRA) method. These centers are open for 5 days a week and the main attraction of the center has been provision of one good, wholesome, noon-meal a day, apart from several recreational activities. The members were also assessed for chronic energy deficiency (CED) and quality of life at the beginning of enrolment using body mass index (BMI) and WHO-BREF scale.

**RESULTS:** The attendance to these centers was nearly 90% of the enrolled beneficiaries. A statistically significant improvement was noticed in quality of life in the physical, psychological, social, and environmental domain ( $P < 0.05$ ). There was also a significant increase in the average BMI after 1 year of the intervention ( $P < 0.05$ ).

**CONCLUSION:** Care of underprivileged senior citizens is a growing need in the rural areas and the "Recreation centers" proved to be a beneficial model that can be easily replicated.

DOI: 10.4103/0970-0218.183585

**NAT**

**PMCID: PMC4919936 PMID:27385876**

**EPDM**

**Peedicayil J(1).**

The role of epigenetics in social psychiatry.

Int J Soc Psychiatry. 2016 Nov 16. pii: 0020764016677556. [Epub ahead of print]

**Author information:**

(1)Department of Pharmacology and Clinical Pharmacology, Christian Medical College Vellore, Vellore, India jpeedi@cmcvellore.ac.in.

**BACKGROUND:** Epigenetics refers to the study of heritable changes in gene expression not involving changes in DNA sequence and is presently an active area of research in biology and medicine. There is increasing evidence that epigenetics is involved in the pathogenesis of psychiatric disorders.

**AIMS AND METHODS:** Several studies conducted to date have suggested that psychosocial factors act by modifying epigenetic mechanisms of gene expression in the brain in the pathogenesis of psychiatric disorders. Such studies have been conducted both on brain tissues and also using peripheral tissues as substitutes for brain tissues. This article reviews such studies.

**RESULTS AND CONCLUSION:** Epigenetic mechanisms of gene expression in the brain appear to link one individual with another in the context of social psychiatry. Epigenetics appears to be of major importance to the field of social psychiatry.

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DOI: 10.1177/0020764016677556

INTL

**PMID:27856950**

**EPDM**

**Ramprasad C(1), Zachariah R(2), Steinhoff M(3), Simon A(2).**

Parental attitudes towards influenza vaccination for children in South India.

World J Pediatr. 2016 Aug 31. [Epub ahead of print]

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chethanramprasad@gmail.com. (2)Christian Medical College, Vellore, Tamil Nadu, India.

(3)Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio, USA.

**BACKGROUND:** The rate of influenza vaccination is low for children in India. The purpose of this study is to assess parental attitudes towards influenza vaccination in South India.

**METHODS:** Participants were parents who brought their children to the Well Baby Clinic of Christian Medical College Hospital, Vellore, India for routine immunization. Participants answered questions by written survey while waiting for their children's vaccination.

**RESULTS:** A total of 456 surveys were completed (403 parents did not opt for trivalent influenza vaccination and 53 opted for influenza vaccination). The majority (53.60%) of those parents who did not accept influenza vaccination identified the lack of a doctor's recommendation as the main reason. When asked separately, many non-acceptors (44.91%) indicated that they did not believe or were not sure that the influenza vaccine was effective. Nearly all non-acceptors (92.56%) stated that they would opt for influenza vaccination if a doctor recommended it.

**CONCLUSIONS:** The most common reason that parents not opting for influenza vaccination for their children was the lack of recommendation by a doctor. The results of this study suggest that recommendation by a doctor is a more important factor than belief in efficacy, cost, or convenience in parental decision-making regarding childhood influenza vaccination in India, unlike the United States where parents are less likely to follow recommendations.

DOI: 10.1007/s12519-016-0053-7

**INTL**

**PMID:**27577192

**EPDM**

**Sarkar R**(1), Gladstone BP, Warier JP, Sharma SL, Raman U, Muliylil J, Kang G.

Rotavirus and other Diarrheal Disease in a Birth Cohort from Southern Indian Community.

Indian Pediatr. 2016 Jul 8;53(7):583-8.

**Author information:**

(1)Division of Gastrointestinal Sciences, and \*Community Health Department, Christian Medical College, Vellore, Tamil Nadu, India. Correspondence to: Dr Gagandeep Kang, Division of Gastrointestinal Sciences, Christian Medical College, Vellore 632 004, Tamil Nadu, India. [gkang@cmcvellore.ac.in](mailto:gkang@cmcvellore.ac.in).

**OBJECTIVE:** To describe the incidence, severity and etiology of diarrheal disease in infants and young children residing in an urban slum community in Southern India.

**SETTING:** Three contiguous urban slums in Vellore, Tamil Nadu.

**PARTICIPANTS:** 452 children participating in a birth cohort study on diarrheal disease; 373 completed three years of follow-up.

**OUTCOME MEASURES:** Diarrheal incidence (obtained by twice-weekly home visits) and severity (assessed by the Vesikari scoring system), and etiological agents associated with diarrhea (through examination of stool specimens by bacteriologic culture, rotavirus enzyme immunoassay, PCR for norovirus and microscopy for parasites).

**RESULTS:** A total of 1856 diarrheal episodes were reported in 373 children. The overall incidence rate of

diarrhea was 1.66 episodes per child year for three years, with 2.76 episodes per child year in infancy. The incidence peaked during the months of July and August. Severe diarrhea formed 8% of the total episodes. Rotavirus was the most common pathogen detected, being identified in 18% of episodes. Good hygiene status resulted in 33% protection against moderate-to-severe diarrhea.

**CONCLUSIONS:** This study highlights the burden of diarrheal disease and the important etiological agents of childhood diarrhea in Southern India. Promotion of hygienic behavior through health education may help reduce diarrheal incidence in this and similar communities.

**NAT**

**PMID:**27508534

**EPDM**

**Abiramalatha T(1), Sherba B(1), Joseph R(1), Thomas N(1).**

Unusual complications of placental chorioangioma: consumption coagulopathy and hypertension in a preterm newborn.

BMJ Case Rep. 2016 May 6;2016. pii: bcr2016215734. doi: 10.1136/bcr-2016-215734.

#### **Author information:**

(1)Department of Neonatology, Christian Medical College, Vellore, Tamil Nadu, India.

We report a case of a preterm neonate born to a mother with giant placental chorioangioma. The baby had microangiopathic haemolytic anaemia, thrombocytopenia and cardiac failure at birth. In addition, she had a disseminated intravascular coagulation-like picture and had bleeding from multiple sites, which was treated with transfusion of multiple blood products. She also developed transient hypertension and required antihypertensive drugs for 3 weeks. The baby was successfully managed and discharged home, though with signs of neurosensory impairment. 2016 BMJ Publishing Group Ltd. DOI: 10.1136/bcr-2016-215734

**INT**

**PMID:**27154993

**MISC**

**Agarwala MK(1), George L(1), Parmar H(2), Mathew V(3).**

Ross Syndrome: A Case Report and Review of Cases from India.

Indian J Dermatol. 2016 May-Jun;61(3):348. doi: 10.4103/0019-5154.182472.

#### **Author information:**

(1)Department of Dermatology, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Pathology, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Neurology, Christian Medical College, Vellore, Tamil Nadu, India.

Ross syndrome is a rare dysautonomia characterized by a clinical complex of segmental anhidrosis or hypohidrosis, areflexia, and tonic pupils. A very few cases ( $\approx 50$ ) have been reported in literature since its original description in 1958. Here, we report the case of a middle-aged homemaker from Odisha, India, who presented with complaints of segmental hypohidrosis for the past 7 years. DOI: 10.4103/0019-5154.182472

**NAT**

**PMCID:** PMC4885212 **PMID:**27293279

**MISC**

**Agarwala MK(1), George R(1), Pramanik R(2), McGrath JA(2).**

Olmsted syndrome in an Indian male with a new de novo mutation in TRPV3.

Br J Dermatol. 2016 Jan;174(1):209-11. doi: 10.1111/bjd.13910. Epub 2015 Nov 8.

#### **Author information:**

(1)Department of Dermatology, Christian Medical College, Vellore, Tamil Nadu, India. (2)St John's Institute of Dermatology, King's College London, London, U.K. DOI: 10.1111/bjd.13910

**INTL**

**PMID:**25989441

**MISC**

**Agarwala MK(1), Mukhopadhyay S(2), Sekhar MR(1), Menon A(2), Peter CD(1).**

Solitary Angiokeratoma Presenting as Cutaneous Horn over the Prepuce: A Rare Appearance Indian J Dermatol. 2016 Mar-Apr;61(2):236. doi: 10.4103/0019-5154.177779.

#### **Author information:**

(1)Department of Dermatology, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Pathology, Christian Medical College, Vellore, Tamil Nadu, India.

We present a case of a 47-year-old man with 4 months history of conical growth on the prepuce with a progressive increase in size. The patient had been treated for seminoma a decade ago. Histopathology of the growth showed features of angiokeratoma. It is unusual for angiokeratoma to masquerade as a cutaneous horn. DOI: 10.4103/0019-5154.177779

**NAT**

**PMCID:** PMC4817473 **PMID:**27057048

**MISC**

**Agarwala MK(1), Mukhopadhyay S(2), Sekhar MR(1), Peter CD(1).**

Bullous Fixed Drug Eruption Probably Induced by Paracetamol.

Indian J Dermatol. 2016 Jan-Feb;61(1):121. doi: 10.4103/0019-5154.174098.

#### **Author information:**

(1)Department of Dermatology, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Pathology, Christian Medical College, Vellore, Tamil Nadu, India.

We report a case of a 42-year-old male who presented with second episode of bullous eruptions after ingestion of paracetamol. There were no systemic complaints. The temporal correlation with the drug, history of a similar

episode and the quick improvement led us to a diagnosis of bullous fixed drug due to paracetamol. Applying Naranjo's algorithm, a causality score of 8 was obtained and was categorized as probable reaction to paracetamol. Clinicians should be vigilant of the possible adverse reactions to drugs with robust safety profiles. Drug alert cards could play an important role in preventing recurrences. DOI: 10.4103/0019-5154.174098

**NAT**

**PMCID: PMC4763646 PMID:26951737**

**MISC**

**Alexander M(1).**

Author's reply.

Neurol India. 2016 Mar-Apr;64(2):361-2.

**Author information:**

(1)Department of Neurology, Christian Medical College, Vellore, Tamil Nadu – 632 004, India.

**NAT**

**PMID:26954832**

**MISC**

**Alexander ST(1), Kattula D(2), Mannam P(3), Iyyadurai R(1).**

Risperidone Induced Benign Intracranial Hypertension Leading to Visual Loss.

Indian J Psychol Med. 2016 May-Jun;38(3):249-51. doi: 10.4103/0253-7176.183075.

**Author information:**

(1)Department of Medicine, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

(2)Department of Psychiatry, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

(3)Department of Radiology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

Benign intracranial hypertension (BIH) is a rare but potentially serious condition causing visual loss. Occasionally, medication use has been associated with the occurrence of BIH. We report the case of a 40-year-old obese lady being treated with risperidone for schizophrenia who presented with features of BIH. We report this case, occurring for the 1(st) time in India, to emphasize that a commonly used atypical antipsychotic drug can rarely cause BIH leading to visual loss. DOI: 10.4103/0253-7176.183075

**NAT**

**PMCID: PMC4904763 PMID:27335522**

**MISC**

**Arora S(1), Akhil R(1), Chacko RT(1), George R(2).**

Palmar-plantar erythrodysesthesia: An uncommon adverse effect of everolimus.

Indian J Med Paediatr Oncol. 2016 Apr-Jun;37(2):116-8. Doi

**Author information:**

(1)Department of Medical Oncology, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

(2)Department of Dermatology, Venereology and Leprosy, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

Mammalian target of rapamycin inhibitor everolimus is a novel agent used in endocrine therapy resistant hormone receptor positive metastatic breast cancer. Its use has been associated with clinically significant improvement in the otherwise dismal outcomes of this subset of patients. Rash is a common adverse effect associated with everolimus. However, Hand-foot syndrome is an uncommon toxicity with the use of this drug. We report a case of Grade 3 hand-foot syndrome following institution of everolimus therapy and describe its successful management DOI: 10.4103/0971-5851.180143

**NAT**

**PMCID: PMC4854043 PMID:27168711**

**MISC**

**Arthur A(1), Horo S(2), Balasubramanian DA(3), Peter J(1), Ram TS(4), Peter JV(5).**

Orbital Metastasis of Cervical Carcinoma - Case Report and Review of Literature

J Clin Diagn Res. 2016 Jan;10(1):ND01-2. doi: 10.7860/JCDR/2016/14400.7085. Epub 2016 Jan 1.

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Christian Medical College, Vellore, Tamil Nadu, India .

(4)Professor, Department of Radiation Therapy, Christian Medical College, Vellore

Christian Medical College, Vellore, Tamil Nadu, India .

(5)Professor, Department of Medicine, Christian Medical College, Vellore

Christian Medical College, Vellore, Tamil Nadu, India

The orbit is a frequent site of metastasis, particularly from the breast, prostate gland and the

lung. Carcinoma of the cervix metastasizing to the orbit is rare. We report a 27-year-old woman with Stage II B cervical cancer who presented with progressive painless protrusion of the left eye of one month duration associated with diplopia. Histology of the orbital mass was similar to that of the cervical cancer and reported as squamous cell carcinoma. She received palliative radiation to the left orbit 30 Gy in 10 fractions along with chemotherapy (Paclitaxel and Carboplatin). This resulted in regression of the proptosis. We review published literature of cases of carcinoma of the uterine cervix with metastasis to the orbit.

**NAT**

**PMCID: PMC4740630 PMID:26894102**

**MISC**

**Boaz RJ**(1), George AP(1), Kumar RM(2), Devasia A(1) Giant seminal vesicle cyst: an unusual site for a malignant extragastrointestinal stromal tumour  
BMJ Case Rep. 2016 Mar 2;2016. pii: bcr2015214066. doi: 10.1136/bcr-2015-214066.

**Author information:**

(1)Department of Urology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. (2)Department of Pathology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

Mesenchymal tumours with clinicopathological and molecular profiles similar to gastrointestinal stromal tumours (GISTs) are, on occasion, found in extragastrointestinal locations. Extra GIST (EGIST) is a singular occurrence in the genitourinary tract. A 30-year-old man, catheterised following urinary retention, was found to have a complex pelvic retrovesical cyst on imaging. At operation, origin from the right seminal vesicle was evident with histopathology confirming a GIST. The patient received adjuvant therapy with tyrosine kinase inhibitor and is currently disease free at 2 years. This is only the second report of an EGIST at this anatomic locale. The current literature presents significant uncertainty in defining the true origin of EGISTs, particularly those in the pelvis. We propose the designation origin indeterminate stromal tumour (OIST), to facilitate disambiguation and advance accurate profiling of EGIST; a subject in evolution. 2016 BMJ Publishing Group Ltd. DOI: 10.1136/bcr-2015-214066

**INTL**

**PMID:26935954**

**MISC**

**Das S**(1), Barnwal P(2), Ramasamy A(3), Sen S(4), Mondal S(5).

Lysergic acid diethylamide: a drug of 'use'?

Ther Adv Psychopharmacol. 2016 Jun;6(3):214-28. doi: 10.1177/2045125316640440. Epub 2016 Mar 23.

**Author information:**

(1)Department of Pharmacology, Christian Medical College, Vellore, 632002, India. (2)Jamia Hamdard (Hamdard University), New Delhi, India. (3)Swamy Vivekanandha College of Pharmacy, Namakkal, India. (4)Christian Medical College, Vellore, India. (5)Calcutta School of Tropical Medicine, Kolkata, India.

Lysergic acid diethylamide (LSD), described as a classical hallucinogen, began its journey from the middle of the last century following an accidental discovery. Since then, it was used as a popular and notorious substance of abuse in various parts of the world. Its beneficial role as an adjunct to psychotherapy was much unknown, until some 'benevolent' experiments were carried out over time to explore some of its potential uses. But, many of its effects were unclear and seemed to be a psychedelic enigma. In this review article, we have described the receptor pharmacology, mechanism of action, effects and adverse effects of LSD on the normal body system. We have also highlighted its addictive potentials and the chances of developing tolerance. We have assimilated some of the interesting therapeutic uses of this drug, such as an anti-anxiety agent, a creativity enhancer, a suggestibility enhancer, and a performance enhancer. We have also described LSD to be successfully used in drug and alcohol dependence, and as a part of psychedelic peak therapy in terminally ill patients. The relevant chronological history and literature in the light of present knowledge and scenarios have been discussed. Based on available evidence, LSD could be tried therapeutically in certain specific conditions under controlled settings. But as we mention, due to all the safety concerns, the use of this non-addictive 'entheogen' in actual practice warrants a lot of expertise, caution, cooperation and ethical considerations. DOI: 10.1177/2045125316640440

**INTL**

**PMCID: PMC4910402 PMID:27354909**

**MISC**

**D'Cunha AR**(1), Kurian JJ(1), Jacob TJ(1).

Idiopathic female pseudohermaphroditism with urethral duplication and female hypospadias. BMJ Case Rep. 2016 Mar 10;2016. pii: bcr-2015-214172. doi:10.1136/bcr-2015-214172.

**Author information:**

(1)Department of Paediatric Surgery, Christian Medical College and Hospital,Vellore, Tamil Nadu, India.

Female hypospadias is a rare anomaly of the female urethra where it opens on the anterior vaginal wall anywhere between the introitus and the fornix. It is often associated with other genitourinary anomalies such as Cloacal malformation, female pseudohermaphroditism, nonneurogenic neurogenic bladder and urethral duplication. Idiopathic female pseudohermaphroditism is extremely rare, and most cases occur secondary to adrenogenital syndrome or maternal androgen exposure. We report a unique case of a 1-year and 4-month-old girl who presented with ambiguous genitalia and renal failure secondary to a non-neurogenic neurogenic bladder. On further evaluation, she was found to have urethral duplication with a hypospadiac female urethra. She initially underwent a vesicostomy and was further planned to undergo an appendicular Mitrofanoff at an older age. The mainstay of treatment in these cases includes relief of bladder outlet obstruction and recovery of renal function by adequate urinary drainage. Clitoral reduction, if cosmetically warranted, may be planned at puberty. 2016 BMJ Publishing Group Ltd. DOI: 10.1136/bcr-2015-214172

**INTL****PMID:**26965407**MISC**

**Dhanyee AS**(1), Pillai R(1), Sahajanandan R(1).

Wire guided fiberoptic retrograde intubation in a case of glottic mass.

Indian J Anaesth. 2016 Mar;60(3):219-21. doi: 10.4103/0019-5049.177876.

**Author information:**

(1)Department of Anaesthesia, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

DOI: 10.4103/0019-5049.177876

**NAT****PMCID:** PMC4800944 **PMID:**27053791**MISC**

**Dharmalingam SK**(1), Pillai R, Karuppiah S, Sahajanandan R, George G.

Case report of aortopulmonary window with undiagnosed interrupted aortic arch:Role of transesophageal echocardiography.

Ann Card Anaesth. 2016 Jan-Mar;19(1):152-3. doi: 10.4103/0971-9784.173036.

**Author information:**

(1)Department of Anaesthesiology, Christian Medical College, Vellore, Tamil Nadu, India.

DOI: 10.4103/0971-9784.173036

**INTL****PMCID:** PMC4900370 **PMID:**26750690**MISC**

**Doria AS**(1), Keshava SN(2), Gibikote S(2).

Reply to "Hemosiderin Detection With Ultrasound: Reality or Myth?".

AJR Am J Roentgenol. 2016 Jan;206(1):W31-5. doi: 10.2214/AJR.15.15535.

**Author information:**

(1)1 University of Toronto, The Hospital for Sick Children, Toronto, ON, Canada. (2)2 Christian Medical College, Vellore, India.

**Comment on**

AJR Am J Roentgenol. 2015 Mar;204(3):W336-47.

AJR Am J Roentgenol. 2016 Jan;206(1):W30.

DOI: 10.2214/AJR.15.15535

**INTL****PMID:**26700362**MISC**

**Ganapule AP**(1), Varghese SS(2), Chacko G(3), Aparna I(4), Viswabandya A(1).

Glioblastoma Multiforme in a Post Allogeneic Stem Cell Transplant Patient. A Case Report and Literature Review of Post Transplant Neurological Tumors.

Indian J Hematol Blood Transfus. 2016 Jun;32(Suppl 1):192-5. doi:10.1007/s12288-015-0500-y. Epub 2015 Jan 14.

**Author information:**

(1)Department of Haematology, Christian Medical College and Hospital, Ida Scudder Road, Vellore, 632004 Tamil Nadu India. (2)Department of Radiotherapy, Christian Medical College and Hospital, Ida Scudder Road, Vellore, 632004 Tamil Nadu India. (3)Department of Pathology, Christian Medical College and Hospital, Ida Scudder Road, Vellore, 632004 Tamil Nadu India. (4)Department of Radiology, Christian Medical College and Hospital, Ida Scudder Road, Vellore, 632004 Tamil Nadu India.

Seventeen year old boy, a case of relapsed acute lymphoblastic leukemia 10 years post allogeneic transplantation, presented to us with acute onset of right hemiparesis. The imaging revealed contrast enhancing lesion in the frontal lobe, biopsy of the same was consistent with glioblastoma multiforme (GBM). He had received total body irradiation (TBI) based conditioning regimen prior to transplant. GBM was treated with left parietal craniotomy and parietal excision of

tumour, followed by radiation therapy with concurrent and adjuvant chemotherapy. Disease progressed while was on adjuvant chemotherapy and patient succumbed to his illness 8 months after the diagnosis of GBM. We report here a here unusual case of GBM in a post transplant patient who received TBI based conditioning regimen. DOI: 10.1007/s12288-015-0500-y

**NAT**

**PMCID: PMC4925482 PMID:27408389**

**MISC**

**Ghosh A(1), Kumar S(2), Chacko R(3), Charlu AP(4).**

Total Extraction as a Treatment for Anaemia in a Patient of Glanzmann's Thrombasthenia with Chronic Gingival Bleed: Case Report.

J Clin Diagn Res. 2016 Jan;10(1):ZD11-2. doi: 10.7860/JCDR/2016/16383.7123. Epub 2016 Jan 1.

**Author information:**

(1)Fellow, Head and Neck Oncology, HCG Cancer Centre , (Previously Fellow at CMC Vellore), Ahmedabad, India . (2)Assistant Professor, Department of Oral and Maxillofacial Surgery, Christian Medical College and Hospital , Vellore, Tamil Nadu, India . (3)Head of Department Unit I, Department of Oral and Maxillofacial Surgery, Christian Medical College and Hospital , Vellore, Tamil Nadu, India . (4)Associate Professor, Department of Oral and Maxillofacial Surgery, Christian Medical College and Hospital , Vellore, Tamil Nadu, India .

Glanzmann's Thrombasthenia (GT) is a rare autosomal recessive bleeding disorder affecting the megakaryocyte lineage and is characterized by lack of platelet aggregation on stimulation. The molecular basis is linked to quantitative and qualitative abnormalities of  $\alpha$ IIb $\beta$ 3 integrin. Most of the patients with severe Glanzmann's thrombasthenia have spontaneous gum bleeding and persistent low haemoglobin levels. Often these patients are addressed with local haemostatic measures and platelet coverage. We report a case of a severe Glanzmann's thrombasthenia with chronic gingivitis and associated spontaneous gum bleed with chronic low haemoglobin levels, managed subsequently with total dental extraction under appropriate platelet and recombinant factor VIIa coverage. Further follow up of the patient substantiated the treatment protocol with increased and stable haemoglobin levels, thus emphasizing the need for total dental extraction in patients with severe Glanzmann's with chronic spontaneous gum bleed, as a definitive treatment option, which has not been reported so far in the literature. DOI: 10.7860/JCDR/2016/16383.7123

**NAT**

**PMCID: PMC4740716 PMID:26894187**

**MISC**

**Ghosh GC(1), Alex AG(2), Jacob JR(3).**

Brugada syndrome presenting as incessant polymorphic ventricular tachycardia: a rare cause for a common outcome after cardiac arrest in a middle-aged Asian man.

BMJ Case Rep. 2016 May 13;2016. pii: bcr2016215014. doi: 10.1136/bcr-2016-215014.

**Author information:**

(1)Department of Cardiology, Christian Medical College and Hospital Vellore, Vellore, Tamil Nadu, India. (2)Christian Medical College and Hospital Vellore, Vellore, Tamil Nadu, India. (3)Department of Electrophysiology, Christian Medical College and Hospital Vellore, Vellore, Tamil Nadu, India. DOI: 10.1136/bcr-2016-215014

**INTL**

**PMID:27177936**

**MISC**

**Gnanasekaran KK, Chacko MP(1), Manipadam MT, Bindra MS, George B, Srivastava VM.**

Acute monoblastic leukemia with abnormal eosinophils and inversion (16): A rare entity.

Indian J Pathol Microbiol. 2016 Jan-Mar;59(1):104-6. doi:10.4103/0377-4929.174829.

**Author information:**

(1)Department of Transfusion Medicine and Immunohematology, Christian Medical College, Vellore, Tamil Nadu, India.

Acute myeloid leukemia (AML) is a malignant hematopoietic stem cell disorder which is subclassified based on bone marrow morphology and the presence of specific genetic abnormalities. One such cytogenetic abnormality is the pericentric inversion (inv) of chromosome 16 which is typically seen in AML M4 with eosinophilia and is associated with a favorable prognosis. We report the inv (16) in a young woman with AML M5 and abnormal eosinophils. This is a rare entity with only about 20 cases being reported till date. DOI: 10.4103/0377-4929.174829

**NAT**

**PMID:26960652**

**MISC**

**Godson HF(1), Ravikumar M(2), Sathiyam S(2), Ganesh KM(2), Ponmalar YR(1), Varatharaj C(2).**

Analysis of small field percent depth dose and profiles: Comparison of measurements with various detectors and effects of detector orientation with different jaw settings.

J Med Phys. 2016 Jan-Mar;41(1):12-20. doi: 10.4103/0971-6203.177284.

**Author information:**

(1)Department of Radiation Physics, Kidwai Memorial Institute of Oncology, Bengaluru, Karnataka, India; Department of Radiotherapy, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Radiation Physics, Kidwai Memorial Institute of Oncology, Bengaluru, Karnataka, India.

The advent of modern technologies in radiotherapy poses an increased challenge in the determination of dosimetric parameters of small fields that exhibit a high degree of uncertainty. Percent depth dose and beam profiles were acquired using different detectors in two different orientations. The parameters such as relative surface dose (D<sub>S</sub>), depth of dose maximum (D<sub>max</sub>), percentage dose at 10 cm (D<sub>10</sub>), penumbral width, flatness, and symmetry were evaluated with different detectors. The dosimetric data were acquired for fields defined by jaws alone, multileaf collimator (MLC) alone, and by MLC while the jaws were positioned at 0, 0.25, 0.5, and 1.0 cm away from MLC leaf-end using a Varian linear accelerator with 6 MV photon beam. The accuracy in the measurement of dosimetric parameters with various detectors for three different field definitions was evaluated. The relative D<sub>S</sub>(38.1%) with photon field diode in parallel orientation was higher than electron field diode (EFD) (27.9%) values for 1 cm × 1 cm field. An overestimation of 5.7% and 8.6% in D<sub>10</sub> depth were observed for 1 cm × 1 cm field with RK ion chamber in parallel and perpendicular orientation, respectively, for the fields defined by MLC while jaw positioned at the edge of the field when compared to EFD values in parallel orientation. For this field definition, the in-plane penumbral widths obtained with ion chamber in parallel and perpendicular orientation were 3.9 mm, 5.6 mm for 1 cm × 1 cm field, respectively. Among all detectors used in the study, the unshielded diodes were found to be an appropriate choice of detector for the measurement of beam parameters in small fields. DOI: 10.4103/0971-6203.177284

**NAT**

**PMCID:** PMC4795411 **PMID:** 27051165

**MISC**

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

Effect of Fortification and Additives on Breast Milk Osmolality.

Indian Pediatr. 2016 Feb;53(2):167-9.

**Author information:**

(1)Department of Neonatology and Clinical Biochemistry, Christian Medical College, Vellore, Tamil Nadu, India. [niranjan@cmcvellore.ac.in](mailto:niranjan@cmcvellore.ac.in).

This study evaluated the effect of fortification and commonly used additives on the osmolality of human milk. Osmolality after fortification with milk powder and human milk fortifier increased from 303 mOsmol/kg to 397 and 373 mOsmol/kg, respectively. The maximal increase in osmolality was seen with the addition of calcium gluconate.

**NAT**

**PMID:** 26897157

**MISC**

**Hazra D(1), Sen I(1), Selvaraj D(1), Premkumar P(1), Agarwal S(1).**

Arterial thoracic outlet syndrome in Klippel-Feil syndrome.

ANZ J Surg. 2016 Feb 22. doi: 10.1111/ans.13452. [Epub ahead of print]

**Author information:**

(1)Department of Vascular Surgery, Christian Medical College, Vellore, India.

DOI: 10.1111/ans.13452

**INTL**

**PMID:** 26909867

**MISC**

**Isaac BT(1), Datey A(2), Christopher DJ(3).**

Successful removal of self-expanding metallic stent after deployment fortubercular bronchostenosis.

Indian J Tuberc. 2016 Jan;63(1):55-8. doi: 10.1016/j.ijtb.2015.07.013. Epub 2016May 4.

**Author information:**

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Electronic address: [barneyisaac98@gmail.com](mailto:barneyisaac98@gmail.com).

(2)Research Officer, Department of Pulmonary Medicine, Christian Medical College, Vellore, India.

(3)Professor, Department of Pulmonary Medicine, Christian Medical College, Vellore, India.

The use of metallic stents is traditionally not recommended for benign tracheobronchial conditions. With advances in the field of interventional bronchoscopy, metal tracheobronchial stents have occasionally been used to treat benign disease. However, the removal of these stents from the airway is technically difficult. We are reporting the case of a young female subject who received a self-expanding metallic stent for alleviation of post-tubercular bronchostenosis, which was successfully removed after two months without complications. Metal stents can be used in benign tracheobronchial conditions but require meticulous follow-up to monitor complications.

Experienced operators can remove them without major complications and this may be life-saving in emergencies. We are reporting this case for the rarity of such procedures in India. Copyright © 2015 Tuberculosis Association of India. Published by Elsevier B.V. All rights reserved. DOI: 10.1016/j.ijtb.2015.07.013

**NAT**

**PMID:**27235947

**MISC**

**Jeba J**(1), Suryawanshi M(2), Gaikwad P(3), Backianathan S(1).

Colonic metastasis in mucoepidermoid carcinoma of the parotid: a rare occurrence.

BMJ Case Rep. 2016 Jan 28;2016. pii: bcr2015213932. doi: 10.1136/bcr-2015-213932.

**Author information:**

(1)Department of Radiotherapy, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

(2)Department of General Pathology, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

(3)Department of General Surgery Unit 1, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

We present a case of intermediate-grade mucoepidermoid carcinoma of the parotid with late local recurrence and colonic metastasis. A 69-year-old man who had undergone right total conservative parotidectomy followed by adjuvant radiotherapy for intermediate-grade mucoepidermoid carcinoma 10 years prior, presented with a recurrent swelling in the postoperative site and cardiac failure. On evaluation, he was found to have severe anaemia with positive stool occult blood. Colonoscopic evaluation revealed a globular submucosal bulge with erosion 40 cm from the anal verge, the biopsy of which was consistent with mucoepidermoid carcinoma. The presentation, diagnostic details and management of this rare case are discussed. 2016 BMJ Publishing Group Ltd. DOI: 10.1136/bcr-2015-213932

**INTL**

**PMID:**26823365

**MISC**

**John D**(1), Irodi A(2), Michael JS(3).

Concurrent Infections of *Conidiobolus Coronatus* with Disseminated Tuberculosis Presenting as Bilateral Orbital Cellulitis.

J Clin Diagn Res. 2016 Apr;10(4):ND01-2. doi: 10.7860/JCDR/2016/16790.7535. Epub 2016 Apr 1.

**Author information:**

(1)Associate Surgeon, Department of Ophthalmology, Christian Medical College, Vellore, Tamil Nadu, India .

(2)Associate Professor, Department of Radiology,

Christian Medical College , Vellore, Tamil Nadu, India . (3)Professor, Department of Microbiology, Christian Medical College , Vellore, Tamil Nadu, India .

Zygomycetes species contains two orders of organisms that infect humans, namely Mucorales and Entomophthorales. Entomophthorales cause chronic infection in immunocompetent patients, invading subcutaneous tissues but are non-angioinvasive. This includes *Basidiobolus ranarum*, *Conidiobolus incongruus* and *Conidiobolus coronatus*. We report a case of disseminated tuberculosis with *Conidiobolus coronatus* infection presenting as orbital cellulitis in an adolescent. DOI: 10.7860/JCDR/2016/16790.7535

**NAT**

**PMCID:** PMC4866150 **PMID:**27190852

**MISC**

**Jose N**(1), Kurian GP(2).

Schmidt Syndrome: An Unusual Cause of Hypercalcaemia.

J Clin Diagn Res. 2016 May;10(5):OD21-2. doi: 10.7860/JCDR/2016/16770.7783. Epub 2016 May 1.

**Author information:**

(1)Assistant Professor, Department of General Medicine, Christian Medical College and Hospital , Vellore, Tamil Nadu, India .

(2)Assistant Professor, Department of Intensive Care, Christian Medical College and Hospital , Vellore, Tamil Nadu, India .

Autoimmune polyglandular syndrome type 2 also known as Schmidt syndrome. It is a rare disorder involving a combination of Addison's disease with autoimmune thyroid disease with or without type 1 diabetes mellitus. In this case report one such patient with this rare syndrome is described who presented with hyperpigmentation of knuckles, palms and soles with significant weight loss for 2 months. At presentation she also had severe hypercalcaemia. Severe hypercalcaemia is rare and hypercalcaemia at the initial presentation of Addison's disease is also unusual. The mechanism of hypercalcaemia in addisons and management of this patient is discussed. DOI: 10.7860/JCDR/2016/16770.7783

**NAT**

**PMCID:** PMC4948460 **PMID:**27437284

**MISC**

**Joseph G**(1), Canaud L(2).

Combining Ascending Aorta and Aortic Arch TEVAR.

J Endovasc Ther. 2016 Dec 13. pii: 1526602816682687. [Epub ahead of print]

**Author information:**

(1)Department of Cardiology, Christian Medical College, Vellore, India joseph59@gmail.com. (2)Service de Chirurgie Vasculaire et Thoracique, Hôpital A de Villeneuve, Montpellier, France. DOI: 10.1177/1526602816682687

**INTL**

**PMID:**27974602

**MISC**

**Kaki AR(1), Satyendra S(1).**

Scrub typhus with hyperacusis and tinnitus. J Assoc Physicians India. 2016 Jan;64(1):154.

**Author information:**

(1)Christian Medical College & Hospital, Vellore.

**NAT**

**PMID:**27728719

**MISC**

**Koshy M(1), Mishra AK(1), Agrawal B(2), Kurup AR(1), Hansdak SG(1).**

Dengue fever complicated by hemophagocytosis. Oxf Med Case Reports. 2016 Jun 1;2016(6):121-4. doi: 10.1093/omcr/omw043.eCollection 2016.

**Author information:**

(1)Department of Medicine, Unit 4 , Christian Medical College and Hospital , Vellore, Tamil Nadu , India. (2)Department of Pathology , Christian Medical College and Hospital , Vellore, Tamil Nadu , India.

Dengue is a common acute viral febrile illness in the tropics. Although the usual presentation is that of a self-limiting illness, its complications are protean. We report a 29-year-old man who presented with an acute febrile illness and was diagnosed with dengue hemorrhagic fever. Despite appropriate supportive therapy, the patient initially improved, but subsequently had clinical deterioration. Evaluation revealed features of hemophagocytic lymphohistiocytosis. He was successfully treated with glucocorticoids and had an uneventful recovery. This case adds to the limited adult cases of virus-associated hemophagocytic syndrome in the literature and the need for prompt recognition and treatment of this rare complication. DOI: 10.1093/omcr/omw043

**INTL**

**PMCID:** PMC4887830 **PMID:**27274854

**MISC**

**Kumar AS(1), Singh IR(1), Sharma SD(2), John S(1), Ravindran BP(1).**

Radiation dose measurements during kilovoltage-cone beam computed tomography imaging in radiotherapy.

J Cancer Res Ther. 2016 Apr-Jun;12(2):858-63. doi: 10.4103/0973-1482.164699.

**Author information:**

(1)Department of Radiotherapy, Christian Medical College, Vellore, Tamil Nadu, India. (2)Radiological Physics and Advisory Division, Bhabha Atomic Research Center, Mumbai, Maharashtra, India.

**OBJECTIVE:** The use of image guidance during radiotherapy for accurate localization and setup has become the standard care of practice in radiotherapy. This mostly involves the use of kilovoltage-cone beam computed tomography (kV-CBCT) for verification of patient setup on the first few days and on a weekly basis. Some protocols require this to be performed daily and also before and after the treatment. Though the radiation due to this kV-CBCT is small, the repeated use could deliver a dose that could increase the probability of the stochastic effect. The main purpose of this work is to measure radiation dose during image guidance with kV-CBCT. **MATERIALS AND METHODS:** In this work, we have attempted to measure the dose during kV-CBCT for different sites both on a humanoid phantom and on patients undergoing image-guided radiotherapy with MOSFETs calibrated against an ion chamber. **RESULTS:** The dose measurement on patients during kV-CBCT resulted in mean doses of 0.19 and 0.3 cGy to the ipsilateral and contralateral eyes, 0.625 and 1.097 cGy to the surface of the ipsilateral and contralateral breasts, and 3.01 cGy to the surface of the pelvis. **CONCLUSION:** Radiation dose to the eye, breast, and the surface of the pelvis have been arrived at during CBCT. The doses measured on patients agreed closely with those measured on humanoid phantom and with published values. DOI: 10.4103/0973-1482.164699

**INTL**

**PMID:**27461664

**MISC**

**Kumar M(1), Thomas N(2).**

Appearances are Deceptive - Passing a Nasogastric Tube does Not Always Rule Out Oesophageal Atresia.

J Clin Diagn Res. 2016 Apr;10(4):SD01-2. doi: 10.7860/JCDR/2016/18179.7654. Epub 2016 Apr 1.

**Author information:**

(1)Associate Professor, Department of Neonatology, Christian Medical College , Vellore, Tamilnadu, India .  
 (2)Professor and Head, Department of Neonatology, Christian Medical College , Vellore, Tamilnadu, India .

Oesophageal atresia/trachea-Oesophageal fistula is commonly diagnosed in the newborn period by inability to pass a nasogastric tube (NGT). We present the instance of a newborn baby where the diagnosis of oesophageal atresia was delayed because of an apparent successful passage of nasogastric tube to the stomach. Failure to reinsert the NGT raised the suspicion of oesophageal atresia which was confirmed by contrast study showing blind upper oesophageal pouch. DOI: 10.7860/JCDR/2016/18179.7654

**NAT****PMCID: PMC4866210 PMID:27190912****MISC****Kumar V(1), Jose J(2), Joseph G(2).**

Rupture of sinus of Valsalva aneurysm into the left ventricle after dissecting through the interventricular septum mimicking aortic regurgitation.

Clin Res Cardiol. 2016 Jun;105(6):560-2. doi: 10.1007/s00392-015-0947-8. Epub 2015 Dec 14.

**Author information:**

(1)Department of Cardiology, Ruban Patliputra Hospital, Patna, India. docvipin2005@gmail.com.  
 (2)Department of Cardiology, Christian Medical College, Vellore, India.

DOI: 10.1007/s00392-015-0947-8

**INTL****PMID:26667232****MISC****Kumar V(1), Varghese MJ(2), Raveendran S(3), George OK(1).**

Pseudoaneurysm following transradial coronary angiogram.

Eur Heart J. 2016 Jan 14;37(3):252. doi: 10.1093/eurheartj/ehv425. Epub 2015 Sep 10.

**Author information:**

(1)Department of Cardiology, Christian Medical College, Vellore, India. (2)Department of Cardiology, Christian Medical College, Vellore, India drmithunjv@gmail.com. (3)Dr. Paul Brand Centre for Hand Surgery, Christian Medical College, Vellore, India.

DOI: 10.1093/eurheartj/ehv425

**INTL****PMID:26358573****MISC****Kuppswamy B(1), Rajaleelan W(2), Jacob NS(1), Ponniah M(1).**

Anesthetic management of an adolescent with congenital glossopharyngeal web.

Saudi J Anaesth. 2016 Apr-Jun;10(2):243-5. doi: 10.4103/1658-354X.168839.

**Author information:**

(1)Department of Anesthesia, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

(2)Department of Anesthesia, St. Stephen's Hospital, New Delhi, India.

DOI: 10.4103/1658-354X.168839

**INTL****PMCID: PMC4799625 PMID:27051384****MISC****Kurien NA(1), John D(2), Chacko G(3), Jacob P(4).**

Granulocytic Sarcoma in an Adult with Relapsed Acute Myeloid Leukaemia.

J Clin Diagn Res. 2016 Jan;10(1):ND03-4. doi: 10.7860/JCDR/2016/15215.7093. Epub 2016 Jan 1.

**Author information:**

(1)Resident, Department of Ophthalmology, Christian Medical College , Vellore, Tamil Nadu, India . (2)Associate Surgeon, Department of Ophthalmology, Christian Medical College , Vellore, Tamil Nadu, India . (3)Professor, Department of Pathology, Christian Medical College , Vellore, Tamil Nadu, India . (4)Professor, Department of Ophthalmology, Christian Medical College , Vellore, Tamil Nadu, India .

Granulocytic sarcoma is an extramedullary tumour consisting of malignant granulocytic precursor cells that is common among children with acute myeloid leukaemia (AML). We report a case of orbital granulocytic sarcoma in an adult with relapsed undifferentiated AML-M0. It presented as bilateral medial canthal swellings. An incisional biopsy confirmed the diagnosis of granulocytic sarcoma. The swelling resolved with re-induction chemotherapy. DOI: 10.7860/JCDR/2016/15215.7093

DOI: 10.7860/JCDR/2016/15215.7093

**NAT****PMCID: PMC4740631 PMID:26894103****MISC****Lahiri A(1), Alex AG(1), George OK(1).**

T-wave inversions with a difference.

BMJ Case Rep. 2016 Mar 31;2016. pii: bcr2015214307. doi: 10.1136/bcr-2015-214307.

**Author information:**

(1)Department of Cardiology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

DOI: 10.1136/bcr-2015-214307

**INTL**

**PMID:**27033290

**MISC**

**Mahajan R**(1), Kurien RT(1), Joseph AJ(1), Dutta AK(1), Chowdhury SD(2).

Squamous papilloma of esophagus.

Indian J Gastroenterol. 2016 Mar;35(2):151. doi: 10.1007/s12664-016-0642-3.

**Author information:**

(1)Department of Gastroenterology, Christian Medical College, Vellore, 632 004, India. (2)Department of Gastroenterology, Christian Medical College, Vellore, 632 004, India. [sudipto.d.c@gmail.com](mailto:sudipto.d.c@gmail.com).

DOI: 10.1007/s12664-016-0642-3

**NAT**

**PMID:**27138928

**MISC**

**Mahajan RK**(1), Rajan SJ(2), Peter JV(3), Suryawanshi MK(4).

Multiple Small Intestine Perforations after Organophosphorous Poisoning: A Case Report.

J Clin Diagn Res. 2016 Mar;10(3):GD06-7. doi: 10.7860/JCDR/2016/17103.7454. Epub 2016 Mar 1.

**Author information:**

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(3)Professor, Medical ICU, Department of Critical Care Medicine, Christian Medical College, Vellore, Tamil Nadu, India. (4)Assistant Professor, Department of General Pathology, Christian Medical College, Vellore, India.

Organophosphate poisoning has significant gastrointestinal manifestations including vomiting, diarrhea, cramps and increased salivation. We report an uncommon gastrointestinal complication of multiple small intestinal perforations following organophosphorus poisoning. A 28-year old male presented after ingesting dichlorvos mixed with alcohol. Following the initial cholinergic symptoms, the patient developed severe shock with fever, attributed to aspiration pneumonia. Despite appropriate antibiotics, shock was persistent. Over the next 24-hours, he developed abdominal distension, loose stools and high nasogastric aspirates. Computed tomography showed pneumoperitonium. Exploratory

laparotomy revealed six perforations in the jejunum and ileum. The involved portion of the bowel was resected and re-anastomosed, following which only 80-cm of small bowel was left. Postoperatively, shock resolved over 72-hours. However, over the next few days, patient developed features of anastomotic leak. Since only a small portion of the small bowel was preserved, a conservative approach was adopted. He deteriorated further and finally succumbed to the illness. DOI: 10.7860/JCDR/2016/17103.7454

**NAT**

**PMCID:** PMC4843284 **PMID:**27134898

**MISC**

**Mani V, George R**(1), Vijayakumar K, Nair S.

Type D lymphomatoid papulosis simulating aggressive epidermotropic cytotoxic lymphoma.

Indian J Pathol Microbiol. 2016 Jan-Mar;59(1):81-3. doi:10.4103/0377-4929.174823.

**Author information:**

(1)Department of Dermatology, Christian Medical College, Vellore, Tamil Nadu, India.

Three histological subtypes of lymphomatoid papulosis (LyP), type A (histiocytic), type B (mycosis fungoides like) and type C (anaplastic large cell lymphoma like) are well recognized. Two new histological variants, type D (simulating an aggressive epidermotropic cytotoxic lymphoma) and type E (angioinvasive type) has been described recently. We describe a 27-year-old man presented with a history of asymptomatic erythematous papules on both upper and lower limbs noted since 10 years of age. There were no systemic symptoms. Biopsy revealed an atypical dermal lymphoid infiltrate with epidermotropism, and the immunohistochemical markers showed a diffuse positivity for CD3, CD8, CD56, T1A and granzyme B with the focal positivity of CD30. All other relevant tests were normal. In this case report of a recently described delineated variant of LyP we emphasize the indolent course of this entity although the histology would suggest a more aggressive disease. DOI: 10.4103/0377-4929.174823

**NAT**

**PMID:**26960644

**MISC**

**Manuel DA**(1), Irodi A(1), Sudhakar SV(1), Varkki S(1).

Abnormal Chest Radiograph Due to a Common Lung Finding in Down Syndrome.

Oman Med J. 2016 Jan;31(1):81. doi: 10.5001/omj.2016.16.

**Author information:**

(1)Department of Cardiology, Christian Medical College and Hospital, Vellore, India.

DOI: 10.5001/omj.2016.16

**INTL**

**PMCID: PMC4720935 PMID:26813607**

**MISC**

**Manuel DA(1), Lahiri A(1), George OK(1).**

Transcatheter closure of ruptured sinus of valsalva to left ventricle.

Ann Pediatr Cardiol. 2016 Jan-Apr;9(1):72-4. doi: 10.4103/0974-2069.171386.

**Author information:**

(1)Department of Cardiology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

We report a rare case of ruptured right sinus of valsalva into the left ventricle (LV). Transthoracic echocardiography showed a marked turbulent flow from the right aortic sinus to the LV. We describe a novel technique of closure of this defect with duct occluder, involving the formation of an arterio-arterial loop, without resorting to the usual arteriovenous loop. DOI: 10.4103/0974-2069.171386

**INTL**

**PMCID: PMC4782474 PMID:27011698**

**MISC**

**Mathew SK(1), Kutty KK(2), Ramya I(3), Padmakumar C(2), Pius P(2).**

Ondansetron-Induced Life Threatening Hypokalemia.

J Assoc Physicians India. 2016 Feb;64(2):81-82.

**Author information:**

(1)Retired Professor. (2)Assistant Professor of Medicine, Kanyakumari Medical College and Government Hospital, Tamil nadu. (3)Associate Professor of Medicine, CMC Hospital, Vellore.

Ondansetron is widely used in general practice for nausea and vomiting due to any cause. We report a rare side effect, life-threatening hypokalaemia following intravenous Ondansetron injection. It may be judicious to restrict the use of Odansetron to patients with severe vomiting due to chemotherapy or in post-operative state. Life-threatening hypokalemia can occur without any warning and may be difficult to manage in a primary set up. © Journal of the Association of Physicians of India 2011.

**NAT**

**PMID:27730793**

**MISC**

**Mishra AK(1), George AA(2), George L(2).**

Yellow nail syndrome in rheumatoid arthritis: an aetiology beyond thiol drugs.

Oxf Med Case Reports. 2016 Mar 16;2016(3):37-40. doi: 10.1093/omcr/omw013.eCollection 2016.

**Author information:**

(1)General Medicine , Christian Medical College , Vellore, Tamil Nadu , India. (2)Dermatology, Venereology and Leprosy , Christian Medical College , Vellore, Tamil Nadu , India.

Yellow nail syndrome (YNS) is a rare entity characterized by a triad of nail changes, lymphoedema and lung involvement. We report a 57-year-old man with rheumatoid arthritis (RA) and YNS. We have reviewed the previous case reports of RA and YNS and discuss the pulmonary manifestations. DOI: 10.1093/omcr/omw013

**INTL**

**PMCID: PMC4794558 PMID:26989491**

**MISC**

**Mitra S(1), Gunasekaran K, Chacko G, Hansdak SG.** Leprous neuromyositis: A rare clinical entity and review of the literature.

Indian J Med Microbiol. 2016 Jan-Mar;34(1):95-7. doi: 10.4103/0255-0857.174120.

**Author information:**

(1)Department of Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

Mycobacterium leprae, the causative agent of leprosy (Hansen's disease), is a slow growing intracellular acid-fast bacillus that affects the skin, peripheral nerves and respiratory tract. In patients with suppressed cell-mediated immunity, the infiltration of the Bacilli can produce disseminated illness such as leprosy neuromyositis. We reported a case of 56-year-old gentleman presenting with pyrexia of unknown origin, asymmetric sensory motor axonal polyneuropathy and was on chronic exogenous steroid therapy. On evaluation, his skin, muscle, nerve and bone marrow biopsy showed numerous globi of acid-fast Bacilli suggestive of leprosy neuromyositis, a rare form of disseminated Hansen's disease. We reported this case in view of its rarity, atypical manifestation of a relatively rare disease and literature review on poor electrophysiological correlation in the diagnosis of leprosy neuromyositis as compared to the histopathological examination. DOI: 10.4103/0255-0857.174120

**NAT**

**PMID:26776128**

**MISC**

**Mythri SV(1), Mathew V(2).**  
Catatonic Syndrome in Anti-NMDA Receptor Encephalitis.  
Indian J Psychol Med. 2016 Mar-Apr;38(2):152-4. doi: 10.4103/0253-7176.178812.

#### Author information:

(1)Department of Psychiatry, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

Anti-N-methyl-D-aspartate (NMDA) receptor encephalitis is a newly recognized autoimmune condition. With its typical clinical pattern, consistent association with the presence of auto antibodies and rapid improvement with immunotherapy, this condition is giving insights into the boundaries between psychiatry and other neurosciences, and is opening avenues for future research. In a young lady who presented with catatonia, we considered anti-NMDA receptor encephalitis, after ruling out other aetiologies. After a positive antibody test we treated her with immunotherapy. She showed gradual improvement in her psychotic and catatonic symptoms. Knowledge regarding the nature and function of NMDA receptors and pathophysiology of this particular encephalitis is important for psychiatric practice. The great opportunity for research in this area due to its association with psychotic disorders is evident but an appeal to temper the enthusiasm by considering the historical lessons learnt from Karl Jaspers' critique of General Paresis of Insane, is in place. Catatonic syndrome has to be conceptualized broadly and should be recognised with a separate nosological position. DOI: 10.4103/0253-7176.178812

**NAT**

**PMCID: PMC4820557 PMID:27114630**

**MISC**

**Naik D(1), Jebasingh KF(2), Ramprasath(3), Roy GB(4), Paul MJ(5).**  
Video Assisted Thoracoscopic Surgery (VATS) for Excision of an Ectopic Anterior Mediastinal Intra-Thymic Parathyroid Adenoma.  
J Clin Diagn Res. 2016 Jun;10(6):PD22-4. doi: 10.7860/JCDR/2016/18108.8023. Epub 2016 Jun 1.

#### Author information:

(1)Associate Professor, Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, India. (2)Senior Registrar, Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, India. (3)Assistant Professor, Department of Thoracic surgery, Christian Medical College, Vellore, India. (4)Professor, Department of Thoracic Surgery, Christian Medical

College, Vellore, India. (5)Professor and Head, Department of Endocrine Surgery, Christian Medical College, Vellore, India.

Ectopic anterior mediastinal parathyroid adenoma is a rare cause of Primary Hyperparathyroidism (PHPT). Imaging studies such as Technetium-99m ((99m)Tc) sestamibi parathyroid scan along with a Single Photon Emission Computerized Tomogram (SPECT), and contrast enhanced Computerized Tomogram (CT) of the neck and thorax can precisely localize the ectopic mediastinal parathyroid adenoma. We report a 40-year-old gentleman who presented with persistent pain in the right shoulder following trivial trauma. His biochemical investigations showed an elevated serum calcium of 11.6mg% (Normal: 8.3-10.4 mg%) along with an elevated iPTH of 1443 pg/ml (normal: 8-70 pg/ml) which were suggestive of primary hyperparathyroidism. The localization studies revealed an ectopic cystic parathyroid adenoma in the anterior mediastinum that was not accessible from the neck. He underwent a Video Assisted Thoracoscopic (VAT) excision procedure with normalization of serum calcium and an uncomplicated recovery. The VAT approach is a successful minimally invasive technique for mediastinal parathyroidectomy. DOI: 10.7860/JCDR/2016/18108.8023

**NAT**

**PMCID: PMC4963713 PMID:27504353**

**MISC**

**Naik D(1), Jebasingh KF(2), Thomas N(3).**  
Delayed Diagnosis of Graves' Thyrotoxicosis Presenting as Recurrent Adrenal Crisis in Primary Adrenal Insufficiency.  
J Clin Diagn Res. 2016 Apr;10(4):OD20-2. doi: 10.7860/JCDR/2016/16395.7678. Epub 2016 Apr 1.

#### Author information:

(1)Associate Professor, Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, Tamil Nadu, India. (2)Senior Registrar, Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, Tamil Nadu, India. (3)Professor, Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, Tamil Nadu, India.

Adrenal crisis is a potential life threatening complication. The common causes of adrenal crisis are infections, surgical stress and abrupt cessation of steroid medications. Endocrine causes like Graves' disease with thyrotoxicosis is one of the less common causes of an adrenal crisis. We

report a 42-year-old female who presented with recurrent episodes of adrenal crisis due to delayed diagnosis of thyrotoxicosis. She was initially treated with Carbimazole followed by Radio-iodine ablation and currently she is euthyroid. Her adrenal insufficiency was initially treated with hydrocortisone during the time of adrenal crisis followed by Prednisolone 5 mg once daily in the morning along with fludrocortisone 50 mcg once daily. This case highlights the need for high index of suspicion and less common causes like thyrotoxicosis should be ruled out in patients with adrenal crisis. DOI: 10.7860/JCDR/2016/16395.7678

**NAT**

**PMCID: PMC4866171 PMID:27190873**

**MISC**

**Padhye KP(1)**, David KS(2), Dholakia SY(2), Mathew V(2), Murugan Y(2).

'Munchausen syndrome': a forgotten diagnosis in the spine.

Eur Spine J. 2016 May;25 Suppl 1:152-6. doi: 10.1007/s00586-015-4270-x. Epub 2015Oct 28.

**Author information:**

(1)Christian Medical College, Ida Scudder Road, Vellore, Tamil Nadu, 632004, India. kedarorth@gmail.com. (2)Christian Medical College, Ida Scudder Road, Vellore, Tamil Nadu, 632004, India.

**PURPOSE:** To present the case of a patient with Munchausen's syndrome who underwent multiple surgeries in the spine before the diagnosis was made and, therefore, to highlight the importance of this obscure condition that can result in unnecessary surgical treatment. **METHODS:** A 44-year-old businesswoman presented with multiple episodes of low back pain and weakness in both lower limbs over past 11 years. Past history consisted of multiple hospitalizations, and three surgeries on her lumbar spine at different hospitals, with dramatic improvement in symptoms being reported each time after surgery. Clinical examination showed inconsistent and nonspecific neurological findings. Imaging studies like X-rays, magnetic resonance imaging, and all neurophysiological studies were within normal limits. **RESULTS:** Multi-disciplinary evaluation by a team of orthopedicians, neurologist and psychiatrist and rehabilitation specialists diagnosed it as 'Munchausen syndrome'. Only one report of this fictitious disease in spine was found in review of literature (Association AP, Diagnostic and statistical manual of mental disorders: DSM-IV-TR(®), 2003). **CONCLUSIONS:** A history of multiple surgical interventions at multiple hospitals, often followed by dramatic improvement and then relapse, should trigger a suspicion of Munchausen syndrome,

particularly in the scenario of normal imaging studies. Diagnosing this rare condition in spine is key to avoid unnecessary surgery. DOI: 10.1007/s00586-015-4270-x

**INTL**

**PMID:26510423**

**MISC**

**Paul A(1)**, Peringattuthodiyil Y(1), Christopher DJ(1), Thangakunam B(1).

Young onset hemoptysis: A rare cause of pulmonary arterial aneurysm.

Lung India. 2016 May-Jun;33(3):345-7. doi: 10.4103/0970-2113.180952.

**Author information:**

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DOI: 10.4103/0970-2113.180952

**NAT**

**PMCID: PMC4857578 PMID:27186006**

**MISC**

**Peter CD(1)**, Jennifer A(2).

Multiple Giant Cutaneous Horns in a Renal Transplant Recipient.

Indian J Dermatol. 2016 Jan-Feb;61(1):124. doi: 10.4103/0019-5154.174156.

**Author information:**

(1)Department of Dermatology, Venereology and Leprosy, Christian Medical College, Vellore, Tamil Nadu, India. E-mail: dincypeter@gmail.com.

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

DOI: 10.4103/0019-5154.174156

**NAT**

**PMCID: PMC4763662 PMID:26955148**

**MISC**

**Pillai R**, Ancheri SA, Dharmalingam SK, Sahajanandan R(1).

An innovative way to reinsert dislodged Arndt blocker using urological glidewire.

Ann Card Anaesth. 2016 Apr-Jun;19(2):354-6. doi: 10.4103/0971-9784.179617.

**Author information:**

(1)Department of Anaesthesia, Christian Medical College, Vellore, Tamil Nadu, India.

The Arndt blocker is positioned in the desired bronchus using a wire loop which couples the blocker with a fiberoptic bronchoscope (FOB). The wire loop once removed cannot be reinserted in 5F and 7F blockers making repositioning of the

blocker difficult. A 34-year-old female was to undergo left thoracotomy followed by laparoscopic cholecystectomy. The left lung was isolated with a 7F Arndt bronchial blocker. During one-lung ventilation, the wire loop was removed for oxygen insufflation. There was loss of lung isolation during the procedure and dislodgement of the blocker was confirmed by FOB. The initial attempts to reintroduce the blocker into the left main bronchus failed. An alternative technique using a glide wire was attempted which resulted in successful reintroduction of the Arndt blocker. The 0.032 inch zebra glide wire may be effectively used to reposition a dislodged Arndt blocker if the wire loop has been removed. DOI: 10.4103/0971-9784.179617

**INTL****PMCID: PMC4900362 PMID:27052085****MISC**

**Prabhakar AT**(1), Kamanahalli R(2), Sivadasan A(3), Joseph E(2), Viggswarpu S(4).

Non-fatal acute haemorrhagic leukoencephalitis following snake bite: A casereport.

Trop Doct. 2016 Jan;46(1):57-9. doi: 10.1177/0049475515577987. Epub 2015 Mar 18.

**Author information:**

(1)Department of Neurological Sciences, Christian Medical College, Vellore, India atprabhakar@gmail.com. (2)Department of Radiodiagnosis, Christian Medical College, Vellore, India. (3)Department of Neurological Sciences, Christian Medical College, Vellore, India. (4)Department of Geriatrics, Christian Medical College, Vellore, India.

Acute haemorrhagic leukoencephalitis (AHL) is a fulminant inflammatory disease of cerebral white matter, characterised by demyelination and haemorrhagic necrosis. The outcome is usually fatal with only few survivors. An unusual presentation of a 44-year-old South Indian farmer who developed AHL following a snake bite is reported. Though the initial brain imaging showed extensive involvement of the white matter with multiple haemorrhagic foci, the patient improved spontaneously with no specific therapy. A repeat magnetic resonance imaging of the brain 28 days after the snake bite confirmed radiological improvement. © The Author(s) 2015. DOI: 10.1177/0049475515577987

**INTL****PMID:25790820****MISC**

**Prakasan AM**(1), Prabhu AJ(2), Velarasan K(1), Backianathan S(1), Ram TS(1).

Paraneoplastic Pemphigus Associated with Follicular Dendritic Cell Tumor in the Mediastinum.

Case Rep Dermatol Med. 2016;2016:6901539. doi: 10.1155/2016/6901539. Epub 2016 Apr 11.

**Author information:**

(1)Ida B Scudder Cancer Centre, Radiation Oncology Unit 1, Christian Medical College, Ida Scudder Road, Vellore, Tamil Nadu 632004, India.

(2)Department of Pathology, Christian Medical College, Ida Scudder Road, Vellore, Tamil Nadu 632004, India.

Paraneoplastic Pemphigus (PNP) is an autoimmune bullous disease characterized by severe stomatitis, polymorphous skin eruptions, and underlying neoplasms. Diagnosis of cutaneous paraneoplastic disorders requires high index of suspicion. We describe a patient with PNP associated with follicular dendritic cell (FDC) tumor in the mediastinum, a rare neoplasm originating from follicular dendritic cells. Its management requires identification of underlying malignancy and treatment of the same. Our patient showed remission of PNP upon excision of the tumor and remained disease-free for 8 years. DOI: 10.1155/2016/6901539

**INTL****PMCID: PMC4842386 PMID:27190659****MISC**

**Putta T**(1), Chacko BR(2), Joseph E(2).

Intracardiac fistula in a child: a rare complication of infective endocarditis.

Asian Cardiovasc Thorac Ann. 2016 Mar 21. pii: 0218492316640384. [Epub ahead of print]

**Author information:**

(1)Department of Radiology, Christian Medical College, Vellore, India tharaniputta@gmail.com.

(2)Department of Radiology, Christian Medical College, Vellore, India.

DOI: 10.1177/0218492316640384

**INTL****PMID:27002095****MISC**

**Rajendra A**(1), Koshy M(1), Mishra AK(1), Hansdak SG(1).

Lithophagia: Presenting as spurious diarrhea.

J Family Med Prim Care. 2016 Apr-Jun;5(2):499-500.

**Author information:**

(1)Department of Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

DOI: 10.4103/2249-4863.192328

**NAT**

**PMCID: PMC5084597 PMID:27843877**

**MISC**

**Rajendra A**(1), Mishra AK(1), Francis NR(1), Carey RA(1).

Severe hypercalcemia in a patient with pulmonary tuberculosis.

J Family Med Prim Care. 2016 Apr-Jun;5(2):509-511.

**Author information:**

(1)Department of Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

DOI: 10.4103/2249-4863.192327

**NAT**

**PMCID: PMC5084602 PMID:27843882**

**MISC**

**Rao SV**(1), Jacob GG(1), Raju NA(1), Ancheri SA(2).

Spontaneous arterial hemorrhage as a complication of dengue.

Indian J Crit Care Med. 2016 May;20(5):302-4. doi: 10.4103/0972-5229.182201.

**Author information:**

(1)Division of Critical Care, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Anaesthesiology, Christian Medical College, Vellore, Tamil Nadu, India.

Bleeding complications of dengue hemorrhagic fever such as epistaxis, gum bleeding, gastrointestinal bleeding, hypermenorrhea, hematuria, and thrombocytopenia have been documented. A 49-year-old female presented with complaints of intermittent high-grade fever for the past 4 days, lower abdominal pain and altered sensorium for 1 day. Laboratory investigations revealed severe anemia, mild thrombocytopenia, hypofibrinogenemia, and positive dengue serology. Emergency ultrasound examination of the abdomen revealed a possible rapidly expanding hematoma from the inferior epigastric artery and suggested urgent computed tomography (CT) angiogram for confirmation of the same. CT angiogram was confirmatory, and patient underwent emergency embolization of the right inferior epigastric artery. We report the first case of inferior epigastric hemorrhage and rectus sheath hematoma as a consequence of dengue. DOI: 10.4103/0972-5229.182201

**NAT**

**PMCID: PMC4876654 PMID:27275081**

**MISC**

**Rupa V**(1), Abraham V(2), Singh C(3), Cherian VM(4), Abraham P(5).

MCI guidelines on publications for academic Promotions.

Natl Med J India. 2016 Mar-Apr;29(2):113.

**Author information:**

(1)Department of ENT, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Community Medicine, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Urology, Christian Medical College, Vellore, Tamil Nadu, India. (4)Department of Orthopaedics, Christian Medical College, Vellore, Tamil Nadu, India. (5)Department of Clinical Virology, Christian Medical College, Vellore, Tamil Nadu, India.

**NAT**

**PMID:27586224**

**MISC**

**Samuel SS**(1), Shetty S(2), Arunachal G(3), Koshy S(4), Paul TV(5).

Hajdu Cheney Syndrome.

J Clin Diagn Res. 2016 Feb;10(2):OD07-9. doi: 10.7860/JCDR/2016/15782.7203. Epub 2016 Feb 1.

**Author information:**

(1)Assistant Professor, Department of Dental Surgery, Christian Medical College, Vellore, India. (2)Senior Registrar, Department of Endocrinology, Diabetes & Metabolism, Christian Medical College, Vellore, India. (3)Assistant Professor, Department of Clinical Genetics, Christian Medical College, Vellore, India. (4)Professor, Department of Dental Surgery, Christian Medical College, Vellore, India. (5)Professor, Department of Endocrinology, Diabetes & Metabolism, Christian Medical College, Vellore, India.

Hajdu-Cheney Syndrome is a rare genetic disorder characterised by progressive focal bone destruction. It is known to be an autosomal dominant disorder but there have been reports of sporadic cases as well. Although the disease manifestation is found to begin from birth, it is most often not diagnosed until adolescence or adulthood. It could be due to the rarity of the condition and the variation of the disease manifestation at different age groups. We report a case of Hajdu-Cheney Syndrome in a 26-year-old male who presented with severe periodontitis and premature loss of teeth. The other characteristic features included craniofacial dysmorphism, abnormalities of the digits and dental anomalies. Patients with craniofacial dysmorphism along with dental abnormalities should be thoroughly examined for any underlying systemic disorder. A

team of specialists may be able to diagnose this condition before the disease is advanced. DOI: 10.7860/JCDR/2016/15782.7203

**NAT**

**PMCID:** PMC4800570 **PMID:**27042504

**MISC**

**Sathyakumar S(1), Cherian KE(2), Shetty S(3), Paul TV(3).**

Impact of curative surgery on bone in a patient with osteitis fibrosa cystica of primary hyperparathyroidism.

BMJ Case Rep. 2016 Mar 30;2016. pii: bcr2016214970. doi: 10.1136/bcr-2016-214970.

**Author information:**

(1)Department of Endocrinology, Diabetes & Metabolism, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Endocrinology, Christian Medical College, Vellore, Tamil Nadu, India. (3)Christian Medical College, Vellore, Tamil Nadu, India.

DOI: 10.1136/bcr-2016-214970

**INTL**

**PMID:**27030464

**MISC**

**Sathyakumar S(1), Kapoor N(2), Hephzibah J(3), Paul TV(2).**

Unusual presentation of Paget's disease of bone.

BMJ Case Rep. 2016 Mar 4;2016. pii: bcr2016214556. doi: 10.1136/bcr-2016-214556.

**Author information:**

(1)Department of Endocrinology, Diabetes Metabolism, Christian Medical College, Vellore, Tamil Nadu, India. (2)Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Nuclear Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

DOI: 10.1136/bcr-2016-214556

**INTL**

**PMID:**26944376

**MISC**

**Sen S(1), Ramakant P(1), Paul MJ(1), Jennifer A(2).**

Acute suppurative thyroiditis secondary to urinary tract infection by E. coli: arare clinical scenario.

BMJ Case Rep. 2016 Jan 13;2016. pii: bcr2015213231. doi: 10.1136/bcr-2015-213231.

**Author information:**

(1)Department of Endocrine Surgery, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Pathology, Christian Medical College, Vellore, Tamil Nadu, India.

A 60-year-old woman with diabetes and symptomatic urinary tract infection presented to us with a painful neck swelling for 2 weeks. We discuss diagnostic and management issues in acute suppurative thyroiditis caused by Escherichia coli. 2016 BMJ Publishing Group Ltd. DOI: 10.1136/bcr-2015-213231

**INTL**

**PMID:**26762349

**MISC**

**Shetty S(1), Kapoor N(1), Mathai S(2), Paul TV(1).** Hyperphosphatemic tumoural calcinosis.

BMJ Case Rep. 2016 Jan 25;2016. pii: bcr2015213537. doi: 10.1136/bcr-2015-213537.

**Author information:**

(1)Department of Endocrinology, Christian Medical College (CMC), Vellore, Tamil Nadu, India. (2)Department of Child Health-1, Christian Medical College, Vellore, Tamil Nadu, India.

DOI: 10.1136/bcr-2015-213537

**INTL**

**PMID:**26811414

**MISC**

**Shetty S(1), Shetty S(1), Prabhu AJ(2), Kapoor N(1), Hephzibah J(3), Paul TV(1).**

An unusual presentation of metastatic bone disease in a subject with Paget's disease of bone.

J Family Med Prim Care. 2016 Apr-Jun;5(2):488-490.

**Author information:**

(1)Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of General Pathology, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Nuclear Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

Solid organ malignancies involving breast, prostate, and lung frequently metastasize to the skeleton. However, the occurrence of Paget's disease and metastatic bone disease in the same patient is uncommon. We report a case of a 63-year-old man who presented with back pain and a lump in the right breast. He was earlier diagnosed to have Paget's disease of bone based on characteristic skeletal radiological features, (99m)Tc methylene diphosphonate bone scan and elevated alkaline phosphatase, and treated with bisphosphonates, and his disease was in remission. Further evaluation revealed an underlying skeletal metastatic disease secondary to a breast malignancy. He underwent radical

mastectomy with axillary node clearance, radiotherapy, and chemotherapy. In addition, he also received parenteral bisphosphonates for his skeletal metastatic bone disease. DOI: 10.4103/2249-4863.192326

**NAT**

**PMCID: PMC5084592 PMID:27843872**

**MISC**

**Stephen S**(1), Subashini B(2), Thomas R(3), Philip A(4), Sundaresan R(5).

Skull Base Osteomyelitis Caused by an Elegant Fungus. J Assoc Physicians India. 2016 Feb;64(2):70-71.

**Author information:**

(1)PG Registrar. (2)Assistant Professor, Dept. of Microbiology, Christian Medical College and Hospital, Vellore, Tamil Nadu. (3)Associate Professor. (4)Assistant Professor. (5)Assistant Professor, Dept. of ENT.

Malignant otitis externa (skull base osteomyelitis) is predominantly caused by bacteria while fungal etiology is rare. We report a middle aged diabetic gentleman who succumbed to invasive skull base infection due to *Apophysomyces elegans* a fungus belonging to Zygomycetes which causes only skin and soft tissue infections. Mortality and invasive infections due to this genus is rarely reported, especially in the ear. © Journal of the Association of Physicians of India 2011.

**NAT**

**PMID:27730788**

**MISC**

**Surekha V**(1), Thomas TA(1), Zechariah RD(1).

Development of a geriatric distance education curriculum for medical practitioners.

J Assoc Physicians India. 2016 Jan;64(1):73.

**Author information:**

(1)Christian Medical College, Vellore.

**NAT**

**PMID:27727955**

**MISC**

**Surya P**(1), Keshava SN(1), Irodi A(1), Vyas S(2), Thangakunam B(2).

Recurrent hemoptysis: An unusual cause and novel management.

Indian J Radiol Imaging. 2016 Apr-Jun;26(2):267-70. doi:10.4103/0971-3026.184412.

**Author information:**

(1)Department of Radiology, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of

Pulmonary Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

We report a rare case a 15 year old boy who presented with recurrent hemoptysis. There was past history of pancreatitis. A CT scan of thorax revealed a small collection in the region of the tail of the pancreas and a tract from it extending across the diaphragm into the posterobasal segment of left lower lobe, suggesting a pancreatico-pleuro-pulmonary fistula. The fistula was embolised by percutaneous injection of glue into the collection and fistula, which resulted in good symptom control. DOI: 10.4103/0971-3026.184412

**NAT**

**PMCID: PMC4931790 PMID:27413278**

**MISC**

**Telugu RB**(1), Job AJ(2), Manipadam MT(3).

Papillary Cystadenocarcinoma of the Parotid Gland: A Rare Case Report.

J Clin Diagn Res. 2016 Jun;10(6):ED01-3. doi: 10.7860/JCDR/2016/17750.7907. Epub2016 Jun 1.

**Author information:**

(1)Assistant Professor, Department of General Pathology, Christian Medical College, Vellore, Tamilnadu, India. (2)Consultant, Department of ENT, Scudder Memorial Hospital, Ranipet, Vellore, Tamilnadu, India. (3)Professor, Department of General Pathology, Christian Medical College, Vellore, Tamilnadu, India.

Papillary cystadenocarcinoma is a rare malignant neoplasm of the salivary gland, characterized by noticeable cystic and solid areas with papillary endophytic projections. These tumours lack features that characterize cystic variants of several more common salivary gland carcinomas. It was first described in 1991 by World Health Organization as a separate entity and cystadenocarcinoma with or without papillary component in the AFIP classification. Most of these tumours occurred in the major salivary glands followed by minor salivary glands. Cystadenocarcinoma is the malignant counterpart of cystadenoma. We report a case of papillary cystadenocarcinoma of parotid. A 40-year-old lady presented with gradually progressive swelling below the right ear associated with occasional pain. Clinical and radiological features suggested benign neoplasm. Right lobe superficial parotidectomy was performed. The histopathologic diagnosis showed papillary cystadenocarcinoma of the parotid gland.

Histologic confirmation of stromal invasion is required to differentiate it from the benign lesion. Conservative wide local surgical excision is the treatment of choice.

DOI: 10.7860/JCDR/2016/17750.7907

**NAT**

**PMCID: PMC4963657 PMID:27504297**

**MISC**

**Telugu RB**(1), Pushparaj M(2), Masih D(3), Pulimood A(4).

Synchronous Appearance of Adenocarcinoma and Gastrointestinal Stromal Tumour(GIST) of the Stomach: A Case Report.

J Clin Diagn Res. 2016 Feb;10(2):ED16-8. doi: 10.7860/JCDR/2016/17636.7289. Epub2016 Feb 1.

**Author information:**

(1)Assistant Professor, Department of General Pathology, Christian Medical College , Vellore, Tamilnadu, India . (2)PG Registrar, Department of General Pathology, Christian Medical College , Vellore, Tamilnadu, India . (3)Associate Professor, Department of General Pathology, Christian Medical College , Vellore, Tamilnadu, India . (4)Professor, Department of General Pathology, Christian Medical College , Vellore, Tamilnadu, India .

Adenocarcinoma is the most common histological type of gastric tumour, accounting for approximately 95% of all gastric carcinomas. Gastrointestinal stromal tumours (GISTs) are rare mesenchymal neoplasms of the digestive tract. Synchronous adenocarcinoma and gastrointestinal stromal tumour (GIST) occurring in the stomach is rare and very few cases have been reported in literature. Synchronous tumours in the stomach are rarely diagnosed preoperatively. A 63-year-old gentleman was diagnosed with a gastric adenocarcinoma on endoscopic biopsy and underwent surgery. Postoperative histopathologic examination revealed 2 synchronous tumours with both adenocarcinoma and GIST. The adenocarcinoma was determined to be the aggressive tumour based on histologic features. GIST was categorized as a very low risk of malignancy, based on its size and mitosis. The patient underwent chemotherapy for adenocarcinoma. He is under follow up and is currently disease free. Careful histopathologic evaluation is required to detect co-existing rare synchronous tumours. Presence of the second tumour may require additional procedures or protocols.

DOI: 10.7860/JCDR/2016/17636.7289

**NAT**

**PMCID: PMC4800542 PMID:27042477**

**MISC**

**Tomar LR**(1), Gupta N(2), Malik S(3), Garg P(4), Chhabra P(5).

Image Diagnosis: Immune Thrombocytopenia Secondary to Abdominal Koch Disease.

Perm J. 2016 Winter;20(1):e103-4. doi: 10.7812/TPP/15-032.

**Author information:**

(1)Resident in the Neurology Department at the Govind Ballabh Pant Institute of Post Graduate Medical Education and Research in Delhi, India. drlaxmikantucms@yahoo.com. (2)Fellow in Clinical Immunology & Rheumatology at the Christian Medical College in Vellore, India. nik.gupta4u@gmail.com. (3)Senior Resident in the Department of Medicine at the University College of Medical Sciences and Guru Teg Bahadur Hospital, University of Delhi, Dilshad Garden, Delhi, India. sarthakmalik87@gmail.com. (4)Fellow in the Department of Pathology at the University College of Medical Sciences and Guru Teg Bahadur Hospital, University of Delhi, Dilshad Garden, Delhi, India. drparitoshgarg@gmail.com. (5)Fellow in the Department of Gastroenterology at the Post Graduate Institute of Medical Education and Research in Chandigarh, India. puneet.pgi@gmail.com.

DOI: 10.7812/TPP/15-032

**INTL**

**PMCID: PMC4732805 PMID:26824970**

**MISC**

**Udiya AK**(1), Shetty GS(2), Chauhan U(3), Singhal S(4), Prabhu SM(5).

Multiple Isolated Enteric Duplication Cysts in an Infant - A Diagnostic Dilemma.

J Clin Diagn Res. 2016 Jan;10(1):TD15-6. doi: 10.7860/JCDR/2016/15129.7129. Epub2016 Jan 1.

**Author information:**

(1)Senior Resident, Department of Radiodiagnosis, Institute of Liver and Biliary Sciences , New Delhi, India . (2)Senior Resident, Department of Radiodiagnosis, All India Institute of Medical Sciences , New Delhi, India . (3)Senior Resident, Department of Radiodiagnosis, GB Pant Hospital , New Delhi, India . (4)Senior Resident, Department of Radiodiagnosis, Lady Hardinge Medical College and assoc. SSK and KSC hospitals , Connaught Place, New Delhi, India . (5)Senior Resident, Department of Radiodiagnosis, CMC , Vellore, India.

Completely isolated enteric duplication cysts are a rare variety of enteric duplication cysts having an independent blood supply with no communication

with any part of the adjacent bowel segment. We report a case showing two completely isolated enteric duplication cysts originating in the greater omentum and transverse mesocolon in an infant. Multiple isolated enteric duplication cysts involving non-contiguous bowel segments have not been previously reported in the literature. In addition the transverse mesocolon duplication cyst was infected showing septations and loss of double wall sign resulting in difficulty in imaging diagnosis. Both the cysts were excised and confirmed on histopathology.

DOI: 10.7860/JCDR/2016/15129.7129

**NAT**

**PMCID: PMC4740677 PMID:26894149**

**MISC**

**Varghese MJ(1), George OK(2).**

Smoked out!

Eur Heart J. 2016 Mar 14;37(11):918. doi: 10.1093/eurheartj/ehv362. Epub 2015 Aug 10.

**Author information:**

(1)Department of Cardiology, Christian Medical College, Vellore, India drmithunjv@gmail.com.

(2)Department of Cardiology, Christian Medical College, Vellore, India.

DOI: 10.1093/eurheartj/ehv362

**INTL**

**PMID:26261293**

**MISC**

**Varghese MJ(1), Lahiri A(2), Kumar V(3), Manuel DA(3), George OK(4).**

Unraveling the Mystery Behind A Patient with 'Refractory Seizures'.

J Clin Diagn Res. 2016 Feb;10(2):OD01-2. doi: 10.7860/JCDR/2016/15308.7174. Epub 2016 Feb 1.

**Author information:**

(1)Associate Professor, Department of Cardiology, Christian Medical College, Vellore, Tamil Nadu, India.

(2)Registrar, Department of Cardiology, Christian Medical College, Vellore, Tamil Nadu, India.

(3)Assistant Professor, Department of Cardiology, Christian Medical College, Vellore, Tamil Nadu, India.

(4)Professor, Department of Cardiology, Christian Medical College, Vellore, Tamil Nadu, India.

Neurological manifestations such as seizures although rare are well recognized presentations of cardiac arrhythmias. Almost always, such events are primarily generalized in nature leading on to loss of consciousness. Rarely however, cardiac seizures can manifest with focal neurological events. We report a case of a sexagenarian who presented with recurrent focal seizures with secondary generalization, who was misdiagnosed and treated as seizure disorder; only a

careful history and focussed investigations helped in realising a precise diagnosis.

DOI: 10.7860/JCDR/2016/15308.7174

**NAT**

**PMCID: PMC4800567 PMID:27042501**

**MISC**

**Venkatramani V(1), George AJ(1), Chandrasingh J(1), Panda A(1), Devasia A(1).**

Urethral duplication with unusual cause of bladder outlet obstruction.

Indian J Urol. 2016 Apr-Jun;32(2):156-8. doi: 10.4103/0970-1591.174780.

**Author information:**

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

A 12-year-old boy presented with poor flow and recurrent urinary tract infections following hypospadias repair at the age of 3 years. The evaluation revealed urethral duplication with a hypoplastic dorsal urethra and patent ventral urethra. He also had duplication of the bladder neck, and on voiding cystourethrogram the ventral bladder neck appeared hypoplastic and compressed by the dorsal bladder neck during voiding. The possibility of functional obstruction of the ventral urethra by the occluded dorsal urethra was suspected, and he underwent a successful urethro-urethrostomy. DOI: 10.4103/0970-1591.174780

**NAT**

**PMCID: PMC4831507 PMID:27127361**

**MISC**

**Vergheese A(1).**

The integration of psychiatry and neurology.

Indian J Psychiatry. 2016 Jan-Mar;58(1):104-5. doi: 10.4103/0019-5545.174405.

**Author information:**

(1)Department of Psychiatry, Christian Medical College, Vellore, Tamil Nadu, India. E-mail: averghese2002@yahoo.co.in.

DOI: 10.4103/0019-5545.174405

**NAT**

**PMCID: PMC4776572 PMID:26985119**

**MISC**

**Yoganathan S(1), Arunachal G(2), Sudhakar SV(3), Rajaraman V(4), Thomas M(1), Danda S(2).**

Beta Propellar Protein-Associated Neurodegeneration: A Rare Cause of Infantile Autistic Regression and Intracranial Calcification.

Neuropediatrics. 2016 Apr;47(2):123-7. doi: 10.1055/s-0035-1571189. Epub 2016 Feb 9.

**Author information:**

(1)Department of Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Medical Genetics, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Radiodiagnosis, Christian Medical College, Vellore, Tamil Nadu, India. (4)Division of Child and Adolescent Psychiatry, Department of Psychiatry, Christian Medical College, Vellore, Tamil Nadu, India.

Neurodegeneration with brain iron accumulation (NBIA) is a heterogeneous group of single gene disorders with distinguished clinical phenotypes and definitive imaging findings. Beta propeller protein-associated neurodegeneration (BPAN) is a subentity of NBIA with X linked dominant inheritance. In this report, we describe a girl with autistic regression, seizures, intracranial calcification, iron accumulation in substantia nigra, and globi pallidi, and diagnosis of BPAN was established based on the identification of previously described disease causing variant in WD repeat domain 45 (WDR45) gene encoding for  $\beta$  propeller protein. This is the first genetically proven case from India. BPAN is an underrecognized disorder and must be considered as a differential diagnosis in children with atypical Rett features and should be enlisted among the causes for autistic regression and intracranial calcification. Pediatricians must be aware of this rare entity for establishing early diagnosis, prognostication, and genetic counseling. Treatment is usually supportive. More research is needed to explore drugs in the management of BPAN that can facilitate the autophagy and promotes cytoprotection. Georg Thieme Verlag KG Stuttgart · New York. DOI: 10.1055/s-0035-1571189

**INTL****PMID:**26859818**MISC**

**Yoganathan S**(1), **Sudhakar SV**(2), **James EJ**(3), **Thomas MM**(1).

Acute necrotising encephalopathy in a child with H1N1 influenza infection: a clinico-radiological diagnosis and follow-up.

BMJ Case Rep. 2016 Jan 11;2016. pii: bcr2015213429. doi: 10.1136/bcr-2015-213429.

**Author information:**

(1)Department of Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Radiodiagnosis, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Pediatrics, Christian Medical College, Vellore, Tamil Nadu, India.

Acute necrotising encephalopathy of childhood (ANEC) is a fulminant disorder with rapid progressive encephalopathy, seizures and poor outcome. It has been reported in association with various viral infections. We describe the clinico-radiological findings and short-term follow-up in a child with H1N1 influenza-associated ANEC. Lamellar, target or tricolour pattern of involvement of the thalamus was seen on apparent diffusion coefficient images. Our patient had significant morbidity at discharge despite early diagnosis and management with oseltamivir and immunoglobulin. Repeat imaging after 3 months had shown significant resolution of thalamic swelling, but there was persistence of cytotoxic oedema involving bilateral thalamus. She was pulsed with intravenous steroids and maintained on a tapering schedule of oral steroids. This report emphasises the need for a high index of suspicion to establish early diagnosis, promotion of widespread immunisation strategies to prevent influenza outbreak, and more research to establish standard treatment protocols for this under-recognised entity. 2016 BMJ Publishing Group Ltd. DOI: 10.1136/bcr-2015-213429

**INTL****PMID:**26759402**MISC**

**Yoganathan S**(1), **Sudhakar SV**(2), **Thomas MM**(1), **Yadav VK**(2).

A tropical menace of co-infection of Japanese encephalitis and neurocysticercosis in two children.

J Pediatr Neurosci. 2016 Apr-Jun;11(2):140-4. doi: 10.4103/1817-1745.187644.

**Author information:**

(1)Department of Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Radiodiagnosis, Christian Medical College, Vellore, Tamil Nadu, India.

Japanese encephalitis (JE) is a mosquito borne encephalitis caused by Flavivirus. Neurocysticercosis (NCC) is a parasitic disease of the central nervous system caused by *Taenia solium*. In this report, we describe the clinical profile, imaging findings, and outcome of two children with JE and coexisting NCC. Eleven and thirteen-year-old boys from the same town of Jharkhand state were brought with history of fever, seizures, altered sensorium, and extrapyramidal symptoms. Dystonia, hypomimia, bradykinesia, and dyskinesia were observed. Meigs syndrome observed in one of the children is a novel finding. Magnetic resonance imaging of the

brain revealed findings suggestive of JE with cysticercal granulomas. There are few reports of coexistence of JE and NCC in children. Both children were treated with ribavirin, and follow-up imaging had shown significant resolution of signal changes. Both the children had shown marked clinical improvement. Ribavirin was found to be beneficial in reducing the morbidity in our patients. DOI: 10.4103/1817-1745.187644

**NAT**

**PMCID:** PMC4991158 **PMID:** 27606026

**MISC**

**Arora R**(1), George AJ(1), Eapen A(2), Devasia A(1). Carcinoma prostate masquerading as a hemorrhagic pelvic cyst.

Int Braz J Urol. 2016 Nov 2. doi: 10.1590/S1677-5538.IBJU.2015.0207. [Epub ahead of print]

**Author information:** (1)Department of Internal Medicine, Christian Medical College Hospital, Vellore, Tamil Nadu, India. Electronic address: dr.shalabharora@gmail.com. (2)Department of Internal Medicine, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

**INTL**

**PMCID:** PMC5032849 **PMID:** 27802006

**MISC**

**Arumugam R**(1), Rai E(2), Ancheri S(2), Thulasiraman R(3).

Unusually narrow caudal space with undue resistance to drug injection in a congenital adrenal hyperplasia child.

Paediatr Anaesth. 2016 Nov;26(11):1117-1118. doi: 10.1111/pan.12962.

**Author information:**

(1)Department of Anaesthesia, Christian Medical College, Vellore, Tamil Nadu, India. sendmailtodrrajasekar@gmail.com. (2)Department of Anaesthesia, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Anaesthesia, Government Vellore Medical College, Vellore, Tamil Nadu, India.

**INTL**

**PMID:** 27747980

**MISC**

**Arun S**(1), Kumar M(2), Ross BJ(1).

mediastinal bronchogenic cyst mimicking congenital lobar emphysema.

BMJ Case Rep. 2016 Sep 8;2016. pii: bcr2016216704. doi: 10.1136/bcr-2016-216704.

**Author information:**

(1)Department of Neonatology, Christian Medical College and Hospital Vellore, Vellore, Tamil Nadu, India. (2)Department of Neonatology, Christian Medical College, Vellore, Tamil Nadu, India.

Bronchogenic cyst (BC) is a rare congenital malformation of the lung. Most patients remain asymptomatic until adulthood while some are symptomatic in the first few years of life. However, symptoms in newborn period are rare. We report a case of a 3-day-old preterm baby with respiratory distress diagnosed as congenital lobar emphysema on chest X-ray. A CT scan revealed a mediastinal cyst causing obstructive lobar emphysema.

**INTL**

**PMID:** 27609589

**MISC**

**Bal SK**(1), Gupta R, Vimala LR, Paul A, Thangakunam B, Christopher DJ.

A Curious Case of a Low-Protein Pleural Effusion. J Bronchology Interv Pulmonol. 2016 Jul;23(3):e23-4. doi: 10.1097/LBR.0000000000000280.

**Author information:**

(1)Departments of \*Pulmonary Medicine †Radiology, Christian Medical College Vellore, Tamil Nadu, India. DOI: 10.1097/LBR.0000000000000280

**INTL**

**PMID:** 27454476

**MISC**

**Bhageerathy PS**(1), Thomas A(1), Thomas V(1), Keshava SN(2), Peedicayil A(1).

Femoral Arterial Blowout Post Groin Recurrence in Vulvar Carcinoma - Novel Endovascular Management

Indian J Surg Oncol. 2016 Dec;7(4):456-459. Epub 2016 Apr 23.

**Author information:**

(1)Department of Gynaecologic Oncology, Christian Medical College, Vellore, Tamil Nadu 632004 India. (2)Department of Interventional Radiology, Christian Medical College, Vellore, Tamil Nadu 632004 India. DOI: 10.1007/s13193-016-0521-5

**NAT**

**PMID:** 27872535

**MISC**

**Bhowmick K**(1), Matthai T(2), Nesaraj J(2), Jepegnanam TS(2).

Claw Toe Deformity of the Foot due to Foreign Body Granuloma.

Foot Ankle Spec. 2016 Jun;9(3):271-4. doi: 10.1177/1938640015585965. Epub 2015 May 8.

**Author information:**

(1)Department of Orthopaedics, Christian Medical College, Vellore, Tamil Nadu, India kaushikbhowmick97@yahoo.co.in. (2)Department of Orthopaedics, Christian Medical College, Vellore, Tamil Nadu, India. We present a case of dynamic claw deformity of the right third toe due to a foreign body granuloma adhering to the flexor digitorum longus (FDL) tendon at the level of the body of the metacarpal bone. The deformity was completely corrected after removal of the granuloma and lengthening of the FDL tendon. A 25-year-old woman presented with pain and claw deformity of the right third toe, which corrected with ankle plantar flexion. Ultrasound and magnetic resonance imaging suggested the presence of foreign body granuloma of the right FDL tendon at the level of body of third metacarpal bone. On removal of the granuloma and Z-plasty of the FDL tendon, there was complete correction of the claw. In the reported literature, claw deformity is seen with compartment syndrome or ankle fractures due to fixed length phenomenon or checkrein deformity of the flexor tendons usually at the level of medial part of the ankle. Here, we present a case of checkrein claw deformity of the FDL tendon due to a foreign body granuloma. LEVELS OF EVIDENCE: Therapeutic, Level IV: Case study. © 2015 The Author(s). DOI: 10.1177/1938640015585965

**INTL**

**PMID:**25956874

**MISC**

**Bhowmick K(1), Varghese VD(2).**

Retrograde Intramedullary Nailing for Recurrent Fracture in Congenital Pseudarthrosis of the Tibia.

J Foot Ankle Surg. 2016 Nov - Dec;55(6):1287-1291. doi:

**Author information:**

(1)Assistant Professor, Department of Orthopaedics, Christian Medical College, Vellore, India. Electronic address: kaushikbhowmick97@yahoo.co.in. (2)Assistant Professor, Department of Orthopaedics, Christian Medical College, Vellore, India.

We present the case of a 23-year-old male with congenital pseudarthrosis of the tibia, who had undergone treatment with Ilizarov ring fixation and had experienced 4 episodes of repeat fracture. He had associated type 1 neurofibromatosis, and his radiographs confirmed a type 6 Boyd's congenital pseudarthrosis of the left tibia, with

concomitant arthritic ankle and subtalar joints. He was treated successfully with retrograde intramedullary nailing of the tibia and autologous bone grafting. At his final follow-up visit at 3 years postoperatively, he displayed complete union with no repeat fractures. Copyright © 2015 American College of Foot and Ankle Surgeons. Published by Elsevier Inc. All rights reserved. DOI: 10.1053/j.jfas.2015.07.009

**INTL**

**PMID:**26342666

**MISC**

**Burad DK(1), Ramakrishna B(1).**

Cytological diagnosis of biliary cryptococcosis in an immunocompromised patient with mid common bile duct stricture masquerading as cholangiocarcinoma.

Cytopathology. 2016 Sep 4. doi: 10.1111/cyt.12369. [Epub ahead of print]

**Author information:**

(1)Department of General Pathology, Christian Medical College, Vellore, Tamil Nadu, India. DOI: 10.1111/cyt.12369

**INTL**

**PMID:**27592857

**MISC**

**Chowdhury SD(1), Kurien RT(1), Bharath AK(1), Dutta AK(1), David D(1), Bharath CK(1), Joseph AJ(1).**

Endoscopic ultrasound-guided gastrojejunostomy with a Nagi stent for relief of jejunal loop obstruction following hepaticojejunostomy. Endoscopy. 2016;48 Suppl 1:E263-4. doi: 10.1055/s-0042-112971. Epub 2016 Aug 10.

**Author information:**

(1)Department of Gastroenterology, Christian Medical College, Vellore, Tamil Nadu, India. DOI: 10.1055/s-0042-112971

**INTL**

**PMID:**27509466

**MISC**

**Cunliffe NA(1), Kang G(2).**

Can Changes to Scheduling Enhance the Performance of Rotavirus Vaccines in Low-Income Countries?

J Infect Dis. 2016 Jun 1;213(11):1673-5. doi: 10.1093/infdis/jiw026. Epub 2016 Jan 27.

**Author information:**

(1)Centre for Vaccine Development and Evaluation, Institute of Infection and Global Health, University of Liverpool, United Kingdom.

(2) Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, Christian Medical College, Vellore, India. DOI: 10.1093/infdis/jiw026

**INTL**

**PMID:**26823336

**MISC**

**Devasia AJ(1), Irodi A(2), George B(3).**

Broncho-Pericardial Fistula Leading to Pneumopericardium Following Allogeneic Stem Cell Transplantation.

Indian J Pediatr. 2016 Oct;83(10):1206-7. doi: 10.1007/s12098-016-2117-z. Epub 2016 Apr 29.

**Author information:**

(1) Department of Clinical Hematology, Christian Medical College, Vellore, Tamil Nadu, 632004, India.

(2) Department of Radiology, Christian Medical College, Vellore, Tamil Nadu, India. (3) Department of Clinical Hematology, Christian Medical College, Vellore, Tamil Nadu, 632004, India.

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DOI: 10.1007/s12098-016-2117-z

**NAT**

**PMID:**27130507

**MISC**

D'sa SR(1), Peter JV(1), Chacko B(1), Pichamuthu K(1), Sathyendra S(2).

Intra-aortic balloon pump (IABP) rescue therapy for refractory cardiogenic shock due to scorpion sting envenomation.

Clin Toxicol (Phila). 2016;54(2):155-7. doi: 10.3109/15563650.2015.1116043. Epub 2015 Dec 22.

**Author information:**

(1) a Medical ICU, Christian Medical College, Vellore, Tamil Nadu, India; (2) b Department of Medicine, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND:** Cardiomyopathy, cardiogenic shock or acute pulmonary oedema are well recognised complications of scorpion sting envenomation occurring in about 1-3% of patients. Current treatment recommendations include afterload reduction using prazosin and improving cardiac contractility with inotropes like dobutamine. We report the use of intra-aortic balloon pump (IABP) as rescue therapy in a patient with refractory cardiogenic shock due to *Mesobuthus tamulus* (Indian red scorpion) envenomation. **CASE:** A 32-year-old woman was referred 24 h after a scorpion sting. At presentation she was ventilated and in circulatory shock (systolic blood pressure < 50 mmHg). After admission, the patient had four cardiac arrests (three episodes of pulseless ventricular tachycardia/ventricular fibrillation and one episode of

asystole) over the next few hours. Following resuscitation, despite a combination of dobutamine, noradrenaline, and adrenaline, blood pressure did not improve significantly. In view of persistent tachycardia (heart rate 160/min), catecholamine storm was suspected and prazosin was added. However, shock was refractory. Hence, IABP was considered as rescue therapy. Following initiation of IABP, there was improvement in cardiac function (improved ejection fraction) which translated to weaning of inotropes over 48 h and improved organ function (renal, respiratory) in the next 2-3 d. However, following extubation, on Day 8, she was noted to have features of hypoxic brain injury. This improved gradually. At discharge (Day 30) she was independent for activities of daily living and was able to mobilise without support. **CONCLUSION:** IABP could be generally considered as a rescue therapy in refractory cardiogenic shock in envenomations. DOI:

10.3109/15563650.2015.1116043

**INTL**

**PMID:**26696217

**MISC**

**Dutta AK(1), Ekbote AV, Thomas N, Omprakash S, Danda S.**

De Bary syndrome type B presenting with cardiac and genitourinary abnormalities.

Clin Dysmorphol. 2016 Oct;25(4):190-1. doi: 10.1097/MCD.0000000000000142.

**Author information:**

(1) Departments of a Clinical Genetics b Neonatology, Christian Medical College, Vellore, India. DOI: 10.1097/MCD.0000000000000142

**INTL**

**PMID:**27379772

**MISC**

**Garg P(1), Gupta N(2), Arora M(3).** Monoarticular Poncet Disease after Pulmonary Tuberculosis: A Rare Case Report and Review of Literature.

Perm J. Summer 2016;20(3). doi: 10.7812/TPP/15-199. Epub 2016 Jul 15.

**Author information:**

(1) Pathologist at the University College of Medical Sciences and Guru Tag Bahadur Hospital in Dilshad Garden, Delhi, India. drparitoshgarg@gmail.com. (2) Fellow in Clinical Immunology and Rheumatology at the Christian Medical College and Hospital in Vellore, Tamil Nadu, India. nik.gupta4u@gmail.com. (3) Orthopedician at the University College of Medical Sciences and Guru Tag Bahadur Hospital

in Dilshad Garden, Delhi, India.  
[drmkarora@yahoo.com](mailto:drmkarora@yahoo.com).

**INTRODUCTION:** Tuberculosis is a major health problem worldwide, more so in Asian countries and especially India. Being a communicable disease, it can affect the lives of many people. Tuberculosis has varied manifestations and can affect almost every part of the human body. Pulmonary tuberculosis is the most common form. Poncet disease (tuberculous rheumatism) is a polyarticular arthritis that occurs during acute tuberculosis infection in which no mycobacterial involvement can be found or no other known cause of polyarthritis is detected. **CASE PRESENTATION:** We describe an atypical presentation of active pulmonary tuberculosis with monoarticular Poncet disease of the right knee in a 24-year-old woman. **DISCUSSION:** The diagnosis of Poncet disease is mainly clinical with exclusion of other causes. It generally presents as an acute or subacute form; however, chronic forms have been described in the literature. DOI: 10.7812/TPP/15-199

**INT**

**PMCID:** PMC4991904 **PMID:** 27455057

**MISC**

**Garon J**(1), Orenstein W, John TJ.  
 The Need and Potential of Inactivated Poliovirus Vaccine.  
 Indian Pediatr. 2016 Aug 7;53 Suppl 1:S2-S6.

**Author information:**

(1)Division of Infectious Diseases, Emory University School of Medicine, Atlanta, Georgia, USA, and Retired Professor of Clinical Virology, Christian Medical College, Vellore, Tamil Nadu, India. Correspondence to: Julie Garon, Emory University, School of Medicine, Division of Infectious Diseases, 1462 Clifton Road, Room 446, Atlanta, GA 30322, USA.  
[julie.garon@emory.edu](mailto:julie.garon@emory.edu).

As the polio endgame progresses, the world will increasingly rely on inactivated polio vaccine (IPV) for protection against polio (wild and vaccine-related) and for risk mitigation during the phased removal of oral polio vaccine (OPV). IPV has already been introduced in most countries and strategies are underway to ensure the remaining OPV-only using countries succeed in introducing IPV in light of operational challenges. Questions remain as to the ideal dosing schedule for IPV in developing countries as well as the length of time for IPV to be administered beyond certification of eradication of wild polioviruses and total OPV withdrawal. IPV policies will likely evolve and new technologies will become available to meet unforeseen needs during this historical and unprecedented public health endeavor.

Pediatricians in India have a crucial role to play in this global effort by supporting the overall polio eradication strategy and ensuring that all targeted children in India receive IPV.

**NAT**

**PMID:** 27771632

**MISC**

**George A**(1), Peter D(1), Pulimood S(1), Manipadam MT(2), George B(3), Paul MJ(4), Thomas JK(4).

Rapidly progressing necrotic ulcerations and sinuses in specific cutaneous Hodgkin's disease.

Indian Dermatol Online J. 2016 Sep-Oct;7(5):436-438.

**Author information:**

(1)Department of Dermatology, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Pathology, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Haematology, Christian Medical College, Vellore, Tamil Nadu, India. (4)Department of Surgery, Christian Medical College, Vellore, Tamil Nadu, India.

DOI: 10.4103/2229-5178.190503

**NAT**

**PMCID:** PMC5038116 **PMID:** 27730051

**MISC**

**George AA**(1), Peter D(1), Masih D(2), Thomas M(2), Pulimood S(1).

Cutaneous metastases from signet cell carcinoma of the gut: A report of two cases.

Indian Dermatol Online J. 2016 Jul-Aug;7(4):281-4. doi: 10.4103/2229-5178.185462.

**Author information:**

(1)Department of Dermatology, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Pathology, Christian Medical College, Vellore, Tamil Nadu, India.

Cutaneous metastasis from visceral tumors is a rare entity with a reported incidence between 0.3% and 9.8%. These usually occur late in the course of the disease; the average time interval between the diagnosis of malignancy and presentation of cutaneous metastases has been reported to be 33 months. In rare instances (in about 0.8%-1.3% of patients), cutaneous metastases may be a pointer to an underlying undiagnosed malignancy. We report two patients presenting to us with soft, nodular, cutaneous lesions, which was the manifestation of metastatic signet cell carcinoma arising from the gut. We report these cases owing to their rarity.

DOI: 10.4103/2229-5178.185462

## NAT

PMCID: PMC4976407 PMID:27559503

## MISC

**George R(1)**, Santhanam S(2), Samuel R(3), Chapla A(4), Hilmarsen HT(5), BraathenGJ(5), Reinholt FP(6), Jahnsen F(6), Khnykin D(7).

Ichthyosis prematurity syndrome caused by a novel missense mutation in FATP4 gene—a case report from India.

Clin Case Rep. 2015 Dec 1;4(1):87-9. doi: 10.1002/ccr3.462. eCollection 2016.

**Author information:**

(1)Department of Dermatology Christian Medical College Vellore India. (2)Department of Neonatology Christian Medical College Vellore India. (3)Centre for Stem Cell Research Christian Medical College Vellore India. (4)Department of Endocrinology Christian Medical College Vellore India. (5)Section of Medical Genetics Department of Laboratory Medicine Telemark Hospital Skien Norway. (6)Department of Pathology Oslo- University Hospital- Rikshospitalet Oslo Norway. (7)Department of Pathology Oslo- University Hospital- Rikshospitalet Oslo Norway; Department of Dermatology Oslo- University Hospital- Rikshospitalet Oslo Norway.

Ichthyosis prematurity syndrome (IPS) is reported mainly from Scandinavia where most of the cases are homozygous or compound heterozygous for the nonsense mutation c.504C>A (p.Cys168\*) in exon3 indicating a common ancestor for this mutation. The occurrence of IPS in an Indian patient suggests that it is more widespread than previously reported. DOI: 10.1002/ccr3.462

## INTL

PMCID: PMC4706401 PMID:26783444

## MISC

**Ghosh GC(1)**, Sharma B(2).

Hypoglossal palsy in a case of cavernous sinus thrombosis.

Neurol India. 2016 Nov-Dec;64(6):1316-1318. doi: 10.4103/0028-3886.193802.

**Author information:**

(1)Department of Cardiology, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Medicine, PGIMER and Dr. RML Hospital, New Delhi, India.

DOI: 10.4103/0028-3886.193802

## NAT

PMID:27841209

## MISC

Godson HF(1),(2), Manickam R(3), Saminathan S(1), Ganesh KM(1), PonmalarR(1),(2).

The effect of influence quantities and detector orientation on small-field patient-specific IMRT QA: comparison of measurements with various ionization chambers.

Radiol Phys Technol. 2016 Dec 1. [Epub ahead of print]

**Author information:** (1)Department of Radiation Physics, Kidwai Memorial Institute of Oncology, Dr. M.H. Marigowda Road, Bangalore, 560 029, India. (2)Department of Radiotherapy, Christian Medical College, Vellore, India. (3)Department of Radiation Physics, Kidwai Memorial Institute of Oncology, Dr. M.H. Marigowda Road, Bangalore, 560 029, India. [drmravi59@yahoo.com](mailto:drmravi59@yahoo.com).

Intensity-modulated radiation therapy (IMRT) requires a patient-specific quality assurance (QA) program to validate the treatment plan and a high level of dosimetric accuracy in the treatment delivery. Dosimetric verification generally consists of both absolute- and relative-dose measurements in a phantom using ionization chambers. Measurements were carried out with three different ionization chambers (Scanditronix FC 65G, Exradin A18, and PTW PinPoint 31014) to assess the effects of influence quantities such as the stability, pre- and post-irradiation leakage, stem effect, polarity, and ion recombination on the IMRT point-dose verification with two different orientations. The Exradin A18 and PTW PinPoint ion chambers demonstrated noticeable leakage to magnitudes of 0.6 and 1.2%, whereas negligible leakage was observed with FC 65G ion chamber. Maximum deviations of 0.5 and 0.6% were noticed for the smallest field owing to the ion recombination effect with the PTW PinPoint ion chamber in the parallel and perpendicular orientations, respectively. The calculated total uncertainties of all influence quantities for the FC 65G, A18, and PTW PinPoint ion chambers were 0.5, 0.7, and 1.3%, respectively. The uncertainties determined for each chamber were incorporated into the point-dose measurements of 30 head and neck patient-specific QA plans, and the variation was found to be within  $\pm 3\%$ . The magnitude of the leakage in a small-volume ion chamber indicated the significance of incorporating the correction factors in the absolute-dose measurement. A paired t test analysis indicated that the influence quantities significantly affect the point-dose measurements in the patient-specific IMRT QA. DOI: 10.1007/s12194-016-0385-y

## INTL

PMID:27910001

**MISC**

**Gupta A(1)**, Moorthy RK(1), Prabhu AJ(2), Rajshekhar V(1).

Lumbar paraspinal primary high-grade leiomyosarcoma mimicking an extraforaminalschwannoma.

Neurol India. 2016 Sep-Oct;64(5):1071-4. doi: 10.4103/0028-3886.190226.

**Author information:**

(1)Department of Neurological Sciences, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

(2)Department of Pathology, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

DOI: 10.4103/0028-3886.190226

**NAT**

**PMID:**27625268

**MISC**

**Gupta M(1)**, Gnanasekaran KK, Manojkumar R, Thomas A, Sebastian A.

Extrauterine Placental Site Trophoblastic Tumor Involving the Vagina.

Int J Gynecol Pathol. 2016 Aug 10. [Epub ahead of print]

**Author information:**

(1)Departments of General Pathology (M.G., K.K.G., R.M.) Radiology Gynecologic Oncology (A.T., A.S.), Christian Medical College, Vellore, Tamil Nadu, India.

Very few cases of placental site trophoblastic tumor (PSTT) primarily involving the extrauterine sites have been reported to date. We report a case of a 29-year-old female who presented with a vaginal nodule 9 months after delivery at an outside hospital which was initially diagnosed as a poorly differentiated squamous cell carcinoma. Subsequently she was referred to our institute and on the basis of histology, mildly elevated serum  $\beta$ -HCG level, and immunohistochemistry, PSTT was diagnosed. After the completion of chemotherapy, the vaginal nodule completely regressed and serum  $\beta$ -hCG returned to the baseline. Her follow-up has been unremarkable. This case highlights the importance of the fact that PSTT can be easily misdiagnosed at extrauterine sites in the absence of proper clinical, histologic, and immunohistochemical correlation. DOI: 10.1097/PGP.0000000000000318

**INTL**

**PMID:**27513078

**MISC**

**Gupta M(1).**

Malignant melanoma of cervix.

BMJ Case Rep. 2016 Nov 28;2016. pii: bcr2016217970. doi: 10.1136/bcr-2016-217970.

**Author information:**

(1)Department of General Pathology, Christian Medical College, Vellore, Tamil Nadu, India.

A 68-year-old woman presented with symptoms of bleeding per vaginum. On examination, a growth was seen in the cervix, clinically considered to be squamous cell carcinoma. The growth was confined to the cervix and did not involve the parametria. However, on biopsy it was diagnosed as malignant melanoma. She underwent surgery elsewhere and was advised chemotherapy as these tumours are aggressive; however, she refused chemotherapy. She has been on regular follow-up and has an ongoing survival and disease-free period of more than 5 years. Primary cervical malignant melanomas are very rare as compared with vulval and vaginal counterparts and should be considered in the histological differential diagnosis of poorly differentiated malignant neoplasms involving cervix. Moreover, it is important to rule out metastasis from common primary sites such as skin, oesophagus, uveal tract and anorectal region before considering diagnosis of primary cervical melanoma. 2016 BMJ Publishing Group Ltd. DOI: 10.1136/bcr-2016-217970

**INTL**

**PMID:**27895081

**MISC**

**Gururani K(1)**, Kumar P(2).

Unusual presentation of left atrial myxoma.

BMJ Case Rep. 2016 Sep 1;2016. pii: bcr2016217089. doi: 10.1136/bcr-2016-217089.

**Author information:**

(1)Department of Cardiology, Christian Medical College and Hospital Vellore, Vellore, Tamil Nadu, India. (2)Department of Cardiology, Eternal Heart are Centre, Jaipur, Rajasthan, India. DOI: 10.1136/bcr-2016-217089

(2)Department of Cardiology, Eternal Heart are Centre, Jaipur, Rajasthan, India. DOI: 10.1136/bcr-2016-217089

**INTL**

**PMID:**27587750

**MISC**

**Herle K(1)**, Jehangir S(1).

Retained Wireless Capsule Endoscope in a Girl with suspected Crohn's Disease.

APSP J Case Rep. 2016 Sep 1;7(4):27. doi: 10.21699/ajcr.v7i4.466.

**Author information:**

(1)Department of Pediatric Surgery, Christian Medical College, Vellore, Tamil Nadu, INDIA.

Wireless capsule endoscopy (WCE) is one of the great milestones in the field of gastroenterology. It is versatile in image acquisition, painless and can reach parts of the small bowel not amenable to conventional endoscopy. The commonest complication with WCE is retention of the capsule. We report a case of retained capsule in a child who was being investigated for obscure gastrointestinal bleeding (OGIB). Operative intervention was required for its retrieval after two weeks of expectant management. DOI: 10.21699/ajcr.v7i4.466

**INTL**

**PMCID: PMC5027058 PMID:27672577**

**MISC**

**Irodi A(1), Leena RV(1), Prabhu SM(2), Gibikote S(3).** Role of Computed Tomography in Pediatric Chest Conditions.

Indian J Pediatr. 2016 Jul;83(7):675-90. doi: 10.1007/s12098-015-1955-4. Epub 2016 Feb 26.

**Author information:**

(1)Department of Radiology, Christian Medical College, Vellore, 632004, Tamil Nadu, India. (2)Department of Radiology, SSM Superspeciality Hospital, Hassan, Karnataka, India. (3)Department of Radiology, Christian Medical College, Vellore, 632004, Tamil Nadu, India. [gibikote@cmcvellore.ac.in](mailto:gibikote@cmcvellore.ac.in).

CT is the preferred cross-sectional imaging modality for detailed evaluation of anatomy and pathology of the lung and tracheobronchial tree, and plays a complimentary role in the evaluation of certain chest wall, mediastinal, and cardiac abnormalities. The article provides an overview of indications and different types of CT chest, findings in common clinical conditions, and briefly touches upon the role of each team member in optimizing and thus reducing radiation dose.

DOI: 10.1007/s12098-015-1955-4

**NAT**

**PMID:26916888**

**MISC**

**Jeba J(1), Backianathan S(2), Ishitha G(3), Singh A(4).** Oral and gastrointestinal symptomatic metastases as initial presentation of lung cancer.

BMJ Case Rep. 2016 Nov 18;2016. pii: bcr2016217539. doi: 10.1136/bcr-2016-217539.

**Author information:**

(1)Palliative Care Unit, Christian Medical College Hospital, Vellore, India. (2)Department of

Radiotherapy, Christian Medical College Hospital, Vellore, India. (3)Department of General Pathology, Christian Medical College and Hospital Vellore, Vellore, Tamil Nadu, India. (4)Department of Medical Oncology, Christian Medical College and Hospital, Vellore, India.

Metastasis to the tongue, duodenum or pancreas from primary lung cancer is uncommon. Primary lung cancer presenting with symptoms related to metastases at these sites, at initial presentation is extremely rare. We report a 45-year-old man with disseminated lung malignancy who presented with dyspepsia, melena, symptoms due to anaemia and swelling in the tongue. Oral examination revealed a hard submucosal anterior tongue lesion. Biopsies from the tongue lesion and the duodenal ulcer seen on upper gastrointestinal endoscopy were suggestive of metastasis from lung primary. CT revealed lung primary with disseminated metastasis to lung, liver, adrenals, kidneys, head and body of pancreas, duodenum and intra-abdominal lymph nodes. The patient was treated with palliative chemotherapy. The unusual presentation and diagnostic details are discussed. 2016 BMJ Publishing Group Ltd. DOI: 10.1136/bcr-2016-217539

**INTL**

**PMID:27864300**

**MISC**

**Jiwanmall SA(1), Kattula D(1).**

Obsessive-Compulsive Disorder Presenting with Compulsions to Urinate Frequently.

Indian J Psychol Med. 2016 Jul-Aug;38(4):364-5. doi: 10.4103/0253-7176.185953.

**Author information:**

(1)Department of Psychiatry, Christian Medical College, Vellore, Tamil Nadu, India.

Obsessive compulsive disorder (OCD) is a common psychiatric disorder which is easily recognized. However, sometimes patients of OCD present in such an atypical presentation of symptoms and a pathway to care involving multiple specialities. We report a case of a girl who had consulted several physicians and a urologist for frequent micturition, who was treated as a case of OCD after clarifying the compulsive nature of her symptom. There was significant improvement in her condition following 8 weeks of treatment with 200 mg of Sertraline and behavior therapy.

DOI: 10.4103/0253-7176.185953

**NAT**

**PMCID: PMC4980909 PMID:27570353**

**MISC**

**Joseph AA(1)**, Pulimood S(2), Manipadam MT(3), Viswabandya A(4), Sigamani E(3).

Extramedullary plasmacytoma: an unusual neoplasm in a HIV-positive patient. *Int J STD AIDS*. 2016 Sep;27(10):909-11. doi: 10.1177/0956462415605244. Epub 2015 Sep 22.

#### Author information:

(1)Department of Dermatology, Christian Medical College Hospital, Vellore, Tamil Nadu, India anjusushil2005@gmail.com. (2)Department of Dermatology, Christian Medical College Hospital, Vellore, Tamil Nadu, India. (3)Department of Pathology, Christian Medical College Hospital, Vellore, Tamil Nadu, India. (4)Department of Haematology, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

There is a wide range of plasma cell abnormalities in people living with HIV (PLHIV). Extramedullary plasmacytomas are not common in HIV infection, unlike plasmablastic lymphomas. An HIV-positive 44-year-old man on antiretroviral therapy presented with a rapidly progressing swelling on the face. Imaging revealed underlying bone destruction. Histologically, there was a tumour composed of small to medium-sized plasmacytoid cells admixed with many mature plasma cells and plasmablasts. These were positive for CD138 and MUM 1. Extramedullary multiple myeloma was ruled out as CD56 and cyclin D-1 were negative. EBV was negative. As the tumour cells were mostly mature, plasmablastic lymphoma was also excluded. The presence of a monoclonal protein (1 g%), IgG kappa type, was detected. Neoplasia of plasma cells acquires special clinical characteristics in PLHIV. These patients are younger, with a greater tendency to develop solitary extramedullary plasmacytomas with atypical clinical evolution and greater aggressiveness of the neoplastic process. All of these features, along with a high proliferation index (MIB1 60%) was found in our patient. We report this case for its rarity, histopathological dilemma and its atypical features in HIV infection. © The Author(s) 2015. DOI: 10.1177/0956462415605244

**INTL**

**PMID:**26400264

**MISC**

**Joseph G(1)**, Varghese MJ(2), George OK(1).  
Transjugular balloon mitral valvotomy in a patient with severe kyphoscoliosis.

*Indian Heart J*. 2016 Sep;68 Suppl 2:S11-S14. doi: 10.1016/j.ihj.2016.01.015. Epub 2016 Jan 29.

#### Author information:

(1)Department of Cardiology, Christian Medical College, Vellore, India. (2)Department of Cardiology,

Christian Medical College, Vellore, India. Electronic address: [drmithunjv@gmail.com](mailto:drmithunjv@gmail.com).

Balloon mitral valvotomy (BMV) performed by the conventional transfemoral approach can be difficult or even impossible in the presence of structural impediments such as severe kyphoscoliosis, gross cardiac anatomic distortion and inferior vena caval anomalies. A 25-year-old woman with severe thoracolumbar kyphoscoliosis due to poliomyelitis presented with symptomatic rheumatic mitral valve stenosis. After the failure of transfemoral BMV, the procedure was attempted from the right jugular access, using a modified septal puncture technique. The left atrium was entered from the jugular access and the mitral valve was crossed and dilated successfully using over the wire balloon technique. Transjugular BMV is an effective alternative in patients with kyphoscoliotic spine that preclude transfemoral approach. The detailed technique used for the procedure, its advantages as well as the other percutaneous treatment options are also discussed.

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DOI: 10.1016/j.ihj.2016.01.015

**NAT**

**PMCID:** PMC5067793 **PMID:**27751258

**MISC**

**Kalyaniwala K(1)**, Abhilash K(2), Victor PJ(3).

Cartap Hydrochloride Poisoning.

*J Assoc Physicians India*. 2016 Aug;64(8):91-92.

#### Author information:

(1)Senior House Surgeon. (2)Associate Professor, Accident and Emergency Department. (3)Assoc. Prof. and Ag. Head, Medical Intensive Care Unit, Christian Medical College (CMC), Vellore, Tamil Nadu.

Cartap hydrochloride is a moderately hazardous nereistoxin insecticide that is increasingly used for deliberate self-harm in India. It can cause neuromuscular weakness resulting in respiratory failure. We report a patient with 4% Cartap hydrochloride poisoning who required mechanical ventilation for 36-hours. He recovered without any neurological deficits. We also review literature on Cartap hydrochloride poisoning.

© Journal of the Association of Physicians of India 2011.

**NAT**

**PMID:**27762121

**MISC**

**Karuppiah Viswanathan AM(1)**, Irodi A(1), Keshava SN(2), Aneez J(3), Karthik G(3).

Arteriolympathic Fistula: An Unusual Cause of Spontaneous Swelling in the LeftSupraclavicular Region. *Cardiovasc Intervent Radiol.* 2016 Sep;39(9):1347-51. doi:10.1007/s00270-016-1348-8. Epub 2016 May 16.

**Author information:**

(1)Department of Radiology, Christian Medical College Hospital, Vellore, India.(2)Department of Radiology, Christian Medical College Hospital, Vellore, India. [aparna\\_shyam@yahoo.com](mailto:aparna_shyam@yahoo.com). (3)Department of Medicine, Christian Medical College Hospital, Vellore, India.

An abnormal fistulous communication between an artery and lymphatic system is a rare occurrence. We report a 38-year-old male presenting with sudden onset, spontaneous, pulsatile swelling in the left supraclavicular region following a recent cardiac catheterisation via right femoral arterial access. On evaluation, he was found to have a femoral arteriolympathic fistula. He was managed conservatively with ultrasound-guided compression with complete resolution of symptoms at follow-up. This case describes a hitherto unknown complication of percutaneous vascular cannulation presenting in an unusual manner, diagnosed with Doppler Ultrasonography and CT angiography and managed effectively with a non-invasive therapeutic image-guided manoeuvre.

DOI: 10.1007/s00270-016-1348-8

**INTL**

**PMID:**27184364

**MISC**

**Kharkongor MA(1)**, Cherian KE(2), Kodiatte TA(3), Paul TV(2).

Uncommon cause for anorexia and weight loss. *BMJ Case Rep.* 2016 Dec 16;2016. pii: bcr2016218675. doi: 10.1136/bcr-2016-218675.

**Author information:**

(1)Department of General Medicine, Christian Medical College, Vellore, TamilNadu, India. (2)Department of Endocrinology, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Pathology, Christian Medical College, Vellore, Tamil Nadu, India. DOI: 10.1136/bcr-2016-218675

**INTL**

**PMID:**27986696

**MISC**

**Kumar S(1).**

Paraquat tongue.

*Indian J Gastroenterol.* 2016 Jul;35(4):321. doi: 10.1007/s12664-016-0673-9. Epub2016 Jul 20.

**Author information:**

(1)Department of Pulmonary Medicine, Christian Medical College and Hospital, Vellore, 632 004, India. [jupitersap@gmail.com](mailto:jupitersap@gmail.com).

DOI: 10.1007/s12664-016-0673-9

**NAT**

**PMID:**27435617

**MISC**

**Mahajan A(1)**, Sen I(1), Hazra D(1), Agarwal S(1). Management of Epithelioid Sarcoma of the Inguinal Region with Vascular Invasion.

*Indian J Surg.* 2016 Aug;78(4):315-7. doi: 10.1007/s12262-015-1401-x. Epub 2015Nov 12.

**Author information:**

(1)Department of Vascular Surgery, CMC, Vellore, 632004 India.

Epithelioid sarcoma (ES) is a rare clinically polymorphic tumor that mimics both benign and malignant conditions. It presents with dermal or subcutaneous nodules on the extremities in young adults. We present here a case of epithelioid sarcoma of the inguinal region infiltrating the femoral vessels. Biopsy is diagnostic and good histopathological evaluation is critical in management.

DOI: 10.1007/s12262-015-1401-x

**NAT**

**PMCID:** PMC4987559 **PMID:**27574351

**MISC**

**Mahajan R(1)**, Aruldas BW(2), Sharma M(3), Badyal DK(4), Singh T(3).

Professionalism and ethics: A proposed curriculum for undergraduates.

*Int J Appl Basic Med Res.* 2016 Jul-Sep;6(3):157-63. doi:10.4103/2229-516X.186963.

**Author information:**

(1)Department of Pharmacology, Adesh Institute of Medical Sciences and Research, Bathinda, Punjab, India. (2)Department of Pharmacology, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Pediatrics, Christian Medical College, Ludhiana, Punjab, India. (4)Department of Pharmacology, Christian Medical College, Ludhiana, Punjab, India.

Professionalism is the attributes, behaviors, commitments, values, and goals that characterize a profession. In medical professional, it encompasses strong societal role and involves

emotional component too. On the other hand, ethics is the study of morality - careful and systematic analysis of moral decisions and behaviors and practicing those decisions. Medical ethics focuses primarily on issues arising out of the practice of medicine. It is generally believed that professionalism and ethics are caught by watching your teachers and seniors and not taught formally. Professionalism and ethics are reverently diffused passively to the students through "the hidden curriculum," leaving a lot to chance. However, over the time, it has been advocated that graduates need to be formally trained in the concepts of professionalism and ethics. In this paper, we propose a formal curriculum on professionalism and ethics, tailor-made for Indian medical graduates. DOI: 10.4103/2229-516X.186963

**INTL**

**PMCID: PMC4979294 PMID:27563578**

**MISC**

**Mani SS(1), Kodiatt T(2), Jagannati M(3).**

A rare presentation of plasmablastic lymphoma as cutaneous nodules in an immunocompromised patient. *Int J STD AIDS*. 2016 Oct 13. pii: 0956462416675037. [Epub ahead of print]

**Author information:**

(1)Department of General Medicine, Christian Medical College, Vellore, India selvinsr@gmail.com. (2)Department of General Pathology, Christian Medical College, Vellore, India. (3)Department of General Medicine, Christian Medical College, Vellore, India.

Plasmablastic lymphoma is a rare entity accounting for around 2.7% of all AIDS-related lymphomas. The oral cavity and gastrointestinal tract are the most common sites involved. We report a case of a 34-year-old HIV-positive woman with a rare presentation of cutaneous nodules all over the body. Due to overwhelming tumour burden, she developed tumour lysis syndrome during her hospital stay and succumbed to the illness. © The Author(s) 2016. DOI: 10.1177/0956462416675037

**INTL**

**PMID:27738277**

**MISC**

**Manik G(1), Jose J(2), Hygriv Rao B(3).**

Follicular thyroid carcinoma with tumour thrombus extending into superior vena cava and right atrium - A case report.

*Indian Heart J*. 2016 Sep;68 Suppl 2:S146-S147. doi: 10.1016/j.ihj.2016.05.016. Epub 2016 Jun 11.

**Author information:**

(1)Krishna Institute of Medical Sciences, Hyderabad, India. Electronic address: geetesh.manik@gmail.com. (2)Christian Medical College, Vellore, India. (3)Division of Pacing & Electrophysiology, Krishna Institute of Medical Sciences, Hyderabad, India.

Intra-cardiac extension of tumour thrombus of follicular carcinoma of thyroid is uncommon. We report a case of advanced thyroid carcinoma where tumour thrombus was well profiled with CT scan and transesophageal echo images and extension was noted from SVC into right atrium, with clinical features of superior vena cava syndrome. The clinical significance of the "ring sign" is discussed.

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**NAT**

**PMCID: PMC5067792 PMID:27751268**

**MISC**

**Manuel DA(1), Kumar P(2), Jose J(2).**

Incidentally detected large neonatal ductus arteriosus aneurysm. *Asian Cardiovasc Thorac Ann*. 2016 Nov;24(9):900-901. Epub 2015 May 15.

**Author information:**

(1)Department of Cardiology, Christian Medical College, Vellore, Tamil Nadu, India devi\_manny@rediffmail.com. (2)Department of Cardiology, Christian Medical College, Vellore, Tamil Nadu, India. DOI: 10.1177/0218492315585046

**INTL**

**PMID:25979874**

**MISC**

Mathews DM(1), John R(2), Verghese V(3), Parmar H(4), Chaudhary N(2), Mishra S(5), Mathew L(2).

Histoplasma capsulatum Infection with Extensive Lytic Bone Lesions Mimicking LCH.

*J Trop Pediatr*. 2016 Dec;62(6):496-499. Epub 2016 Jun 20.

**Author information:**

(1)Department of Pediatrics, Christian Medical College and Hospital, Vellore, Tamil Nadu, India divyamathews82@gmail.co. (2)Department of Pediatrics Haematology-Oncology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. (3)Department of Pediatrics Infectious Diseases, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. (4)Department of Pathology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. (5)Department of

Pediatrics, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. Multiple lytic bone lesions in a child can be a manifestation of various diseases like Langerhans cell histiocytosis, metastatic neuroblastoma, leukemia, hyperparathyroidism, multifocal osteomyelitis and histoplasmosis. Disseminated histoplasmosis caused by *Histoplasma capsulatum* var. *duboisii* is well known to present with multiple osteolytic lesions in immunocompromised adults and is mostly restricted to the African subcontinent. Histoplasmosis seen in American and Asian countries is caused by *Histoplasma capsulatum* var. *capsulatum*, which presents with pulmonary and systemic manifestations and rarely bone involvement. We report a case of histoplasmosis, caused by *H. capsulatum* var. *capsulatum* with extensive lytic bone lesions in a 13 year old immunocompetent boy who presented with prolonged fever, weight loss and multiple boggy swellings. He responded to amphotericin and is currently on Itraconazole. This case is unique for extensive osteolytic lesions with *H. capsulatum* var. *capsulatum* infection in an immunocompetent child. © The Author [2016]. Published by Oxford University Press. All rights reserved. For Permissions, please email: [journals.permissions@oup.com](mailto:journals.permissions@oup.com). DOI: 10.1093/tropej/fmw040

INTL

PMID:27329388

MISC

**Muthusamy K(1)**, Ekbote AV(2), Thomas MM(1), Aaron S(1), Mathew V(1), Patil AB(1), Sivadasan A(1), Prabhakar AT(1), Yoganathan S(1), Alexander M(1). Biotin thiamine responsive basal ganglia disease-A potentially treatable inborn error of metabolism. *Neurol India*. 2016 Nov-Dec;64(6):1328-1331. doi: 10.4103/0028-3886.193797.

**Author information:**

(1)Department of Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India.  
(2)Department of Medical Genetics, Christian Medical College, Vellore, Tamil Nadu, India.  
DOI: 10.4103/0028-3886.193797

NAT

PMID:27841215

MISC

**Naina P(1)**, Syed KA(2), Koshy L(1), Mathews SS(3). Sublingual dermoid causing stertor in an infant. *BMJ Case Rep*. 2016 Sep 16;2016. pii: bcr2016217135. doi: 10.1136/bcr-2016-217135.

**Author information:**

(1)Department of ENT, Christian Medical College and Hospital Vellore, Vellore, Tamil Nadu, India.

(2)Department of Otorhinolaryngology, Head & Neck Surgery, Christian Medical College and Hospital Vellore, Vellore, Tamil Nadu, India.  
(3)Department of ENT, Christian Medical College, Vellore, Tamil Nadu, India.

Sublingual dermoids are uncommon lesions in the floor of mouth. The most common age of presentation is early adulthood, but presentation in infancy has also been reported. This report highlights the clinical presentation and treatment challenges in infants. An 8-month-old infant presented with inability to close mouth, intermittent stertor and snoring. MRI suggested a sublingual dermoid which was confirmed on histopathology of the surgically enucleated specimen. Sublingual dermoids are uncommon lesions of the floor of mouth. The age of presentation of a sublingual dermoid depends on the initial size of the lesion. Large sublingual dermoids in neonates can present with respiratory embarrassment and need early surgical intervention. Surgical enucleation via an intraoral approach is the treatment of choice with external approach reserved for very large cysts below the mylohyoid. Large sublingual cysts can present with anaesthetic challenges and may need fiberoptic intubation.

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INTL

PMID:27637278

MISC

**Nirmal B(1).**

Finger-shaped Red Light Emitting Diode to Ascertain the Depth of Periungual Wart. *J Cutan Aesthet Surg*. 2016 Jul-Sep;9(3):201-203.

**Author information:**

(1)Department of Dermatology, Christian Medical College, Vellore, India.

Management of periungual wart is a great challenge, especially when there is subungual extension. The major cause of recurrence of wart is improper clinical assessment of its extent and not directing therapy against the entire wart. This difficulty of ascertaining its extent could be overcome with this finger-shaped red light emitting diode device. Red light in the device penetrates the thick palmar skin and dark constitutive skin colour due to its longer wavelength.

DOI: 10.4103/0974-2077.191655

NAT

PMCID: PMC5064687 PMID:27761093

**MISC**

**Rajan RJ**(1), Mohanraj P(2), Rose W(3).  
Subcutaneous Basidiobolomycosis Resembling  
Fournier's Gangrene.  
J Trop Pediatr. 2016 Oct 29. pii: fmw075. [Epub ahead  
of print]

**Author information:**

(1)Department of Pediatrics, Christian Medical College, Vellore 632004, India. (2)Department of Microbiology, Christian Medical College, Vellore 632004, India. (3)Department of Pediatrics, Christian Medical College, Vellore 632004, India  
winsleyrose@cmcvellore.ac.in.

Basidiobolomycosis is an uncommon cutaneous zygomycete infection typically seen in immunocompetent individuals. Diagnosis can be made by biopsy and fungal culture of the lesion. Treatment with Potassium iodide and co-trimoxazole is simple and effective. Early and accurate diagnosis of basidiobolomycosis is essential to avoid dissemination and mortality. We present a case with basidiobolomycosis resembling Fournier's gangrene.

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**INTL**

**PMID:**27794531

**MISC**

**Rajan SJ**(1), Jacob TM(2), Sathyendra S(1).  
Vertical integration of basic science in final year of medical education.  
Int J Appl Basic Med Res. 2016 Jul-Sep;6(3):182-5. doi:  
10.4103/2229-516X.186958.

**Author information:**

(1)Department of Medicine Unit 3, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Anatomy, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND:** Development of health professionals with ability to integrate, synthesize, and apply knowledge gained through medical college is greatly hampered by the system of delivery that is compartmentalized and piecemeal. There is a need to integrate basic sciences with clinical teaching to enable application in clinical care.

**AIM:** To study the benefit and acceptance of vertical integration of basic science in final year MBBS undergraduate curriculum.

**MATERIALS AND METHODS:** After Institutional Ethics Clearance, neuroanatomy refresher classes with clinical application to neurological diseases were held

as part of the final year posting in two medical units. Feedback was collected. Pre- and post-tests which tested application and synthesis were conducted. Summative assessment was compared with the control group of students who had standard teaching in other two medical units. In-depth interview was conducted on 2 willing participants and 2 teachers who did neurology bedside teaching.

**RESULTS:** Majority (>80%) found the classes useful and interesting. There was statistically significant improvement in the post-test scores. There was a statistically significant difference between the intervention and control groups' scores during summative assessment (76.2 vs. 61.8 P < 0.01). Students felt that it reinforced, motivated self-directed learning, enabled correlations, improved understanding, put things in perspective, gave confidence, aided application, and enabled them to follow discussions during clinical teaching.

**CONCLUSION:** Vertical integration of basic science in final year was beneficial and resulted in knowledge gain and improved summative scores. The classes were found to be useful, interesting and thought to help in clinical care and application by majority of students.

DOI: 10.4103/2229-516X.186958

**INTL**

**PMCID:** PMC4979300 **PMID:**27563584

**MISC**

**Rajshekhhar V**(1).  
Highest cited papers in Neurology India.  
Neurol India. 2016 Nov-Dec;64(6):1400. doi:  
10.4103/0028-3886.193838.

**Author information:**

(1)Department of Neurological Sciences, Christian Medical College Hospital, Vellore, India.

DOI: 10.4103/0028-3886.193838

**NAT**

**PMID:**27841252

**MISC**

**Rajshekhhar V**(1).  
Author's reply.  
Neurol India. 2016 Jul-Aug;64(4):839-40. doi:  
10.4103/0028-3886.185376.

**Author information:**

(1)Department of Neurological Sciences, Christian Medical College Hospital, Vellore - 632 004, Tamil Nadu, India.

DOI: 10.4103/0028-3886.185376

**NAT**

**PMID:**27381155

## MISC

**Ramassamy S**(1), Gibikote S(2), George RE(1).  
Anonychia with absent phalanges and brachydactyly:  
A report of two unrelated cases.  
Indian J Dermatol Venereol Leprol. 2016 Nov-  
Dec;82(6):693-695. doi:10.4103/0378-6323.184198.

**Author information:**

(1)Department of Dermatology, Venereology and Leprosy, Christian Medical College and Hospital, Vellore, Tamil Nadu, India. (2)Department of Radiology, Venereology and Leprosy, Christian Medical College and Hospital, Vellore, Tamil Nadu, India.

DOI: 10.4103/0378-6323.184198

## NAT

PMID:27320764

## MISC

**Ravindran PB**(1),(2),(3).

A study of Winston-Lutz test on two different electronic portal imaging devices and with low energy imaging.

Australas Phys Eng Sci Med. 2016 Sep;39(3):677-85.  
doi:10.1007/s13246-016-0463-9. Epub 2016 Jul 19.

**Author information:**

(1)Department of Radiation Oncology, The Brunei Cancer Center, Bandar Seri Begawan, Brunei Darussalam. bpaulravindran@gmail.com. (2)Faculty of Science, University of Brunei Darussalam, Bandar Seri Begawan, Brunei Darussalam. bpaulravindran@gmail.com. (3)Christian Medical College, Vellore, India. [bpaulravindran@gmail.com](mailto:bpaulravindran@gmail.com).

Stereotactic radiosurgery requires sub-millimetre accuracy in patient positioning and target localization. Therefore, verification of the linear accelerator (linac) isocentre and the laser alignment to the isocentre is performed in some clinics prior to the treatment using the Winston-Lutz (W-L) test with films and more recently with images obtained using the electronic portal imaging devices (EPID). The W-L test is performed by acquiring EPID images of a radio-opaque ball of 6 mm diameter (the W-L phantom) placed at the isocentre of the linac at various gantry and table angles, with a predefined small square or circular radiation beam. In this study, the W-L test was performed on two linacs having EPIDs of different size and resolution, viz, a TrueBeam™ linac with aS1000 EPID of size 40 × 30 cm(2) with 1024 × 768 pixel resolution and an EDGE™ linac having an EPID of size 43 × 43 cm(2) with pixel resolution of 1280 × 1280. In order to determine the displacement of the radio-opaque ball centre from the radiation beam centre of the W-L test, an in-house MATLAB™ image processing

code was developed using morphological operations. The displacement in radiation beam centre at each gantry and couch position was obtained by determining the distance between the radiation field centre and the radio-opaque ball centre for every image. Since the MATLAB code was based on image processing that was dependent on the image contrast and resolution, the W-L test was also compared for images obtained with different beam energies. The W-L tests were performed for 6 and 8 MV beams on the TrueBeam™ linac and for 2.5 and 6 MV beams on the EDGE™ linac with a higher resolution EPID. It was observed that the images obtained with the EPID of higher resolution resulted in same accuracy in the determination of the displacement between the centres of the radio-opaque ball and the radiation beam, and significant difference was not observed with images acquired with different energies. It is concluded that the software based on morphological operations provided an accurate estimation of the displacement of the ball centre from the radiation beam center.

DOI: 10.1007/s13246-016-0463-9

## INTL

PMID:27435984

## MISC

**Rodger A**(1), Sen I(1), Nidugala Keshava S(2), Agarwal S(1).

Diagnosis of a varicose aneurysm is rare but not obsolete.

J Vasc Surg Venous Lymphat Disord. 2016 Oct;4(4):482. doi:10.1016/j.jvsv.2015.10.050.

**Author information:**

(1)Department of Vascular Surgery, Christian Medical College, Vellore, Tamil Nadu, India. (2)Department of Radiology, Christian Medical College, Vellore, Tamil Nadu, India.

DOI: 10.1016/j.jvsv.2015.10.050

## INTL

PMID:27639004

## MISC

**Rogawski ET**(1), Westreich DJ, Kang G, Ward HD, Cole SR.

Brief Report: Estimating Differences and Ratios in Median Times to Event.

Epidemiology. 2016 Nov;27(6):848-51. doi: 10.1097/EDE.0000000000000539.

**Author information:**

(1)From the aDepartment of Epidemiology, University of North Carolina at Chapel Hill, Chapel Hill, NC; bDivision of Gastrointestinal Sciences, Christian Medical College, Vellore, India; and

cDivision of Geographic Medicine and Infectious Diseases, Tufts Medical Center, Boston, MA.

Time differences and time ratios are often more interpretable estimates of effect than hazard ratios for time-to-event data, especially for common outcomes. We developed a SAS macro for estimating time differences and time ratios between baseline-fixed binary exposure groups based on inverse probability-weighted Kaplan-Meier curves. The macro uses pooled logistic regression to calculate inverse probability of censoring and exposure weights, draws Kaplan-Meier curves based on the weighted data, and estimates the time difference and time ratio at a user-defined survival proportion. The macro also calculates the risk difference and risk ratio at a user-specified time. Confidence intervals are constructed by bootstrap. We provide an example assessing the effect of exclusive breastfeeding during diarrhea on the incidence of subsequent diarrhea in children followed from birth to 3 years in Vellore, India. The SAS macro provided here should facilitate the wider reporting of time differences and time ratios.

DOI: 10.1097/EDE.0000000000000539

**INTL**

**PMCID: PMC5039102 PMID:27465526**

**MISC**

**Ross B(1)**, Kumar M, Srinivasan H, Ekbote AV. Isoleucine Deficiency in a Neonate Treated for Maple Syrup Urine Disease Masquerading as Acrodermatitis Enteropathica. *Indian Pediatr.* 2016 Aug 8;53(8):738-40.

**Author information:**

(1)Departments of Neonatology, \*Pediatrics and #Clinical Genetics Unit, Christian Medical College, Vellore, Tamilnadu, India. Correspondence to: Dr Benjamin Ross, Department of Neonatology, Christian Medical College, Vellore 632 004, Tamilnadu, India. [benjaminross@cmcvellore.ac.in](mailto:benjaminross@cmcvellore.ac.in).

**BACKGROUND:** Special diet with restricted branched-chain-amino-acids used for treating maple syrup urine disease can lead to specific amino acid deficiencies.

**CASE CHARACTERISTICS:** We report a neonate who developed skin lesions due to isoleucine deficiency while using specialised formula.

**INTERVENTION/OUTCOME:** Feeds were supplemented with expressed breast milk. This caused biochemical and clinical improvement with resolution of skin lesions.

**MESSAGE:** Breast milk is a valuable and necessary adjunct to specialized formula in maple syrup urine disease to prevent specific amino acid deficiency in the neonatal period.

**NAT**

**PMID:27567652**

**MISC**

**Sajan JE(1)**, John JA(1), Grace P(1), Sabu SS(1), Tharion G(1).

Wii-based interactive video games as a supplement to conventional therapy for rehabilitation of children with cerebral palsy: A pilot, randomized controlled trial.

*Dev Neurorehabil.* 2016 Nov 15;1-7. [Epub ahead of print]

**Author information:**

(1)a Department of Physical Medicine and Rehabilitation, Christian Medical College, Vellore, India.

**OBJECTIVE:** To assess the effect of interactive video gaming (IVG) with Nintendo Wii (Wii) supplemented to conventional therapy in rehabilitation of children with cerebral palsy (CP). **DESIGN:** Randomized, controlled, assessor-blinded study.

**PARTICIPANTS:** Children with CP; 10 children each in the control and intervention groups.

**INTERVENTION:** IVG using Wii, given as a supplement to conventional therapy, for 45 min per day, 6 days a week for 3 weeks. The children in the control group received conventional therapy alone.

**OUTCOME MEASURES:** Posture control and balance, upper limb function, visual-perceptual skills, and functional mobility.

**RESULTS:** Significant improvement in upper limb functions was seen in the intervention group but not in the control group. Improvements in balance, visual perception, and functional mobility were not significantly different between control and intervention groups.

**CONCLUSIONS:** Wii-based IVG may be offered as an effective supplement to conventional therapy in the rehabilitation of children with CP.

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**INTL**

**PMID:27846366**

**MISC**

**Samuel R(1)**, Russell PS(2), Paraseth TK(2), Ernest S(2), Jacob KS(2).

Development and validation of the Vellore Occupational Therapy Evaluation Scaletto assess functioning in people with mental illness.

*Int J Soc Psychiatry.* 2016 Aug 26. pii: 0020764016664754. [Epub ahead of print]

**Author information:**

(1)Department of Psychiatry, Christian Medical College, Vellore, India reemasamuel@cmcvellore.ac.in.  
 (2)Department of Psychiatry, Christian Medical College, Vellore, India.

**BACKGROUND:** Available occupational therapy assessment scales focus on specific areas of functioning. There is a need for comprehensive evaluation of diverse aspects of functioning in people with mental illness.

**AIM:** To develop a comprehensive assessment scale to evaluate diverse aspects of functioning among people with mental illness and to assess its validity and reliability.

**METHODS:** Available instruments, which evaluate diverse aspects of functioning in people with mental illness, were retrieved. Relevant items, which evaluate specific functions, were selected by a committee of mental health experts and combined to form a comprehensive instrument. Face and content validity and feasibility were assessed and the new instrument was piloted among 60 patients with mental illness. The final version of the instrument was employed in 151 consecutive clients, between 18 and 60 years of age, who were also assessed using Global Assessment of Functioning (GAF), Occupational Therapy Task Observation Scale (OTTOS), Social Functioning Questionnaire (SFQ), Rosenberg Self Esteem Scale (RSES) and Pai and Kapur Family Burden Interview Schedule (FBIS) by two therapists. The inter-rater reliability and test-retest reliability of the new instrument (Vellore Occupational Therapy Evaluation Scale (VOTES)) were also evaluated.

**RESULTS:** The new scale had good internal consistency (Cronbach's  $\alpha = .817$ ), inter-rater reliability .928 (.877-.958) and test-retest reliability .928 (.868-.961). The correlation between the general behaviour domain (Pearson's Correlation Coefficient [PCC] = -.763,  $p = .000$ ), task behaviour (PCC = -.829,  $p = .000$ ), social skills (PCC = -.351,  $p = .000$ ), intrapersonal skills (PCC = -.208,  $p = .010$ ), instrumental activities of daily living (IADL) (PCC = -.329,  $p = .038$ ) and leisure activities (PCC = -.433,  $p = .005$ ) scores of VOTES with the corresponding domains in the scales used for comparison was statistically significant. The correlation between the total score of VOTES and the total scores of OTTOS, SFQ and RSES was also statistically significant suggesting convergent validity. The correlation between the total score of VOTES with the total score of FBI is not statistically significant, implying good divergent validity.

**CONCLUSION:** VOTES seems to be a promising tool to assess overall functioning of people with mental illness.

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DOI: 10.1177/0020764016664754

**INTL**

**PMID:**27565950

**MISC**

**Samuel VJ**(1), Gibikote S(2), Kirupakaran H(3).

The routine pre-employment screening chest radiograph: Should it be routine?  
 Indian J Radiol Imaging. 2016 Jul-Sep;26(3):402-404.

**Author information:**

(1)Radiologist, Christian Fellowship Hospital, Oddanchatram, Tamil Nadu, India. (2)Department of Radiology, Christian Medical College, Vellore, Tamil Nadu, India. (3)Department of Staff Health, Christian Medical College, Vellore, Tamil Nadu, India.

**BACKGROUND AND OBJECTIVE:** A routine chest radiograph is mandatory in many institutions as a part of pre-employment screening. The usefulness of this has been studied over the years keeping in mind the added time, cost, and radiation concerns. Studies conducted outside India have shown different results, some for and some against it. To our knowledge, there is no published data from India on this issue.

**MATERIALS AND METHODS:** A retrospective review of the reports of 4113 pre-employment chest radiographs done between 2007 and 2009 was conducted.

**RESULTS:** Out of 4113 radiographs, 24 (0.58%) candidates required further evaluation based on findings from the screening chest radiograph. Out of these, 7 (0.17%) candidates required appropriate further treatment.

**INTERPRETATION AND CONCLUSIONS:** The percentage of significant abnormalities detected which needed further medical intervention was small (0.17%). Although the individual radiation exposure is very small, the large numbers done nation-wide would significantly add to the community radiation, with added significant cost and time implications. We believe that pre-employment chest radiographs should be restricted to candidates in whom there is relevant history and/or clinical findings suggestive of cardiopulmonary disease.

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**NAT**

**PMCID:** PMC5036342 **PMID:**27857470

**MISC**

**Sathyakumar S**(1), Cherian KE(1), Jebasingh F(1), Hepzhibah J(2), Kapoor N(1), Paul TV(1).  
 Visual Vignette.

Endocr Pract. 2016 Sep 15. [Epub ahead of print]

**Author information:**

(1)1Department of Endocrinology, Diabetes & Metabolism. (2)2 Department of Nuclear Medicine, Christian Medical College, Vellore, India.

DOI: 10.4158/EP161307.VV

**INTL**

**PMID:**27631840

**MISC**

**Singh O(1)**, Muthukrishna Pandian R(2), Sudhakar Kekre N(2).

Alkaptonuric Ochronosis.

Urology. 2016 Nov 2. pii: S0090-4295(16)30654-9. doi:10.1016/j.urology.2016.09.035. [Epub ahead of print]

**Author information:**

(1)Department of Urology, Christian Medical College and Hospital, Vellore, Tamilnadu 632004, India. Electronic address: dronkarsingh@gmail.com. (2)Department of Urology, Christian Medical College and Hospital, Vellore, Tamilnadu 632004, India.

Alkaptonuria is a rare autosomal recessive disorder of tyrosine metabolism. Deficiency of homogentisate 1,2 dioxygenase results in accumulation of oxidized homogentisic acid in the connective tissues of the skin, eyes and ears, musculoskeletal system, and cardiac valves, and in urolithiasis. Excretion of excessive homogentisic acid in urine causes dark-colored urine on exposure to air. We present a case of alkaptonuria with multiple system involvement, who presented with lower urinary tract symptoms secondary to vesical and prostatic calculi.

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**INTL**

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**MISC**

**Sonambekar A(1)**, Gupta N(2), Swadi A(3), Tomar LR(4).

Carpal Tunnel Syndrome in Sarcoidosis: A Case Report of a Rare Neurologic Manifestation.

Perm J. 2016 Fall;20(4). doi: 10.7812/TPP/15-168. Epub 2016 Sep 13.

**Author information:**

(1)Physician at the University College of Medical Sciences and at Guru Teg Bahadur Hospital in Dilshad Garden, Delhi, India. ajinkya.sonambekar@gmail.com. (2)Fellow in Clinical Immunology & Rheumatology at the Christian Medical College in Vellore, India. nik.gupta4u@gmail.com. (3)Radiologist at Byramjee Jeejeebhoy Government Medical College in Pune,

India. akanksha.swadi@gmail.com. (4)Resident in the Neurology Department at the Govind Ballabh Pant Institute of Post Graduate Medical Education and Research in Delhi, India. [drlaxmikantucms@yahoo.com](mailto:drlaxmikantucms@yahoo.com).

**INTRODUCTION:** Sarcoidosis is a multisystemic inflammatory disease with myriad clinical manifestations. Neurologic involvement in sarcoidosis is uncommon. Peripheral neuropathic presentations include mononeuropathy, mononeuritis multiplex, and generalized sensory, motor, autonomic, and sensorimotor polyneuropathies.

**CASE PRESENTATION:** We report a case of carpal tunnel syndrome caused by sarcoidosis in a 30-year-old woman. Other causes of carpal tunnel syndrome were ruled out. The patient responded well to the standard line of corticosteroid treatment and wrist splinting.

**DISCUSSION:** Carpal tunnel syndrome caused by sarcoidosis is a rare presentation. The mechanism of neurologic involvement in sarcoidosis is not clear.

DOI: 10.7812/TPP/15-168

**INTL**

**PMCID:** PMC5101080 **PMID:**27643973

**MISC**

**Srinivasan C(1)**, Kurian GP(1), Mariappan R(1).

A case of bronchiectasis needing lung isolation for cerebello pontine angle tumorexcision: Anesthetic challenges.

Saudi J Anaesth. 2016 Jul-Sep;10(3):359-61. doi: 10.4103/1658-354X.174923.

**Author information:**

(1)Department of Anesthesia, Christian Medical College, Vellore, Tamil Nadu, India.

The main goals of neuroanesthesia are the maintenance of adequate cerebral perfusion pressure, avoidance of hypercarbia, hypoxemia, and to provide better brain relaxation. Providing anesthesia for a patient with bronchiectasis needing lung isolation for craniotomy can be challenging. A 56-year-old male patient, case of right lung bronchiectasis with a right cerebello pontine angle tumor underwent excision in the left lateral position. Since he had severe bronchiectasis of the right lung, we had isolated the right lung using right-sided double lumen tube to avoid spillage. Intraoperative split lung test was performed to assess the right lung contribution on carbon dioxide (CO<sub>2</sub>) elimination and found that there was a significant contribution from the right lung. Hence, both lungs were ventilated to control

CO<sub>2</sub>. The importance of lung isolation to prevent spillage and avoidance of one lung ventilation to control the arterial CO<sub>2</sub> are highlighted in this case report. By providing a balanced anesthetic keeping both, the neurosurgical and thoracic concerns are important for better postoperative outcome.

DOI: 10.4103/1658-354X.174923

**INTL**

**PMCID: PMC4916829 PMID:27375400**

**MISC**

**Sundararaj MS**(1), Singh G, Prabhu K.

Supplementary Motor Area (SMA) Syndrome: An Enigma to Anesthesiologists!

J Neurosurg Anesthesiol. 2016 Oct;28(4):438-9. doi: 10.1097/ANA.0000000000000243.

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**INTL**

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**MISC**

**Syed KA**(1), Raja K(2), Kolehakkat AA(3), Varghese AM(2), Al Abri R(3), KurienM(2).

Congenital midnasal stenosis - A novel technique for management.

Int J Pediatr Otorhinolaryngol. 2016 Aug;87:117-20. doi:10.1016/j.ijporl.2016.06.014. Epub 2016 Jun 7.

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Neonates are obligate nasal breathers and nasal obstruction in a neonate is an emergency. Here we report two cases of congenital mid-nasal stenosis, discuss its presentation and diagnosis with description of a novel method of management.

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**MISC**

**Thangakunam B**(1), Isaac BT(1), Christopher DJ(1), Burad D(2).

Idiopathic pleuroparenchymal fibroelastosis - A rare idiopathic interstitial pneumonia.

Respir Med Case Rep. 2015 Nov 22;17:8-11. doi: 10.1016/j.rmcr.2015.11.004.eCollection 2016.

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Idiopathic pleuroparenchymal fibroelastosis is a rare idiopathic interstitial pneumonia. It was first described in 2004 and subsequently included in the ATS/ERS classification of idiopathic interstitial pneumonia in 2013. There have been few cases reported so far. The diagnostic criteria is still emerging and its etiology is being questioned. We report a case of pleuroparenchymal fibroelastosis probably idiopathic, the first of its kind to be reported from India, and a brief review of the literature.

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**MISC**

**Vyas R**(1), Faith M(1), Selvakumar D(1), Pulimood A(1), Lee M(2).

Project-based faculty development for e-learning. Clin Teach. 2016 Dec;13(6):405-410. doi: 10.1111/tct.12486. Epub 2016 Jan 18.

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**BACKGROUND:** The Christian Medical College, Vellore, in collaboration with Tufts University, Boston, conducted an advanced workshop in e-learning for medical faculty members in India.

**CONTEXT:** E-learning can enhance educational reforms for today's computer-literate generation, and keep faculty members up to speed in a rapidly changing world. The purpose of this paper is to report on the design and evaluation of a project-based faculty member development programme focused on developing faculty members as educators and as peer trainers who can use e-learning for educational reforms. **INNOVATION:** During a 2-day workshop, 29 participants in groups of two or three developed 13 e-learning projects for implementation in their institutions. Evaluation of the workshop was through written feedback from the participants at the end of the workshop and by telephone interview with one participant from each project group at the end of one year. Content analysis of qualitative data was performed. The participants reported that they were motivated to implement e-learning projects

and recognised the need for and usefulness of e-learning. The majority of projects (10 out of 13) that were implemented 'to some extent' or 'to a great extent' faced challenges with a lack of resources and administrative support, but faculty members were able to overcome them. E-learning can enhance educational reforms for today's computer-literate generation IMPLICATIONS: Designing feasible e-learning projects in small groups and obtaining hands-on experience with e-learning tools enhance the effectiveness of subsequent implementation. To successfully incorporate e-learning when designing educational reforms, faculty member training, continuing support and infrastructure facilities are essential. © 2016 John Wiley & Sons Ltd. DOI: 10.1111/tct.12486

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MISC

**Yadav VK**(1), Chavan R(2), Shetty A(2), Kulkarni K(3), Chugh A(4).

Lipomatous meningioma: a rare subtype of the meningioma.

Acta Neurol Belg. 2016 Dec;116(4):639-641. Epub 2016 Feb 1.

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MISC

**Yadav VK**(1), Sudhakar SV(2), Panwar J(2).

Pathognomonic MRI and MR spectroscopy findings in cerebral hydatid cyst.

Acta Neurol Belg. 2016 Sep;116(3):353-5. doi: 10.1007/s13760-015-0561-6. Epub 2015 Nov 2.

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MISC

**Yoganathan S**(1), Sudhakar SV(2), Thomas M(3), Dutta AK(4), Danda S(4).

"Eye of tiger sign" mimic in an adolescent boy with mitochondrial membraneprotein associated neurodegeneration (MPAN).

Brain Dev. 2016 May;38(5):516-9. doi: 10.1016/j.braindev.2015.10.017. Epub 2015 Nov 18.

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Neurodegeneration with brain iron accumulation (NBIA) refers to an inherited heterogeneous group of disorders pathologically characterized by focal brain iron deposition. Clinical phenotype, imaging findings and genotype are variable among the different types of this disorder. In this case report, we describe the imaging finding of an adolescent boy with mitochondrial membrane protein associated neurodegeneration (MPAN), a subentity of NBIA. Magnetic resonance imaging of brain revealed hypointensity of globi pallidi with medial medullary lamina appearing as a hyperintense streak in T2 weighted images. Mild cerebellar atrophy in T2 weighted images and blooming of substantia nigra and globi pallid in susceptibility weighted images were also observed. Imaging findings in patients with MPAN mimics the eye of tiger appearance in patients with pantothenate kinase associated neurodegeneration. Classical phenotype and eye of tiger sign mimic in imaging of patients with NBIA should raise the suspect for MPAN. Genetic studies helps in the confirmation of diagnosis of this neurodegenerative disorder. Copyright © 2015 The Japanese Society of Child Neurology. Published by Elsevier B.V. All rights reserved. DOI: 10.1016/j.braindev.2015.10.017

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