

Christian Medical College VELLORE



VOLUME 1 ISSUE 13 (JULY 2013 - DECEMBER 2013)



Research Digest

Research Digest

Editor's Message:

Dear Friends,

The Annual Research Digest for the term July to Dec 2013 a compilation of the Indexed publications of the institution is provided herewith. Though this is mean to include all publications that were generated by our scientists, students and faculty during this time period-there are certainly likely to be lacunae.

Do browse through the document and let us know if there are more of your publications which need to be added. We would like to thank Dodd Memorial Library, the staff at the research office and Dr Isaac Frank for assistant in compiling the current issue.

Dr. Nihal Thomas MD MNAMS DNB (Endo) FRACP (Endo) FRCP (Edin) FRCP (Glas)
Addl. Vice-Principal (Research)

Research Digest

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Special request to CMC Faculty

Please use the online submission facility on the Dodd Library Website to submit details of all your indexed and non indexed publications. Please also send pdf or word files of your publications to dodd@cmcvellore.ac.in so that we can have copies of all publications.

Dr. Nihal Thomas MD MNAMS DNB (Endo) FRACP (Endo) FRCP (Edin) FRCP (Glas)
Addl. Vice-Principal (Research)

Abraham, P.; H. Ramamoorthy and B. Isaac
Depletion of the cellular antioxidant system contributes to tenofovir disoproxil fumarate - induced mitochondrial damage and increased oxido-nitrosative stress in the kidney.

J Biomed Sci. 2013, 20: 61.

Department of Biochemistry, Christian Medical College, Bagayam, Vellore 632002, Tamil Nadu, India. premilaabraham@cmcvellore.ac.in

BACKGROUND: Nephrotoxicity is a dose limiting side effect of tenofovir, a reverse transcriptase inhibitor that is used for the treatment of HIV infection. The mechanism of tenofovir nephrotoxicity is not clear. Tenofovir is specifically toxic to the proximal convoluted tubules and proximal tubular mitochondria are the targets of tenofovir cytotoxicity. Damaged mitochondria are major sources of reactive oxygen species and cellular damage is reported to occur after the antioxidants are depleted. The purpose of the study is to investigate the alterations in cellular antioxidant system in tenofovir induced renal damage using a rat model.

RESULTS: Chronic tenofovir administration to adult Wistar rats resulted in proximal tubular damage (as evidenced by light microscopy), proximal tubular dysfunction (as shown by Fanconi syndrome and tubular proteinuria), and extensive proximal tubular mitochondrial injury (as revealed by electron microscopy). A 50% increase in protein carbonyl content was observed in the kidneys of TDF treated rats as compared with the control. Reduced glutathione was decreased by 50%. The activity of superoxide dismutase was decreased by 57%, glutathione peroxidase by 45%, and glutathione reductase by 150% as compared with control. Carbonic Anhydrase activity was decreased by 45% in the TDF treated rat kidneys as compared with control. Succinate dehydrogenase activity, an indicator of mitochondrial activity was decreased by 29% in the TDF treated rat kidneys as compared with controls, suggesting mitochondrial dysfunction.

CONCLUSION: Tenofovir- induced mitochondrial damage and increased oxidative stress in the rat kidneys may be due to depletion of the antioxidant system particularly, the glutathione dependent system and MnSOD.

INTL PMID: 23957306 PMCID: 3765371 BS

Agarwal, I.; J. Iswarya; J. Flemming; S. Chaturvedi; L. G. Mathew; S. D. Varkey and R. D. Sahni

Prospective study to determine the usefulness of urinary neutrophil gelatinase associated lipocalin (NAGL) as an early and sensitive marker of urinary tract infection (UTI) in children.

Pediatric Nephrology. 2013, 28(8): 1358-1358.

[Agarwal, Indira; Iswarya, J.; Flemming, Joe; Chaturvedi, Swasti; Mathew, Leni Grace; Varkey, Sneha Dena; Sahni, Rani Diana]

Christian Med Coll & Hosp, Vellore, Tamil Nadu, India.

INTL WOS:000321387201040 BS

Agarwal, I.; N. Aswathaman; L. K. Joseph and R. vSinha
MANNITOL - A NOVEL THERAPY FOR REDUCING SEVERE EDEMA IN CHILDREN WITH NEPHROTIC SYNDROME.

Pediatric Nephrology. 2013, 28(8): 1595-1595.

[Agarwal, Indira; Aswathaman, Nalini; Joseph, Leni Kumar; vSinha, Raji]

Christian Med Coll & Hosp, Vellore, Tamil Nadu, India.

INTL WOS:000321387203187 BS

Athiyarath, R.; A. Srivastava and E. S. Edison

Molecular basis of primary iron overload in India and the role of serum-derived factors in hepcidin regulation.

Annals of Hematology. 2013, 92(6): 843-844.

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

INTL BS

Athiyarath, R.; N. Arora; F. Fuster; R. Schwarzenbacher; R. Ahmed; B. George; M. Chandy; A. Srivastava; A. M. Rojas; M. Sanchez and E. S. Edison

Two novel missense mutations in iron transport protein transferrin causing hypochromic microcytic anaemia and haemosiderosis: molecular characterization and structural implications.

Br J Haematol. 2013, 163(3): 404-407.

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

INTL PMID: 23888904 BS

Bashyam, M. D.;A. K. Chaudhary;M. Kiran;V. Reddy;H. A. Nagarajaram;A. Dalal;L. Bashyam;D. Suri;A. Gupta;N. Gupta;M. Kabra;R. D. Puri;R. Ramadevi;S. Kapoor and S. Danda

Molecular analyses of novel ASAH1 mutations causing Farber lipogranulomatosis: Analyses of exonic splicing enhancer inactivating mutation.

Clin Genet. 2013 Nov 8. doi: 10.1111/cge.12316. [Epub ahead of print]

Laboratory of Molecular Oncology

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Department of Pediatrics Post Graduate Institute of Medical Education and Research Chandigarh India

Department of Pediatrics All India Institute of Medical Sciences New Delhi India

Department of Genetic Medicine Sir Ganga Ram Hospital Delhi India

Sandor Proteomics Hyderabad India

Division of Genetics Lok Nayak Hospital and Maulana Azad Medical College New Delhi India

Department of Clinical Genetics Christian Medical College and Hospital Vellore India

Farber lipogranulomatosis is a rare autosomal recessive lysosomal storage disorder caused by mutations in the ASAH1 gene. In the largest ever study, we identified and characterized ASAH1 mutations from 11 independent Farber disease (FD) families. A total of 13 different mutations were identified including 1 splice, 1 polypyrimidine tract (PPT) deletion and 11 missense mutations. Eleven mutations were exclusive to the Indian population. The IVS6+4A>G splice and IVS5-16delTTTTC PPT deletion mutations resulted in skipping of exon 6 precluding thereby the region responsible for cleavage of enzyme precursor. A missense mutation (p.V198A) resulted in skipping of exon 8 due to inactivation of an exonic splicing enhancer (ESE) element. This is the first report of mutations affecting PPT and ESE in the ASAH1 gene resulting in FD. © 2013 John Wiley & Sons A/S.

INTL PMID:24355074 **BS**

Boaz, R. T.;A. J. Joseph;G. Kang and A. Bose
Intestinal Permeability in Normally Nourished and Malnourished Children with and without Diarrhea.
Indian Pediatrics. 2013, 50(1): 152-153.

[Joseph, A. J.] Christian Med Coll & Hosp, Dept Gastroenterol, Vellore 632002, Tamil Nadu, India. [Kang, G.] Christian Med Coll & Hosp, Vellore 632002, Tamil Nadu, India. [Bose, A.] Christian Med Coll & Hosp, Dept Community Hlth & Dev, Vellore 632002, Tamil Nadu, India. abose@cmcvellore.ac.in

We evaluated the association between diarrhea, malnutrition and intestinal function using the lactulose-mannitol test. Our study showed that a third of all children have abnormal intestinal permeability, there was an expected increase of permeability in children with acute diarrhea and alteration in intestinal permeability was greater in children with concurrent malnutrition and diarrhea.

NAT WOS:000316080200039 **BS**

Chacko, M. P.;A. Mathan;D. Daniel;G. Basu and S. Varughese

Significance of pre-transplant anti-HLA antibodies detected on an ELISA mixed antigen tray platform.

Indian J Nephrol. 2013, 23(5): 351-353.

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

This study aims at examining the clinical impact, of antibodies detected on an ELISA mixed antigen tray format (LATM, One Lambda) in the absence of complement dependent cytotoxicity (CDC) positivity. All patients who underwent renal transplantation in 2007 and 2008 had their final pre-transplant sera retrospectively analyzed by the LATM assay. These patients were then followed-up with clinical, biochemical, and histopathological end points defined by elevation of serum creatinine and/or histopathological criteria. Among 164 patients who were studied, 149 received grafts from live related donors and 15, from deceased donors. 31 (19%) of the transplanted patients demonstrated pre-transplant anti-HLA IgG antibodies on the assay. Totally, 15 were positive for class I antibodies, 4 for class II antibodies, and 12 for both class I and class II antibodies. 44 patients (36%) experienced rejection. 8 out of 31 (26%) ELISA positive patients and 36 out of 133 (27%) ELISA negative patients experienced rejection. Among 15

patients who received deceased donor transplants, 4 were positive for ELISA, and 11 were negative. All 4 (100%) of the ELISA positive patients experienced rejection as compared to 3 out of 11 (27%) ELISA negative patients ($P = 0.01$). The ELISA LATM assay did not show any predictive value for rejection in our overall patient population; however, results in the specific setting of deceased donor transplants merit further exploration.

NAT PMID: 24049271 PMCID: 3764709 BS
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Chandy, S.;R. G. Ulrich;M. Schlegel;R. Petraityte;K. Sasnauskas;D. J. Prakash;V. Balraj;P. Abraham and G. Sridharan

Hantavirus infection among wild small mammals in Vellore, south India.

Zoonoses Public Health. 2013, 60(5): 336-340.

Department of Clinical Virology, Christian Medical College, Vellore, Tamil Nadu, India.

Wild indigenous small mammals including 83 rodents (bandicoot and black rats, and house mice) and a shrew captured from multiple sites in Vellore, south India, were tested for serological and molecular evidence of hantavirus infection. Indirect immunofluorescence assay (IFA) using Hantaan virus (HTNV) antigen indicated hantavirus-reactive antibodies in 16 (19.3%) of 83 rodents (bandicoot and black rats). Western blot (WB) using Thailand virus (THAIV) antigen confirmed hantavirus-reactive antibodies in nine of the 16 HTNV IFA-positive rodents. Reverse transcription polymerase chain reaction (RT-PCR) of lung and kidney tissue of captured mammals resulted in the detection of partial S segment sequence in a bandicoot rat. This study complements our earlier reports on hantavirus epidemiology in south India and documents first laboratory evidence for rodent-associated hantaviruses in south India.

INTL PMID: 22856552 BS
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Chase, D.

Right-sided ECG chest leads and native heart ventricular fibrillation evaluation in a heterotopic cardiac transplant recipient.

J Saudi Heart Assoc. 2013, 25(1): 53-54.

Christian Medical College Hospital, Department of Cardiac Electrophysiology and Pacing, Vellore, Tamilnadu 632004

INTL PMID: 24174847 PMCID: 3809452 BS
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Chase, D.;V. Kumar and A. Hooda

Dual-site right ventricular and left ventricular pacing in a patient with left ventricular systolic dysfunction and atrial fibrillation using a standard CRT-D device.

J Saudi Heart Assoc. 2013, 25(3): 213-218.

Christian Medical College Hospital, Vellore, Tamilnadu 632004.

In patients undergoing cardiac resynchronization therapy with defibrillator (CRT-D) implantation for left ventricular systolic dysfunction (LVSD) accompanied by permanent atrial fibrillation (AF), generally, the unused atrial port is plugged at device implantation. We describe an alternative use for the atrial-port in this case report. A 43 year old gentleman with LVSD due to left ventricular non-compaction (LVNC) and AF of unknown duration underwent a CRT-D implantation after optimization of cardiac failure treatment. The atrial-port which would otherwise have been plugged was connected to a high right ventricular septal (RVS) pacing-lead and the shock-lead was positioned at the right ventricular apex (RVA). This approach permitted modified cardiac resynchronization in a high RVS to left ventricular (LV) and RVA pacing sequence using the high RVS and LV pacing combined with a shock vector including the RV apex. A standard CRT-D device with a minimum programmable A-V delay of 30 ms (technically RVS to LV delay in the 'DDD' pacing mode) was used. The device was programmed to a 'DDD' pacing mode (sequential multi-site ventricular pacing with some programmability). The mode switch operation was programmed 'OFF' since atrial sensing is unavailable. Device-delivered shocks did not cardiovert the patient back to sinus rhythm suggesting that the AF was permanent (no prior cardioversion attempts were made on the presumption that the chances of maintaining sinus rhythm, given the underlying cardiac condition, were low). Subsequently, the patient required radio-frequency ablation of the atrio-ventricular node for conducted AF. Symptomatic, echocardiographic and radiological improvement preceded atrio-ventricular node ablation. **CONCLUSION:** Amongst AF patients with permanent AF undergoing CRT-D implantation, those patients who are likely to have the CRT-D device atrial-ports plugged could benefit from having both the options of (i) a RVA shock vector as well as (ii) a high RVS-pacing feasible, by utilizing the atrial-port of a conventional CRTD device for a RVS pacing lead, should a RVA shock-lead position be preferred. New device programming algorithms will be necessary to make

patient-customized programming in this lead configuration flexible, more useful clinically and easy.

INTL PMID: 24174862 PMCID: 3809458 BS

Christopher, D. J.;S. G. Schumacher;J. S. Michael;R. Luo;T. Balamugesh;P. Duraikannan;N. R. Pollock;M. Pai and C. M. Denkinger

Performance of Xpert MTB/RIF on pleural tissue for the diagnosis of pleural tuberculosis.

Eur Respir J. 2013, 42(5): 1427-1429.

Christian Medical College, Vellore.

INTL PMID: 23900990 BS

Devi, G. S.;N. Arora;S. V. Rajkumar;E. S. Edison;A. Srivastava and G. R. Jayandharan

Fluorescent PCR-based gene dose analysis for detection of deletion mutations in carriers of haemophilia.

Haemophilia. 2013, 19(6): e377-380.

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

INTL PMID: 23855319 BS

Dreyer, R. P.;J. F. Beltrame;C. Neil;T. Air;R. Tavella;B. Hoffmann;P. K. Pati;D. Di Fiore;M. Arstall and C. Zeitz

Cardiac hemodynamics in men versus women during acute ST-segment elevation myocardial infarction.

American Journal of Cardiology. 2013, 112(2): 143-149.

Cardiology Unit, Queen Elizabeth Hospital, University of Adelaide, Adelaide, SA, Australia

Cardiology Unit, Lyell McEwin Hospital, Adelaide, SA, United States

Discipline of Psychiatry, University of Adelaide, Adelaide, SA, United States

Cardiology Unit, Christian Medical College, Vellore, India

Several biologic and clinical factors contribute to the increased 30-day mortality and re-infarction rate in women with ST-segment elevation myocardial infarction (STEMI). Sex differences in cardiac hemodynamic parameters such as pulmonary capillary wedge pressure (PCWP) have not been examined and might play an important role. The objectives of the present study were to examine whether female sex is an independent determinant of PCWP during acute STEMI and whether an elevated PCWP contributes to all-cause 30-day mortality and re-infarction in women. The clinical, angiographic, and hemodynamic features of 470 consecutive patients with STEMI (n = 135

women) undergoing emergency coronary angiography with right-side heart catheterization were evaluated with respect to sex. Women had an elevated PCWP (20 ± 8 vs 16 ± 7 mm Hg, $p < 0.001$) and reduced mixed venous oxygen saturation ($67 \pm 11\%$ vs $71 \pm 9\%$, $p = 0.004$). On multivariate analysis, female sex ($\beta = 4.04$, 95% confidence interval [CI] 2.04 to 6.04, $p < 0.001$), hypertension ($\beta = 2.07$, 95% CI 0.31 to 3.83, $p = 0.021$), and creatine kinase-estimated infarct size ($\beta = 0.001$, 95% CI 0.001 to 0.002, $p < 0.001$) were independent predictors of an elevated PCWP. Female sex exerted a minor independent effect on 30-day mortality and re-infarction (odds ratio 2.36, 95% CI 1.25 to 4.46, $p = 0.008$). However, once PCWP was entered into the mediation model, sex was no longer significant, suggesting that the effect of sex on the post-STEMI outcomes is potentially mediated through PCWP (odds ratio 1.07, 95% CI 1.02 to 1.12, $p = 0.011$). In conclusion, during acute STEMI, women have greater left ventricular filling pressures compared with men, independent of age, hypertension, and infarct size. The biologic explanation for this difference requires additional investigation, although it does not appear to contribute to the increased 30-day mortality and re-infarction rate observed in women. © 2013 Elsevier Inc. All rights reserved.

INTL BS

Dreyer, R. P.;J. F. Beltrame;R. Tavella;T. Air;B. Hoffmann;P. K. Pati;D. Di Fiore;M. Arstall and C. Zeitz

Evaluation of gender differences in door-to-balloon time in st-elevation myocardial infarction.

Heart Lung and Circulation. 2013, 22(10): 861-869.

Cardiology Unit, Queen Elizabeth Hospital (The Basil Hetzel Institute), Discipline of Medicine, University of Adelaide, Adelaide, SA, Australia

Cardiology Unit, Lyell McEwin Hospital, Adelaide, SA, Australia

Discipline of Psychiatry, University of Adelaide, Adelaide, SA, Australia

Cardiology Unit, Christian Medical College (CMC), Vellore, India

Background: A delayed Door-to-Balloon (DTB) time in women with ST-elevation myocardial infarction (STEMI) has been associated with an increased mortality. The objectives of this study were to (a) quantify the components of the delayed DTB time in

women and (b) assess the independent effect of gender on DTB time in patients undergoing percutaneous coronary intervention (PCI) for STEMI.

Methods: Clinical parameters were prospectively collected for 735 STEMI patients undergoing primary PCI from 2006 to 2010, with particular attention to the components of DTB time, including the onset of chest pain and the 'code' notification of the STEMI team by the Emergency Department.

Results: Women were significantly older with more comorbidity. Upon hospital arrival they also experienced delays in Door-to-Code (23 vs. 17. min, $P = .012$), Code-to-Balloon (63 vs. 57. min, $P = .001$) and thus DTB time (88 vs. 72. min, $P = .001$). After multivariate adjustment, independent determinants of DTB time included female gender (ratio of geometric means [RGM]. = 1.13; 95% CI 1.02-1.26; $P = .022$), hypertension (RGM. = 1.12, 95% CI 1.02-1.23, $P = .014$), maximum ST-elevation (RGM. = 0.97, 95% CI 0.94-0.98, $P < .001$), office hours (RGM. = 0.84, 95% CI 0.78-0.92, $P < .001$) and triage category (RGM. = 1.23, 95% CI 1.09-1.40, $P = .001$).

Conclusions: Women experience delays in identification of the STEMI diagnosis and also in the PCI process. Thus a multifaceted approach addressing both the diagnosis and management of STEMI in women is required. © 2013 Australian and New Zealand Society of Cardiac and Thoracic Surgeons (ANZSCTS) and the Cardiac Society of Australia and New Zealand (CSANZ).

INTL BS

Dutta, A. K.; R. Sood; U. B. Singh; A. Kapil and J. C. Samantaray

Diagnostic application of conventional and newer bone marrow examination techniques in fever of unknown origin.

Journal, Indian Academy of Clinical Medicine. 2013, 14(1): 23-27.

Department of GI Sciences, Christian Medical College (CMC), Vellore - 632 002, Tamil Nadu, India

Department of Medicine, All India Institute of Medical Sciences, Ansari Nagar, New Delhi - 110 029, India

All India Institute of Medical Sciences, Ansari Nagar, New Delhi - 110 029, India

Department of Microbiology, All India Institute of Medical Sciences, Ansari Nagar, New Delhi - 110 029, India

Introduction: Bone marrow examination (BME) including bone marrow cultures (BMC) and polymerase

chain reaction (PCR) are often used as diagnostic procedures for the evaluation of fever of unknown origin (FUO). However, objective data are limited about their utility in FUO.

Methodology: Fifty-two patients with FUO were included in the study. After initial evaluation, BME was performed. Bone marrow aspirate was subjected to pathological examination; bacterial, fungal, and mycobacterial cultures; smear examination for AFB/ LD bodies/malarial parasite, and PCR for M. tuberculosis. Bone marrow (BM) trephine was subjected to histopathological examination. The diagnostic yield of BME and the number of patients in whom it was the only diagnostic modality were determined.

Results: A definitive diagnosis could be achieved in 43(82.7%) patients. Thirty-two patients had infectious aetiology with extrapulmonary tuberculosis being the commonest cause of FUO. The diagnostic yield of BME was 38.6% and it was the only diagnostic modality in 25.6% of patients. The yield of BM aspirate smear examination was 15.4%. PCR for M. tuberculosis and fungal cultures were diagnostic in one patient each. Bacterial and mycobacterial cultures were sterile in all patients. A correlation of haematological parameters with BME showed that patients with Hb < 7.7 g% or TLC < 4,450/mm³ had a significantly higher yield on bone marrow examination.

Conclusion: Conventional BME showed a good diagnostic yield in evaluation of FUO. Newer techniques had very low diagnostic yield.

NAT BS

Ebenezer, S. B.; M. K. Rafic and P. B. Ravindran

Basic investigations on LCV micelle gel.

Journal of Physics: Conference Series. 2013, 444(1).

Department of Radiation Oncology, Christian Medical College, Vellore, India

The aim of this study was to investigate the feasibility of using Leuco Crystal Violet (LCV) based micelle gel dosimeter as a quality assurance tool in radiotherapy applications. Basic properties such as absorption coefficient and diffusion of LCV gel phantom over time were evaluated. The gel formulation consisted of 25 mM Trichloroacetic acid, 1mM LCV, 4 mM Triton X-100, 4% gelatin by mass and distilled water. The advantages of using this gel are its tissue equivalence, easy and less preparation time, lower diffusion rate and it can

be read with an optical scanner. We were able to reproduce some of the results of Babic et al. The peak absorption was found to be at 600 nm and hence a matrix of yellow LEDs was used as light source. The profiles obtained from projection images confirmed the diffusion of LCV gel after 6 hours of irradiation. Hence the LCV gel phantom should be read before 6 hours post irradiation to get accurate dose information as suggested previously.

INTL **BS**

Faith, M. and P. Abraham

An update on diagnostic value of biotinidase: From liver damage to cancer: Minireview.

Biomedical Research-India. 2013, 24(2): 267-273.

[Faith, Minnie; Abraham, Premila] Christian Med Coll & Hosp, Dept Biochem, Vellore 632002, Tamil Nadu, India.

Abraham, P (reprint author), Christian Med Coll & Hosp, Dept Biochem, Vellore 632002, Tamil Nadu, India.

The discovery of biotinidase (BTD) deficiency, an inherited biotin-responsive disorder has increased the interest in biotinidase. Impaired serum BTD activity has been reported in patients suffering from chronic liver diseases, and in rats with experimentally induced acute or chronic liver injury. Molecular biology techniques such as tandem mass spectrometry have added a new dimension to our understanding of the role for biotinidase in cellular metabolism that go beyond the classical roles for biotinidase in the recycling of biotin. Recently, biotinidase has been implicated in the diagnosis of cancers. Decreased BTD is suggested as a potential serological biomarker for the detection of breast cancer. Recent reports suggests the potential applicability of biotinidase in the fine needle aspiration (FNA) diagnosis of aggressive papillary thyroid cancer. The exact role of biotinidase in cancer remains to be established. Histone biotinylation is considered to play an important role in signaling DNA damage. As biotinylation of histones depends on biotin supply it may be decreased in BTD deficient patients thereby affecting signaling of DNA damage. Elevated serum biotinidase activity has been reported in patients with glycogen storage diseases. The focus of this review is to update the metabolic importance of biotinidase and to present the applications of BTD in the diagnosis of liver diseases and recently, certain cancers.

NAT WOS:000318219600018 **BS**

Goel, R.;D. Danda;B. Avinash;A. B. Pulimood;J. Mathew and B. S. Ramakrishna

Clinico-pathological correlation of non specific inflammation in bowel histology with joint manifestation in a tertiary center in South India.

Rheumatol Int. 2013, 33(8): 2149-2152.

Christian Medical College and Hospital, Vellore, Tamilnadu, India.

The aim of our study was to determine whether the pattern of arthropathy in patients with suspected enteropathic arthritis bore any relation to their gut histology and specifically to chronic nonspecific gut inflammation. Records of 39 patients with suspected enteropathic arthritis from rheumatology clinic between January 2006 and December 2008 who had undergone ileocolonoscopy biopsy were analyzed retrospectively. Patients were grouped into 3 categories, namely those with normal bowel histology, those with mild nonspecific chronic changes, and those with histology suggestive of inflammatory bowel disease. Patients with nonspecific chronic gut inflammation had higher occurrence of axial involvement with or without peripheral articular involvement as compared to those with normal gut histology (8/9 vs. 10/21, $P = 0.049$), and this pattern was similar to that in patients with IBD. Wrist joint involvement was more common in patients with normal bowel histology (12/21) than the other two groups ($P = 0.003$). All groups had fared well on follow up while taking treatment with sulphasalazine and methotrexate.

INTL PMID: 22258457 **BS**

Gupta, A.;S. M. Prabhu;J. Sureka and G. Chacko

Role of diffusion weighted MRI in differentiating typical from atypical meningiomas at 1.5 and 3T MRI.

Egyptian Journal of Radiology and Nuclear Medicine. 2013, 44(3): 635-640.

Department of Radiology, Christian Medical College, Vellore 632 004, Tamil Nadu, India

Department of Neurological Sciences and Pathology, Christian Medical College, Vellore 632 004, Tamil Nadu, India

Purpose Atypical and malignant meningiomas are considered to have a higher rate of recurrence and show aggressive behavior compared to benign variety. The purpose of our study was to study the role of diffusion weighted imaging and determination of

apparent diffusion coefficient (ADC) values and ADC ratios to differentiate typical meningiomas from atypical/malignant variety at 1.5 and 3T MRI. Materials and methods A total of 94 adult patients (48 patients at 3T and 46 patients at 1.5T) with pathologically proven meningiomas were retrospectively evaluated on conventional and diffusion weighted MRI. The signal intensity of the lesions on DW imaging was evaluated. ADC values and ADC ratios were calculated from lesion and contralateral normal white matter. Results 94 lesions comprising of 66 benign and 28 atypical meningiomas were evaluated. The mean ADC values at 3T MRI were $0.82 \pm 0.12 \times 10^{-3}$ in benign (typical) meningiomas and $0.68 \pm 0.10 \times 10^{-3}$ in atypical meningiomas. At 1.5T, the mean ADC values of benign meningiomas were $0.83 \pm 0.11 \times 10^{-3}$ and $0.70 \pm 0.09 \times 10^{-3}$ in atypical meningiomas. The mean ADC ratios were 1.08 ± 0.17 and 0.85 ± 0.15 for benign and atypical meningiomas respectively. There was a statistically significant difference between the mean ADC ratios and the mean ADC values of typical and atypical meningiomas ($P < 0.001$) at both 1.5T and 3T MRI. Conclusion DWI with calculation of apparent diffusion coefficient (ADC) values and ADC ratios has a potential role in differentiating benign from atypical meningiomas at both 1.5 and 3T MRI. The differences in mean ADC values between benign and atypical meningiomas were similar at both 1.5 and 3T MRI. © 2013 Production and hosting by Elsevier B.V. on behalf of Egyptian Society of Radiology and Nuclear Medicine.

INTL BS

Hephzibah, J.;N. Shanthly and R. Oommen
Comparison of glomerular filtration rate measured by plasma sample technique, Cockcroft Gault method and Gates' method in voluntary kidney donors and renal transplant recipients.

Indian J Nucl Med. 2013, 28(3): 144-151.

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

BACKGROUND: There are numerous methods for calculation of glomerular filtration rate (GFR), which is a crucial measurement to identify patients with renal disease. AIMS: The aim of this study is to compare four different methods of GFR calculation.

SETTINGS AND DESIGN: Clinical setup, prospective study.

MATERIALS AND METHODS: Data was collected from routine renal scans done for voluntary kidney donors (VKD) or renal transplant recipients 6 months after transplantation. Following technetium-99m diethylene triamine penta acetic acid injection, venous blood samples were collected from contralateral arm at 120, 180, and 240 min through an indwelling venous cannula and direct collection by syringe. A total volume of 1 ml of plasma from each sample and standards were counted in an automatic gamma counter for 1 min. Blood samples taken at 120 min and 240 min were used for double plasma sample method (DPSM) and a sample taken at 180 min for single plasma sample method (SPSM). Russell's formulae for SPSM and DPSM were used for GFR estimation. Gates' method GFR was calculated by vendor provided software. Correlation analysis was performed using Pearson's correlation test.

RESULTS: SPSM correlated well with DPSM. GFR value in healthy potential kidney donors has a significant role in the selection of donors. The mean GFR +/- (standard deviation) in VKD using SPSM, DPSM, camera depth method and Cockcroft Gault method was 134.6 (25.9), 137.5 (42.4), 98.6 (15.9), 83.5 (21.1) respectively. Gates' GFR calculation did not correlate well with plasma sampling method.

CONCLUSIONS: Calculation of GFR plays a vital role in the management of renal patients, hence it was noted that Gates GFR may not be a reliable method of calculation. SPSM was more reliable. DPSM is reliable but cumbersome. It is difficult to accurately calculate GFR without a gold standard.

NAT PMID: 24250022 PMID: 3822413 BS

Isaac, B.

GANGLION CELLS IN THE LATERAL CRICOARYTENOID MUSCLE OF THE NORMAL ADULT RAT. A LIGHT MICROSCOPIC STUDY.

Indian Journal of Animal Research. 2013, 47(1): 87-88.

Christian Med Coll & Hosp, Dept Anat, Vellore 632002, Tamil Nadu, India.

Isaac, B (reprint author), Christian Med Coll & Hosp, Dept Anat, Vellore 632002, Tamil Nadu, India.

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The innervation of the lateral cricoarytenoid muscle was examined using light microscopy. Some ganglion cells are considered to enter the muscle, accompanied by

branched nerves. These findings suggest that, in the rat lateral cricoarytenoid muscle, intramuscular ganglion cells exist and may be involved in innervating and contracting smooth muscle cells of the arterioles, thus regulating the blood flow or intravascular pressure.

NAT WOS:000318331000018 BS

Jain, R.;L. T.;J. Chandran;G. R. Jayandharan;A. Palle and P. D. Moses

A novel mutation c.1048A>T at codon 350(Lys>Stop) in PROC gene causing neonatal purpura fulminans.

Blood Coagul Fibrinolysis. 2013, 24(8): 890-892.

aDepartment of Pediatrics bDepartment of Hematology cDepartment of Clinical Pathology Christian Medical College, Vellore, Tamilnadu, India.

Purpura fulminans in the neonatal period due to severe congenital protein C deficiency (protein C activity <1 IU/dl) is a rare autosomal recessive disorder. If untreated, it is fatal. Early identification of such patients may be lifesaving. Acquired deficiency of protein C caused by increased consumption as overt disseminated intravascular coagulation (DIC) and severe infection creates a diagnostic dilemma. Mutation analysis plays a critical role in confirming the diagnosis of the disease and offering prenatal diagnosis. In this report, we describe a newborn who presented with purpura fulminans and DIC, molecular analysis showed a novel c.1048A>T transversion in a homozygous state at codon 350 (Lys>Stop) of protein C (PROC) gene. Prenatal diagnosis in subsequent pregnancy was done which revealed the affected fetus had the same mutation in homozygous form.

INTL PMID: 24158118 BS

Jayanth, S. T.;P. Gaikwad;M. Promila and J. C. Muthusami
The Sinus That Breeds Fungus: Subcutaneous Zygomycosis Caused by Basidiobolus ranarum at the Injection Site.

Case Rep Infect Dis. 2013, 2013: 534192.

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

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

Subcutaneous zygomycosis is caused by Basidiobolus ranarum which is endemic in India. We report a case of a housewife who presented with a persistent

discharging sinus from the right gluteal region subsequent to an intramuscular injection which was refractory to empirical antituberculous therapy. She underwent an excision of the sinus tract, the culture of which yielded B. ranarum. The wound improved with oral potassium iodide.

INTL PMID: 24349806 PMCID: 3852275 BS

Jiang, H. B.;L. R. Holtz;I. Bauer;C. J. Franz;G. Y. Zhao;L. Bodhidatta;S. K. Shrestha;G. Kang and D. Wang

Comparison of novel MLB-clade, VA-clade and classic human astroviruses highlights constrained evolution of the classic human astrovirus nonstructural genes.

Virology. 2013, 436(1): 8-14.

[Jiang, Hongbing; Bauer, Irma; Franz, Carl J.; Zhao, Guoyan; Wang, David] Washington Univ, Sch Med, Dept Mol Microbiol, St Louis, MO 63110 USA. [Holtz, Lori R.] Washington Univ, Sch Med, Dept Pediat, St Louis, MO 63110 USA. [Bodhidatta, Ladaporn] Armed Forces Res Inst Med Sci, Dept Enter Dis, Bangkok 10400, Thailand. [Shrestha, Sanjaya K.] Walter Reed AFRIMS Res Unit Nepal, Kathmandu, Nepal. [Kang, Gagandeep] Christian Med Coll & Hosp, Dept Gastrointestinal Sci, Vellore, Tamil Nadu, India.

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Eight serotypes of human astroviruses (the classic human astroviruses) are causative agents of diarrhea. Recently, five additional astroviruses belonging to two distinct clades have been described in human stool, including astroviruses MLB1, MLB2, VA1, VA2 and VA3. We report the discovery in human stool of two novel astroviruses, astroviruses MLB3 and VA4. The complete genomes of these two viruses and the previously described astroviruses VA2 and VA3 were sequenced, affording seven complete genomes from the MLB and VA clades for comparative analysis to the classic human astroviruses. Comparison of the genetic distance, number of synonymous mutations per synonymous site (dS), number of non-synonymous mutations per non-synonymous site (dN) and the dN/dS ratio in the protease, polymerase and capsid of the classic human, MLB and VA clades suggests that the protease and polymerase of the classic human astroviruses are under distinct selective pressure. (C) 2012 Elsevier Inc. All rights reserved.

INTL WOS:000314003800002 BS

Kavanagh, O.;X. L. Zeng;S. Ramani;I. Mukhopadhyas;S. E. Crawford;G. Kang and M. K. Estes

A time-resolved immunoassay to measure serum antibodies to the rotavirus VP6 capsid protein.

Journal of Virological Methods. 2013, 189(1): 228-231.

[Kavanagh, Owen; Zeng, Xi-Lei; Ramani, Sasirekha; Crawford, Sue E.; Estes, Mary K.] Baylor Coll Med, Dept Mol Virol & Microbiol, Houston, TX 77030 USA. [Ramani, Sasirekha; Mukhopadhyas, Indrani; Kang, Gagandeep] Christian Med Coll & Hosp, Dept Gastrointestinal Sci, Vellore 632004, Tamil Nadu, India.

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The rotavirus (RV) inner capsid protein VP6 is widely used to evaluate immune response during natural infection and in vaccine studies. Recombinant VP6 from the most prevalent circulating rotavirus strains in each subgroup (SG) identified in a birth cohort of children in southern India [SGII (G1P[8]) and SGI (G10P[11])] were produced. The purified proteins were used to measure VP6-specific antibodies in a Dissociation-Enhanced Lanthanide Fluorometric Immunoassay (DELFI). The ability of the assay to detect a ≥ 2 fold rise in IgG level in a panel of serum samples from a longitudinal study was compared to a gold standard virus-capture ELISA. A strong association was observed between the assays ($p < 0.001$; chi-squared test) with assay performances remaining similar when the samples were subdivided as having a fold change increase in VP6 antibody levels (a) within 90 days of RV RNA detection in stool or (b) if no RV RNA was detected within that time period. This study demonstrates the suitability of using recombinant proteins to measure anti-RV immune responses and serves as a "proof of principle" to examine the antibody responses generated to other recombinant RV proteins and thereby possibly identify a correlate of protection. (C) 2012 Elsevier B.V. All rights reserved.

INTL WOS:000317455100036 BS

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

Mitochondrial dysfunction and respiratory chain defects in a rodent model of methotrexate-induced enteritis.

Hum Exp Toxicol. 2013 Dec 17. [Epub ahead of print]

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

INTL PMID: 24347301 BS

Marie, M. A.;J. John;L. G. Krishnappa and S. Gopalkrishnan

Molecular characterization of the beta-lactamases in *Escherichia coli* and *Klebsiella pneumoniae* from a tertiary care hospital in Riyadh, Saudi Arabia.

Microbiology and Immunology. 2013, 57(12): 805-810.

[Marie, Mohammed Ali; Krishnappa, Lakshmana Gowda] King Saud Univ, Coll Appl Med Sci, Clin Lab Dept, Riyadh 11403, Saudi Arabia. [John, James] Christian Med Coll & Hosp, Dept Clin Microbiol, Vellore 630004, Tamil Nadu, India. [Gopalkrishnan, Sangeetha] Cent Leprosy Training & Res Inst, Dept Microbiol, Madras 60096, Tamil Nadu, India.

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The widespread use of antimicrobials has increased the occurrence of multidrug resistant microbes. The commonest mechanism of antimicrobial resistance in Enterobacteriaceae is production of -lactamases such as metallo-lactamases (MBL) and extended spectrum -lactamases (ESBL). Few studies have used a molecular approach to characterize the prevalence of -lactamases. Here, the prevalence of different -lactamases was characterized by performing three multiplex PCRs targeting genes similar to those described in earlier publications. Antimicrobial susceptibility tests for all isolates were performed using the agar dilution method. -lactamase was detected in 72% of the isolates, the detection rate being 64% in 2011 and 75% in 2012. The isolates were highly resistant to carbapenems such as meropenem and imipenem and susceptible to colistin and tigecycline. In this study, 22% of isolates contained both MBL and ESBL. ESBL was detected more frequently in *Escherichia coli* isolates, whereas carbapenemase was detected more frequently in *Klebsiella pneumoniae* isolates. These findings suggest the spread of multi-resistant ESBL and MBL producers in the community. Our results have implications for patient treatment and also indicate the need for increased surveillance and molecular characterization of isolates.

INTL WOS:000328157200002 BS

Nair, V. V.;A. Chapla;N. Arulappan and N. Thomas

Molecular diagnosis of maturity onset diabetes of the young in India.

Indian J Endocrinol Metab. 2013, 17(3): 430-441.

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

Diabetes is highly prevalent in India and the proportion of younger patients developing diabetes is on the increase. Apart from the more universally known type 1 diabetes and obesity related type 2 diabetes, monogenic forms of diabetes are also suspected to be prevalent in many young diabetic patients. The identification of the genetic basis of the disease not only guides in therapeutic decision making, but also aids in genetic counselling and prognostication. Genetic testing may establish the occurrence and frequency of early diabetes in our population. This review attempts to explore the utilities and horizons of molecular genetics in the field of maturity onset diabetes of the young (MODY), which include the commoner forms of monogenic diabetes.

NAT PMID:23869298 PMCID:3712372 BS

Peter, J. V.;G. Karthik;K. Ramakrishna;M. F. Griffith;J. A. Jude Prakash;V. Job;B. Chacko and P. L. Graham

Elevated procalcitonin is associated with increased mortality in patients with scrub typhus infection needing intensive care admission.

Indian J Crit Care Med. 2013, 17(3): 174-177.

Medical Intensive Care Unit, Christian Medical College Hospital, Vellore, Tamil Nadu, India.

CONTEXT: Procalcitonin is a biomarker of bacterial sepsis. It is unclear if scrub typhus, a rickettsial illness, is associated with elevated procalcitonin levels.

AIM: To assess if scrub typhus infection is associated with high procalcitonin levels and whether high levels portend a poorer prognosis.

SETTING AND DESIGN: Retrospective study of patients with severe scrub typhus infection, admitted to the medical intensive care unit of a tertiary care university affiliated teaching hospital.

MATERIALS AND METHODS: Eighty-four patients with severe scrub typhus infection that also had procalcitonin levels were assessed.

STATISTICAL ANALYSIS: Relationship between procalcitonin and mortality explored using univariate and multivariate analyses.

RESULTS: The mean (+/-standard deviation) age was 40.0 +/- 15.5 years. Patients were symptomatic for 8.3 +/- 4.3 days prior to presentation. The median admission procalcitonin level was 4.0 (interquartile range 1.8 to 8.5) ng/ml; 59 (70.2%) patients had levels >2 ng/ml. Invasive mechanical ventilation was required in 65 patients; 20 patients died. On univariate analysis, admission procalcitonin was associated with increased odds of death [odds ratio (OR) 1.09, 95% confidence interval (CI) 1.03 to 1.18]. On multivariate logistic regression analysis including procalcitonin and APACHE-II score, the APACHE-II score was significantly associated with mortality (OR 1.16, 95% CI 1.06 to 1.30, $P = 0.004$) while a trend was observed with procalcitonin (OR 1.05, 95%CI 1.01 to 1.13, $P = 0.09$). The area under the receiver operating characteristic (ROC) curve, AUC, for mortality was 0.77 for procalcitonin and 0.78 for APACHE-II.

CONCLUSIONS: Procalcitonin is elevated in severe scrub typhus infection and may be associated with higher mortality.

NAT PMID: 24082615 PMCID: 3777372 BS

Peter, J. V.;M. Griffith and J. Jude

ANTI-NUCLEAR ANTIBODY (ANA) EXPRESSION IN SEVERE SCRUB TYPHUS INFECTION - PRELIMINARY OBSERVATIONS.

Internal Medicine Journal. 2013, 43: 48-48.

[Peter, John Victor] Christian Med Coll & Hosp, Med Intens Care Unit, Vellore, Tamil Nadu, India. [Griffith, Mathew] Univ Colorado, Dept Internal Med, Boulder, CO 80309 USA. [Jude, John] Christian Med Coll & Hosp, Dept Microbiol, Vellore, Tamil Nadu, India.

INTL WOS:000318911400141 BS

Prabhu, S. M.;A. Irodi;H. L. Kiangte;V. Rupa and P. Naina
Imaging features of rhinosporidiosis on contrast CT.

Indian J Radiol Imaging. 2013, 23(3): 212-218.

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

Department of Oto-Rhino-Laryngology, Christian Medical College, Vellore, Tamil Nadu, India.

CONTEXT: Rhinosporidiosis is a chronic granulomatous disease endemic in certain regions of India. Computed tomography (CT) imaging appearances of rhinosporidiosis have not been previously described in the literature.

AIMS: To study imaging features in rhinosporidiosis with contrast-enhanced CT and elucidate its role in the evaluation of this disease.

MATERIALS AND METHODS: Sixteen patients with pathologically proven rhinosporidiosis were included in the study. Contrast-enhanced CT images were analyzed retrospectively and imaging findings were correlated with surgical and histopathologic findings.

RESULTS: A total of 29 lesions were found and evaluated. On contrast-enhanced CT, rhinosporidiosis was seen as moderately enhancing lobulated or irregular soft tissue mass lesions in the nasal cavity ($n = 13$), lesions arising in nasal cavity and extending through choana into nasopharynx ($n = 5$), pedunculated polypoidal lesions arising from the nasopharyngeal wall ($n = 5$), oropharyngeal wall ($n = 2$), larynx ($n = 1$), bronchus ($n = 1$), skin and subcutaneous tissue ($n = 2$). The inferior nasal cavity comprising nasal floor, inferior turbinate, and inferior meatus was the most common site of involvement ($n = 13$). Surrounding bone involvement was seen in the form of rarefaction ($n = 6$), partial ($n = 3$) or complete erosion ($n = 3$) of inferior turbinate, thinning of medial maxillary wall ($n = 2$), and septal erosion ($n = 2$). Nasolacrimal duct involvement was seen in four cases.

CONCLUSIONS: Contrast-enhanced CT has an important role in delineating the site and extent of the disease, as well as the involvement of surrounding bone, nasolacrimal duct and tracheobronchial tree. This provides a useful roadmap prior to surgery.

NAT PMID: 24347850 PMCID: 3843328 BS

Prem, S.;J. Varghese;B. S. Ramakrishna and M. Jacob

DOES HELICOBACTER PYLORI INFECTION AFFECT DUODENAL MUCOSAL EXPRESSION OF IRON TRANSPORTERS?

American Journal of Hematology. 2013, 88(5): E133-E133.

[Prem, Shiny; Varghese, Joe; Jacob, Molly] Christian Med Coll & Hosp, Dept Biochem, Vellore, Tamil Nadu, India. [Ramakrishna, B. S.] Christian Med Coll & Hosp, Dept Gastroenterol, Vellore, Tamil Nadu, India.

INTL WOS:000318043500219 BS

Rajakumar, D.;M. Alexander and A. Oommen
Oxidative stress, NF-κB and the ubiquitin proteasomal pathway in the pathology of calpainopathy.
Neurochem Res. 2013 Oct;38(10):2009-18. doi: 10.1007/s11064-013-1107-z. Epub 2013 Jul 12.

Neurochemistry Laboratory, Department of Neurological Sciences, Christian Medical College, Vellore Tamil Nadu, India

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The neuromuscular disorder, calpainopathy (LGMD 2A), is a major muscular dystrophy classified under limb girdle muscular dystrophies. Genetic mutations of the enzyme calpain 3 cause LGMD 2A. Calpainopathy is phenotypically observed as progressive muscle wasting and weakness. Pathomechanisms of muscle wasting of calpainopathy remain poorly understood. Oxidative stress, NF-κB and the ubiquitin proteasomal pathway underlie the pathology of several muscle wasting conditions but their role in calpainopathic dystrophy is not known. Oxidative and nitrosative stress, the source of reactive oxygen species, NF-κB signaling and protein ubiquitinylation were studied in 15 calpainopathic and 8 healthy control human muscle biopsies. Oxidative stress and NF-κB/IKK β signaling were increased in calpainopathic muscle and may contribute to increased protein ubiquitinylation and muscle protein loss. Preventing oxidative stress or inhibition of NF-κB signaling could be considered for treatment of LGMD 2A. © 2013 Springer Science+Business Media New York.

INTL PMID:23846623 BS

Rajakumar, D.;M. Alexander and A. Oommen
Oxidative stress, NF-kappaB and the ubiquitin proteasomal pathway in the pathology of calpainopathy.
Neurochem Res. 2013, 38(10): 2009-2018.

Neurochemistry Laboratory, Department of Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India, dhanurajan@hotmail.com.

The neuromuscular disorder, calpainopathy (LGMD 2A), is a major muscular dystrophy classified under limb girdle muscular dystrophies. Genetic mutations of the enzyme calpain 3 cause LGMD 2A. Calpainopathy is phenotypically observed as progressive muscle wasting and weakness.

Pathomechanisms of muscle wasting of calpainopathy remain poorly understood. Oxidative stress, NF-kappaB and the ubiquitin proteasomal pathway underlie the pathology of several muscle wasting conditions but their role in calpainopathic dystrophy is not known. Oxidative and nitrosative stress, the source of reactive oxygen species, NF-kappaB signaling and protein ubiquitinylation were studied in 15 calpainopathic and 8 healthy control human muscle biopsies. Oxidative stress and NF-kappaB/IKK beta signaling were increased in calpainopathic muscle and may contribute to increased protein ubiquitinylation and muscle protein loss. Preventing oxidative stress or inhibition of NF-kappaB signaling could be considered for treatment of LGMD 2A.

INTL PMID:23846623 BS

Rajaratnam, S.

Pituitary gland imaging.

Indian J Endocrinol Metab. 2013, 17(Suppl1): S100-S101.
Departments of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, India.

NAT PMID:24251122 PMCID: 3830268 BS

Ramachandran, A.;M. R. McGill;Y. Xie;H. M. Ni;W. X. Ding and H. Jaeschke

Receptor interacting protein kinase 3 is a critical early mediator of acetaminophen-induced hepatocyte necrosis in mice.

Hepatology. 2013 Dec;58(6):2099-108. doi: 10.1002/hep.26547. Epub 2013 Oct 11.

Department of Pharmacology, Toxicology, and Therapeutics, University of Kansas Medical Center, Kansas City, KS, United States

The Wellcome Trust Research Laboratory, Department of Gastrointestinal Sciences, Christian Medical College, Vellore, India

Acetaminophen (APAP) overdose is a major cause of hepatotoxicity and acute liver failure in the U.S., but the pathophysiology is incompletely understood. Despite evidence for apoptotic signaling, hepatic cell death after APAP is generally considered necrotic in mice and in humans. Recent findings suggest that the receptor interacting protein kinase 3 (RIP3) acts as a switch from apoptosis to necrosis (programmed necrosis). Thus, the aim of the current investigation was to determine if RIP3 is involved in APAP-induced

liver cell death. APAP (200-300 mg/kg) caused glutathione depletion and protein adduct formation, oxidant stress, mitochondrial release of apoptosis inducing factor, and nuclear DNA fragmentation resulting in centrilobular necrosis in C57Bl/6J mice. Inhibiting RIP3 protein induction with antisense morpholinos in wild-type animals or using RIP3-deficient mice had no effect on protein adduct formation but attenuated all other parameters, including necrotic cell death, at 6 hours after APAP. In addition, cultured hepatocytes from RIP3-deficient mice showed reduced injury compared to wild-type cells after 24 hours. Interestingly, APAP-induced mitochondrial translocation of dynamin-related protein 1 (Drp1), the initiator of mitochondrial fission, was inhibited by reduced RIP3 protein expression and the Drp1 inhibitor MDIVI reduced APAP-induced cell death at 24 hours. All of these protective effects were lost after 24 hours in vivo or 48 hours in vitro. Conclusion: RIP3 is an early mediator of APAP hepatotoxicity, involving modulation of mitochondrial dysfunction and oxidant stress. Controlling RIP3 expression could be a promising new approach to reduce APAP-induced liver injury, but requires complementary strategies to control mitochondrial dysfunction for long-term protection. © 2013 by the American Association for the Study of Liver Diseases.

INTL PMID:23744808 PMCID:PMC3791212 BS

Ramachandran, J.;A. M. Ismail;G. Chawla;G. J. Fletcher;A. Goel;C. E. Eapen and P. Abraham
Serum HBsAg quantification in treatment-naive Indian patients with chronic hepatitis B.
Indian J Gastroenterol. 2013 Sep 20. [Epub ahead of print]
 Department of Hepatology, Christian Medical College, Vellore, 632 004, India, jeyamani@cmcvellore.ac.in.

BACKGROUND AND AIMS: There is paucity of Indian data regarding serum HBsAg levels (qHBsAg) in treatment-naive chronic hepatitis B (CHB). This study was done to determine correlation of qHBsAg with hepatitis B e antigen (HBeAg) and hepatitis B virus (HBV) DNA levels and its ability to independently categorize subgroups of CHB.

METHODS: We studied 131 treatment-naive CHB patients and initially classified them based on HBeAg status. The HBeAg-positive group was further classified into immune tolerance (IT) and immune clearance (IC) phases based on serum alanine aminotransferase.

HBeAg-negative patients were classified into low replicators (LR) and HBeAg-negative chronic hepatitis (ENH) based on DNA levels. HBsAg quantification was performed using the Architect chemiluminescence system.

RESULTS: HBeAg-positive patients had higher DNA (7.89 vs. 2.69 log₁₀ IU/mL) and higher qHBsAg (4.60 vs. 3.85 log₁₀ IU/mL) compared to the HBeAg-negative group. Good correlation between qHBsAg and DNA was seen in HBeAg-positive (rho = 0.6, p < 0.001) but not in HBeAg-negative CHB (rho = 0.2). A qHBsAg level greater than 4.39 log₁₀ IU/mL predicted HBeAg-positive state with 81 % sensitivity and 85 % specificity. However, among HBeAg-negative CHB, qHBsAg failed to discriminate between LR and ENH.

CONCLUSIONS: A single point estimation of qHBsAg in treatment-naive patients could predict replicative HBeAg-positive CHB, but was not helpful in defining replicative status in the HBeAg-negative CHB.

NAT PMID: 24052375 BS

Ramachandran, P.;S. P. Fitzwater;S. Aneja;V. P. Verghese;V. Kumar;K. Nedunchelian;N. Wadhwa;B. Veeraraghavan;R. Kumar;M. Meeran;A. Kapil;S. Jasmine;A. Kumar;S. Suresh;S. Bhatnagar;K. Thomas;S. Awasthi;M. Santosham and A. Chandran

Prospective multi-centre sentinel surveillance for Haemophilus influenzae type b & other bacterial meningitis in Indian children.

Indian J Med Res. 2013, 137(4): 712-720.

Institute of Child Health & Hospital for Children, Chennai, India. ramachandran_dr@rediffmail.com

BACKGROUND & OBJECTIVES: Haemophilus influenzae type b (Hib) is one of the leading bacterial causes of invasive disease in populations without access to Hib conjugate vaccines (Hib-CV). India has recently decided to introduce Hib-CV into the routine immunization programme in selected States. Longitudinal data quantifying the burden of bacterial meningitis and the proportion of disease caused by various bacteria are needed to track the impact of Hib-CV once introduced. A hospital-based sentinel surveillance network was established at four places in the country and this study reports the results of this ongoing surveillance.

METHODS: Children aged 1 to 23 months with suspected bacterial meningitis were enrolled in Chennai, Lucknow, New Delhi, and Vellore between July

2008 and June 2010. All cerebrospinal fluid (CSF) samples were tested using cytological, biochemical, and culture methods. Samples with abnormal CSF ($>/=10$ WBC per μ l) were tested by latex agglutination test for common paediatric bacterial meningitis pathogens.

RESULTS: A total of 708 patients with abnormal CSF were identified, 89 of whom had a bacterial pathogen confirmed. Hib accounted for the majority of bacteriologically confirmed cases, 62 (70%), while *Streptococcus pneumoniae* and group B *Streptococcus* were identified in 12 (13%) and seven (8%) cases, respectively. The other eight cases were a mix of other bacteria. The proportion of abnormal CSF and probable bacterial meningitis that was caused by Hib was 74 and 58 per cent lower at Christian Medical College (CMC), Vellore, which had a 41 per cent coverage of Hib-CV among all suspected meningitis cases, compared to the combined average proportion at the other three centres where a coverage between 1 and 8 per cent was seen ($P<0.001$ and $P=0.05$, respectively).

INTERPRETATION & CONCLUSIONS: Hib was found to be the predominant cause of bacterial meningitis in young children in diverse geographic locations in India. Possible indications of herd immunity was seen at CMC compared to sites with low immunization coverage with Hib-CV. As Hib is the most common pathogen in bacterial meningitis, Hib-CV would have a large impact on bacterial meningitis in Indian children.

NAT PMID: 23703338 PMID: 3724251 BS

Reck, M.;I. Bondarenko;A. Luft;P. Serwatowski;F. Barlesi;R. Chacko;M. Sebastian;H. Lu;J. M. Cuillerot and T. J. Lynch

Ipilimumab in combination with paclitaxel and carboplatin as first-line therapy in extensive-disease-small-cell lung cancer: results from a randomized, double-blind, multicenter phase 2 trial.

Ann Oncol. 2013 Jan;24(1):75-83. doi: 10.1093/annonc/mds213. Epub 2012 Aug 2.

[Reck, M.] Hosp Grosshansdorf, Dept Thorac Oncol, D-22927 Grosshansdorf, Germany. [Bondarenko, I.] Dnepropetrovsk City Hosp, Clin Facil, Dnepropetrovsk, Ukraine. [Luft, A.] Leningrad Reg Clin Hosp, St Petersburg, Russia. [Serwatowski, P.] Specjalistyczny Szpital Im, Dept Chemotherapy, Szczecin, Poland. [Barlesi, F.] Univ Aix Marseille 2, Assistance Publ Hop Marseille, Serv Oncol Multidisciplinaire & Innovat Therapeut, Fac Med, Marseille, France. [Chacko, R.] Christian Med Coll & Hosp, Dept Med Oncol, Vellore, Tamil Nadu, India. [Sebastian, M.] Johannes Gutenberg Univ Mainz, Med Ctr, Dept Med 3, Mainz, Germany. [Lu, H.; Cuillerot, J. -M.] Bristol Myers Squibb Co, Res & Dev, Wallingford, CT 06492 USA. [Lynch, T. J.] Yale Canc Ctr, New Haven, CT USA. [Lynch, T. J.] Smilow Canc Hosp, New Haven, CT USA.

Reck, M (reprint author), Hosp Grosshansdorf, Dept Pneumol & Thorac Surg, Woehrendamm 80, D-22927 Grosshansdorf, Germany. dr.martin.reck@web.de

Ipilimumab, an anti-CTLA4 monoclonal antibody, demonstrated survival benefit in melanoma with immune-related (ir) adverse events (irAEs) managed by the protocol-defined guidelines. This phase 2 study evaluated ipilimumab + paclitaxel (Taxol)/carboplatin in extensive-disease-small-cell lung cancer (ED-SCLC). Patients ($n = 130$) with chemotherapy-naïve ED-SCLC were randomized 1:1:1 to receive paclitaxel (175 mg/ m^2)/carboplatin (area under the curve = 6) with either placebo (control) or ipilimumab 10 mg/kg in two alternative regimens, concurrent ipilimumab (ipilimumab + paclitaxel/carboplatin followed by placebo + paclitaxel/carboplatin) or phased ipilimumab (placebo + paclitaxel/carboplatin followed by ipilimumab + paclitaxel/carboplatin). Treatment was administered every 3 weeks for a maximum of 18 weeks (induction), followed by maintenance ipilimumab or placebo every 12 weeks. End points included progression-free survival (PFS), irPFS, best overall response rate (BORR); irBORR, overall survival (OS), and safety. Phased ipilimumab, but not concurrent ipilimumab, improved irPFS versus control

[HR (hazard ratio) = 0.64; P = 0.03]. No improvement in PFS (HR = 0.93; P = 0.37) or OS (HR = 0.75; P = 0.13) occurred. Phased ipilimumab, concurrent ipilimumab and control, respectively, were associated with median irPFS of 6.4, 5.7 and 5.3 months; median PFS of 5.2, 3.9 and 5.2 months; median OS of 12.9, 9.1 and 9.9 months. Overall rates of grade 3/4 irAEs were 17, 21 and 9% for phased ipilimumab, concurrent ipilimumab and control, respectively. These results suggest further investigation of ipilimumab in ED-SCLC.

INTL PMID:22858559 WOS:000312653900011 BS

Sajith, K. G.;A. Goel;J. Ramachandran;S. Priya;S. C. Nair and C. E. Eapen

Erythrocytosis as a cause of false increase in prothrombin time and activated partial thromboplastin time.

Indian Journal of Gastroenterology. 2013, 32(5): 346-347.

Department of Hepatology, Christian Medical College, Vellore, 632 004, India

Department of Transfusion Medicine and Immunohaematology, Christian Medical College, Vellore, 632 004, India

NAT BS

Sivadasan, A.;M. Alexander;A. K. Patil and S. Mani
Spectrum of clinoradiological findings in spinal cord infarction: Report of three cases and review of the literature.

Ann Indian Acad Neurol. 2013, 16(2): 190-193.

Department of Neurological Sciences, Christian Medical College, Vellore, India.

Spinal cord infarction (SCI) often remains undiagnosed due to infrequent occurrence and lack of established diagnostic procedures. The unique pattern of blood supply explains the heterogeneity of clinical presentation. We present three cases of SCI to highlight the varied spectrum of clinoradiological findings. The first patient had posterior spinal artery infarction, and spine imaging showed infarction of adjacent vertebral body, which is usually rare. The second patient had anterior spinal artery infarction and the cANCA titers were elevated. The third patient had a pure motor quadriplegia. Initial imaging did not show any cord infarction, but signal changes were noted on serial imaging. Fibrocartilagenous embolism (FCE) seems the most likely etiology in the first and third cases. A high index of clinical suspicion is necessary for prompt diagnosis. Sensitivity of the initial magnetic resonance

imaging remains limited, necessitating serial follow-up scans. Infarction of the adjacent vertebral body is a useful confirmatory sign. Fat suppression images can delineate the marrow signal changes better. Elderly patients with vascular risk factors and degenerative discs need to avoid mechanical triggers that predispose to FCE. Younger patients with SCI will need evaluation for cardioembolic source and vasculitis.

NAT PMID: 23956562 PMCID: 3724072 . BS

Sivadasan, A.;M. Alexander;V. Mathew;S. Mani and A. K. Patil

Radiological evolution and delayed resolution of an optic nerve tuberculoma: Challenges in diagnosis and treatment.

Ann Indian Acad Neurol. 2013, 16(1): 114-117.

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

Optic nerve tuberculomas are rarely reported and their natural history, prognosis, and duration of required treatment remain unclear. A 40-year-old immunocompetent male presented with complete loss of vision in his right eye, which had evolved over 6 weeks. He had optic atrophy on examination. Initial imaging showed right optic nerve swelling and thickening suggesting an infiltrative inflammatory optic neuropathy (infectious or noninfectious). Serial imaging revealed appearance of ring enhancement with a necrotic centre. Biopsy and culture of the coexistent parietal lobe lesion revealed Mycobacterium tuberculosis. Persistent optic nerve granuloma with evidence of radiological improvement was noted at 18 months follow-up with antituberculous therapy (ATT). Visual recovery could not be achieved. The salient features in this case include the clinical presentation initially mimicking an infiltrative or compressive optic neuropathy, rapid radiological evolution into a tuberculoma, subtle paradoxical radiological worsening after initiation of ATT and persistence of granuloma on follow up scan. The challenges involved in early diagnosis and during the treatment course will be discussed.

NAT PMID: 23661979 PMCID: 3644770 . BS

Sivadasan, A.;M. Sanjay;M. Alexander;S. R. Devasahayam and B. K. Srinivasa

Utility of multi-channel surface electromyography in assessment of focal hand dystonia.

Muscle Nerve. 2013, 48(3): 415-422.

Department of Neurological Sciences, Christian Medical College, Vellore, India, 632004.

INTRODUCTION: Surface electromyography (SEMG) allows objective assessment and guides selection of appropriate treatment in focal hand dystonia (FHD).

METHODS: Sixteen-channel SEMG obtained during different phases of a writing task was used to study timing, activation patterns, and spread of muscle contractions in FHD compared with normal controls. Customized software was developed to acquire and analyze EMG signals.

RESULTS: SEMG of FHD subjects (20) showed "early onset" during motor imagery, rapid proximal muscle recruitment, agonist-antagonist co-contraction involving proximal muscle groups, "delayed offset" after stopping writing, higher rectified mean amplitudes, and mirror activity in contralateral limb compared with controls (16). Muscle activation latencies were heterogenous in FHD.

CONCLUSIONS: Anticipation, delayed relaxation, and mirror EMG activation were noted in FHD. A clear pattern of muscle activation cannot be ascertained. Multi-channel SEMG can aid in objective assessment of temporal-spatial distribution of activity and can refine targeted therapies like chemodenervation and biofeedback.

INTL PMID: 23861190 **BS**

Subramanian, D.;E. Pralong;R. T. Daniel;R. Stoop and S. K. Babu

EFFECTS OF OXYTOCIN ON CARBACHOL-INDUCED OSCILLATIONS IN VENTRAL HIPPOCAMPAL SLICES OF RAT.

Epilepsia. 2013, 54: 46-46.

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INTL WOS:000320472000127 **BS**

Subramanian, R. K.;A. Sidharthan;D. Maneksh;L. Ramalingam;A. S. Manickam;P. Kanthakumar and S. Subramani

Normative data for arterial blood gas and electrolytes in anesthetized rats.

Indian Journal of Pharmacology. 2013, 45(1).

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NAT WOS:000315916200027 **BS**

Vedantam, A. and V. Rajshekhar

Does the type of T2-weighted hyperintensity influence surgical outcome in patients with cervical spondylotic myelopathy? A review.

European Spine Journal. 2013, 22(1): 96-106.

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To review the literature on different classifications of T2-weighted (T2W) increased signal intensity (ISI) on preoperative magnetic resonance (MR) images of patients with cervical spondylotic myelopathy (CSM). The authors searched the databases of PubMed and Cochrane for studies that used a categorization of T2W ISI to predict the functional outcome after decompressive surgery for CSM. Selected studies were analyzed for the type of ISI classification used, patient selection, methodology and results. The level of evidence provided by each study was determined. Twenty-two studies fulfilled our search criteria. There were 11 prospective studies and a total of 1,508 patients were studied. The majority of studies classified ISI based on either the longitudinal extent (12 studies) or the qualitative features of the ISI (10 studies). Three studies used both parameters to

classify T2W ISI. Other classifications were based on the position of ISI (1 study), presence of snake-eye appearance on axial MR images (1 study) and signal intensity ratio (SIR) (1 study). Poorer functional outcomes correlated with sharp, intense ISI (6 studies) and multisegmental ISI (5 studies) (Class II evidence). Five of ten studies reported that the regression of ISI postoperatively was associated with better neurological outcomes (Class II evidence). Methodological variations in previous studies made it difficult to compare studies and results. Both multisegmental T2W ISI and sharp, intense T2W ISI are associated with poorer surgical outcome (Class II evidence). The regression of T2W ISI postoperatively correlates with better functional outcomes (Class II). Future studies on the significance of ISI should ensure use of a uniform grading system, standardized outcome measures and multivariate analyses to control for other preoperative variables.

INTL WOS:000313367200015 BS

Venkatramani, V. and R. P. Mukha

Visualization of male reproductive tract during urethrography: sequel of intense backpressure.

ANZ J Surg. 2013 Nov 20. doi: 10.1111/ans.12461. [Epub ahead of print]

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

INTL PMID: 24252111 BS

Venkatramani, V.;A. Panda;R. Manojkumar and N. S. Kekre
Monopolar versus bipolar trans-urethral resection of bladder tumors (TURBT) -A single-centre, parallel arm, randomized controlled trial.

J Urol. 2013 Dec 10. pii: S0022-5347(13)06086-2. doi: 10.1016/j.juro.2013.12.004. [Epub ahead of print]

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Department of Pathology, Christian Medical College, Vellore.

PURPOSE: The aim of our study was to compare the safety and efficacy of bipolar TURBT with monopolar resection.

MATERIALS AND METHODS: A single-centre parallel arm randomized controlled trial was conducted from

May 2011 to August 2012. All patients with suspected bladder tumours were eligible. Patients refusing consent and those undergoing routine restaging TURBT were excluded. The primary end-point was the incidence of obturator jerk. Secondary outcomes studied were fall in hematocrit, re-coagulation and transfusion rates, bladder perforation, fall in sodium level, development of TUR syndrome and resection time. Pathological quality was assessed by comparing the presence of deep muscle, and degree of severe cautery artifact in both arms.

RESULTS: A total of 257 TURBT's were performed during the study period. After exclusion, 147 patients were randomized - 75 in the monopolar arm and 72 in the bipolar arm. There were 6 protocol violation in the monopolar arm and 4 in the bipolar arm. Both intention to treat and per-protocol analyses were performed. The incidence of obturator jerk was greater in the bipolar arm (60% vs 49.2%, $p=0.27$). There was no significant difference between the secondary outcomes studied. The only significant difference observed was a significantly lower incidence of severe cautery artifact in the bipolar arm (25% vs 46.7%, $p=0.0096$).

CONCLUSIONS: Bipolar TURBT was not superior to monopolar resection with respect to obturator jerk, bladder perforation and hemostasis. There is a significantly lower incidence of severe cautery artifact following bipolar resection.

INTL PMID: 24333244 BS

Wycoco, V.;M. Shroff;S. Sudhakar and W. Lee
White Matter Anatomy. What the Radiologist Needs to Know.

Neuroimaging Clin N Am. 2013 May;23(2):197-216. doi: 10.1016/j.nic.2012.12.002. Epub 2013 Jan 20.

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Diffusion tensor imaging (DTI) has allowed in vivo demonstration of axonal architecture and connectivity. This technique has set the stage for numerous studies on normal and abnormal connectivity and their role in developmental and acquired disorders. Referencing established white matter anatomy, DTI atlases, and neuroanatomical descriptions, this article summarizes

the major white matter anatomy and related structures relevant to the clinical neuroradiologist in daily practice. © 2013.

INTL PMID:23608685 BS

Arias, C. A.; L. M. Bosquiazso; J. A. Bruna; M. C. Fabrica; C. Mascotti; M. S. Bertin; J. L. Castaldi; S. J. Mendoza; L. Y. Partida; A. Zyla; L. Castilla; E. Di Gerolano; M. Espinoza; G. Koch; M. Tulian; M. Melis; M. Miriam; M. Palermo; J. Pappalardo; M. Quinones; F. Cabrera; S. Campos; M. A. Curioni; J. Fernandez; C. Grasselli; F. Abarzua; G. Araya; M. Caro; C. Gonzalez; C. Vera; M. Araneda; S. De la Cuadra; J. P. Kusanovic; J. A. Ortiz; K. Silva; W. K. Bofa; R. M. Djokoto; T. O. Konney; Y. O. Larbi; E. Quashie; A. Kriplani; S. Kumar; S. Mittal; U. Gupta; M. Puri; C. Raghunandan; S. S. Trivedi; S. Batra; A. Kumar; U. Manaktala; S. Prasad; N. Goel; K. Guleria; G. Radhakrishnan; A. Suneja; N. B. Vaid; M. Beck; A. D'Souza; A. Sebastian; A. E. Thomas; E. Thomas; R. Vijayaselvi; F. Butt; S. Kaliti; E. O. Nyaboga; M. J. Owiti; A. Wameyo; S. Akram; A. Junejo; J. Khatoon; S. Siddiqui; S. Zafar; F. Abbasi; S. Aijaz; A. Firdous; A. Khuwaja; B. Zulfiqar; S. Batool; H. Hashmi; S. Hussaini; Z. Naqvi; S. Tahir; S. Ibrahim; S. E. Khalil; A. Kuna; M. Saboni; M. Salman; M. S. Abubakar; M. Awad; M. Elbashir; N. Gaffar; S. Hussain and C. C. Grp
Caesarean section surgical techniques (CORONIS): a fractional, factorial, unmasked, randomised controlled trial.

Lancet. 2013, 382(9888): 234-248.

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Background Variations exist in the surgical techniques used for caesarean section and many have not been rigorously assessed in randomised controlled trials. We aimed to assess whether any surgical techniques were associated with improved outcomes for women and babies. Methods CORONIS was a pragmatic international 2x2x2x2 non-regular fractional, factorial, unmasked, randomised controlled trial that examined five elements of the caesarean section technique in intervention pairs. CORONIS was undertaken at 19 sites in Argentina, Chile, Ghana, India, Kenya, Pakistan, and Sudan. Each site was assigned to three of the five intervention pairs: blunt versus sharp abdominal entry; exteriorisation of the uterus for repair versus intra-abdominal repair; single-layer versus double-layer closure of the uterus; closure versus non-closure of the peritoneum (pelvic and parietal); and chromic catgut versus polyglactin-910 for uterine repair. Pregnant women were eligible if they were to undergo their first or second caesarean section through a planned transverse abdominal incision. Women were randomly assigned by a secure web-based number allocation system to one intervention from each of the three assigned pairs. All investigators, surgeons, and participants were unmasked to treatment allocation. The primary

outcome was the composite of death, maternal infectious morbidity, further operative procedures, or blood transfusion (>1 unit) up to the 6-week follow-up visit. Women were analysed in the groups into which they were allocated. The CORONIS Trial is registered with Current Controlled Trials: ISRCTN31089967. Findings Between May 20, 2007, and Dec 31, 2010, 15 935 women were recruited. There were no statistically significant differences within any of the intervention pairs for the primary outcome: blunt versus sharp entry risk ratio 1.03 (95% CI 0.91-1.17), exterior versus intra-abdominal repair 0.96 (0.84-1.08), single-layer versus double-layer closure 0.96 (0.85-1.08), closure versus non-closure 1.06 (0.94-1.20), and chromic catgut versus polyglactin-910 0.90 (0.78-1.04). 144 serious adverse events were reported, of which 26 were possibly related to the intervention. Most of the reported serious adverse events were known complications of surgery or complications of the reasons for the caesarean section. Interpretation These findings suggest that any of these surgical techniques is acceptable. However, longer-term follow-up is needed to assess whether the absence of evidence of short-term effects will translate into an absence of long-term effects.

INTL WOS:000322543700033 CI

Azad, Z. R.;A. Sivadasan;M. Alexander and A. K. Patil
Efficacy of terbutaline in familial limb girdle myasthenia: Case report and review of literature.

Ann Indian Acad Neurol. 2013, 16(2): 208-210.

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

Congenital myasthenic syndromes (CMS) are frequently misdiagnosed due to their wide clinical heterogeneity. Molecular defects in various end-plate associated proteins are being identified. Better understanding of the molecular pathogenesis and genotype-phenotype correlations can help evolve newer therapeutic targets. We present a report of two siblings with familial limb girdle myasthenia who showed significant objective clinical improvement after initiation of terbutaline. The possible mechanism of action and utility of terbutaline in the setting of CMS are described. Terbutaline is a potential treatment option in certain subtypes of CMS refractory to conventional medicines. However, long-term follow-up is required to determine the overall efficacy and safety profile.

NAT PMID: 23956565 PMCID: 3724075 CI

Balakrishnan, B.;A. Krishnagopal;D. Sen;A. Srivastava and G. R. Jayandharan

Improved AAV1 and AAV9 Vectors for Gene Delivery.

Molecular Therapy. 2013, 21: S130-S131.

[Balakrishnan, Balaji; Sen, Dwaipayan; Srivastava, Alok; Jayandharan, Giridhara R.] Christian Med Coll & Hosp, Vellore, Tamil Nadu, India. [Krishnagopal, Akshaya; Srivastava, Alok; Jayandharan, Giridhara R.] Christian Med Coll & Hosp, Ctr Stem Cell Res, Vellore, Tamil Nadu, India.

INTL WOS:000319858400336 CI

Balakumar, B.;S. Babu;H. K. Varma and V. Madhuri

Triphasic ceramic scaffold in paediatric and adolescent bone defects.

J Pediatr Orthop B. 2014 Mar;23(2):187-95. doi: 10.1097/BPB.0000000000000004.

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We evaluated novel triphasic hydroxyapatite tricalcium phosphate calcium silicate scaffold (HASi) in the management of paediatric bone defects. Their main advantage is considered to be adequate strength and stimulation of bone formation without resorting to autograft. A total of 42 children younger than 16 years of age were recruited over a period of 1 year and were treated with this synthetic bone substitute as a stand-alone graft for pelvic, femur, calcaneal and ulnar osteotomies, cystic bone lesions, subtalar arthrodesis and segmental bone defects. Forty children, 22 boys and 18 girls, mean age 8.3 years and a mean follow-up of 18.51 months, were available for evaluation. Analysis showed that younger age, cancellous defects and no internal fixation were associated with significantly faster healing. Partial incorporation was observed in 22.5% and complete incorporation in 77.5% of cases at 18 months of follow-up. Sex, type of defect, BMI and the shape of the ceramic graft did not significantly affect the rate of healing. Complications attributable to HASi included four nonunions, three of which were diaphyseal. HASi was found to be safe in children with cancellous or benign cavitary defects. It is not suitable for diaphyseal and segmental bone defects as a stand-alone graft.

INTL PMID: 24201074 CI

Carey, R.;P. Rupali;O. C. Abraham and D. Kattula
Does first line antiretroviral therapy increase the prevalence of cardiovascular risk factors in Indian patients?: A cross sectional study.
J Postgrad Med. 2013, 59(4): 258-262.

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

Context: Antiretroviral therapy (ART) is associated with a myriad of metabolic complications which are potential cardiovascular risk factors. Early detection of these risk factors could help in alleviating morbidity and mortality in human immunodeficiency virus (HIV) infected patients on ART.

Aims: To study the prevalence of cardiovascular risk factors in patients on a combination of nucleoside reverse transcriptase inhibitors (NRTIs) and non-NRTIs (NNRTIs) - the standard combination first line ART regimen used in tertiary referral center.

Settings and Design: The prevalence of cardiovascular risk factors in HIV infected subjects with stage 1t disease on standard first line ART for at least 1 year, HIV infected subjects with stage 1 disease and not on ART and HIV negative subjects was assessed. The study was a cross-sectional study design.

Materials and Methods: Basic demographic data was collected and patients were examined for anthropometric data and blood was collected for analysis of blood glucose, serum lipids, and fasting insulin levels.

Statistical Analysis: Chi-square test was used to calculate significance. Statistical Package for Social Sciences (SPSS) software version 16.0 was used for data analysis.

Results: The prevalence of hypercholesterolemia and hypertriglyceridemia was higher in the patients on ART when compared to patients not on ART ($P < 0.001$). There was no difference in the prevalence of abnormal glycemic status, obesity, abdominal obesity, insulin resistance, and hyperinsulinemia between patients on ART and those not on ART.

Conclusions: First line ART is associated with increased prevalence of dyslipidemia. Early detection and treatment of dyslipidemia should help in reducing the cardiovascular morbidity in patients on ART.

NAT PMID: 24346381 CI

Chacko, A. G.;M. K. Turel;S. Sarkar;K. Prabhu and R. T. Daniel

Clinical and radiological outcomes in 153 patients undergoing oblique corpectomy for cervical spondylotic myelopathy.

Br J Neurosurg. 2014 Jan;28(1):49-55. doi: 10.3109/02688697.2013.815326. Epub 2013 Jul 16.

Department of Neurological Sciences, Christian Medical College , Vellore India.

Objective. To document the clinical and radiological outcomes in a large series of patients undergoing the oblique cervical corpectomy (OCC) for spondylotic myelopathy. **Materials and methods.** We retrospectively analyzed our series of 153 patients undergoing OCC for cervical spondylotic myelopathy (CSM) over the last 10 years. A mean clinical follow-up of 3 years was obtained in 125 patients (81.7%), while 117 patients (76.5%) were followed up radiologically. **Neurological function** was measured by the Nurick grade and the modified Japanese Orthopedic Association score (JOA). Plain radiographs and magnetic resonance images (MRI) were reviewed. **Results.** Ninety-two percent were men with a mean age of 51 years and a mean duration of symptoms of 18 months. Sixty-one had a single level corpectomy, 66 had a 2-level, 24 had a 3-level, and two had a 4-level OCC. There was statistically significant improvement ($p < 0.05$) in both the Nurick grade and the JOA score at mean follow-up of 34.6 +/- 25.4 months. Permanent Horner's syndrome was seen in nine patients (5.9%), postoperative C5 radiculopathy in five patients (3.3%), dural tear with CSF leak in one patient (0.7%), and vertebral artery injury in one patient (0.7%). Of the 117 patients who were followed up radiologically, five patients (4.3%) developed an asymptomatic kyphosis of the cervical spine while 22 patients (25.6%) with preoperative lordotic spines had a straightening of the whole spine curvature. **Conclusions.** The OCC is a safe procedure with good outcomes and a low morbidity for treating cervical cord compression due to CSM. This procedure avoids graft-related complications associated with the central corpectomy, but is technically demanding.

INTL PMID: 23859056 CI

Chan, M.;A. Lake;A. Fauci;S. Berkley;J. Phumaphi;C. Elias;P. Alonso;C. de Quadros;N. Bates;Z. Bhutta;L. Dare;H. Evans;L. Hall;T. J. John;J. M. Okwo-Bele;O. Levine;D. Salisbury;A. Schuchat;P. A. Singer;L. Slamet;G. Tambini;J. Vandelaer;S. Wrobel and C. Decade Vaccine Global Vaccine Action Plan.

Vaccine. 2013, 31: B5-B31.

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INTL WOS:000318462000003 CI

Chandramohan, A.;S. K. N. Keshava and T. Mammen
Iatrogenic carotid-jugular fistula while attempting
superior vena cava stenting.

Biomedical Imaging and Intervention Journal. 2013, 9(2).
e11

Available online at <http://www.bijj.org/2013/2/e11> doi:
10.2349/bijj.9.2.e11

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We report a 45-year-old man with lung cancer and superior vena cava syndrome who had an iatrogenic right common carotid artery to internal jugular vein fistula while attempting jugular venous access for superior vena cava stenting. Patient was successfully treated by endovascular carotid stent. © 2013 Biomedical Imaging and Intervention Journal.

INTL CI

Chandy, S. J.;K. Thomas;E. Mathai;B. Antonisamy;K. A. Holloway and C. Stalsby Lundborg

Patterns of antibiotic use in the community and challenges of antibiotic surveillance in a lower-middle-income country setting: a repeated cross-sectional study in Vellore, South India.

J Antimicrob Chemother. 2013, 68(1): 229-236.

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OBJECTIVES: There is considerable evidence linking antibiotic usage to bacterial resistance. Intervention strategies are needed to contain antibiotic use and thereby resistance. To plan appropriate strategies, it is imperative to undertake surveillance in the community to monitor antibiotic encounters and drivers of specific antibiotic misuse. Such surveillance is rarely in place in lower-middle-income countries (LMICs). This study describes antibiotic patterns and challenges faced while developing such surveillance systems in an LMIC.

PATIENTS AND METHODS: Surveillance of antibiotic encounters (prescriptions and dispensations) was carried out using a repeated cross-sectional design for 2 years in Vellore, south India. Every month, patients attending 30 health facilities (small hospitals, general practitioner clinics and pharmacy shops) were observed until 30 antibiotic encounters were attained in each. Antibiotic use was expressed as the percentage of encounters containing specific antibiotics and defined daily doses (DDDs)/100 patients. Bulk antibiotic sales data were also collected.

RESULTS: Over 2 years, a total of 52,788 patients were observed and 21,600 antibiotic encounters (40.9%) were accrued. Fluoroquinolones and penicillins were widely used. Rural hospitals used co-trimoxazole more often and urban private hospitals used cephalosporins more often; 41.1% of antibiotic prescriptions were for respiratory infections. The main challenges in surveillance included issues regarding sampling, data collection, denominator calculation and sustainability.

CONCLUSIONS: Patterns of antibiotic use varied across health facilities, suggesting that interventions should involve all types of health facilities. Although challenges were encountered, our study shows that it is possible to develop surveillance systems in LMICs and the data generated may be used to plan feasible interventions, assess impact and thereby contain resistance.

INTL PMID: 22945913 CI

Cherian, A. M.;T. S. Girish;M. Jagannati and M. Lakshmi
High or low- A trial of low dose anti snake venom in the
treatment of poisonous snakebites.

Journal of Association of Physicians of India. 2013, 61(6):
387-396.

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Objective: To demonstrate that use of lower doses of anti-snake venom is as effective as high doses and is associated with less complications and lower mortality especially in the wake of rising cost of medical treatment, the people most affected by snakebites being the poor farmers.

Methodology: A Prospective descriptive study consisting of 54 snakebite patients fulfilling the inclusion criteria who were admitted to Bangalore Baptist Hospital, Bengaluru, between November 2006 and November 2008 and were treated with a low dose ASV regime. The patients were initially given 2 vials of ASV followed later with 1 vial at a time according to clotting time. Any other supportive measures were undertaken as necessary.

Results:In this study the average dose of ASV required was only 6.70 ± 3.24 vials. The complications - 12.9% patients had ARF, and another 12.9% patients had neuropranalysis severe enough to require ventilatory support. There were 2 deaths (mortality of 3.7%) in the study.

Conclusion: Low dose ASV regime in poisonous snakebites along with supportive treatment as necessary is as good as high dose regime, and has lesser adverse effects while reducing the cost of treatment too. Hence low dose regime can be used with beneficial results in poisonous snakebites. © JAPI.

NAT **CI**

Christudoss, P.;R. Selvakumar;A. B. Pulimood;J. J. Fleming
and G. Mathew

Protective role of aspirin, vitamin C, and zinc and their
effects on zinc status in the DMH-induced colon
carcinoma model.

Asian Pac J Cancer Prev. 2013, 14(8): 4627-4634.

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Chemoprotection refers to the use of specific natural or synthetic chemical agents to suppress or prevent

the progression to cancer. The purpose of this study is to assess the protective effect of aspirin, vitamin C or zinc in a dimethyl hydrazine (DMH) colon carcinoma model in rats and to investigate the effect of these supplements on changes associated with colonic zinc status. Rats were randomly divided into three groups, group 1 (aspirin), group 2 (vitamin C) and group 3 (zinc), each being subdivided into two groups and given subcutaneous injection of DMH (30 mg/kg body wt) twice a week for 3 months and sacrificed at 4 months (A-precancer model) and 6 months (B-cancer model). Groups 1, 2, 3 were simultaneously given aspirin, vitamin C, or zinc supplement respectively from the beginning till the end of the study. It was observed that 87.5% of rats co-treated with aspirin or vitamin C showed normal colonic histology, along with a significant decrease in colonic tissue zinc at both time points. Rats co-treated with zinc showed 100% reduction in tumor incidence with no significant change in colonic tissue zinc. Plasma zinc, colonic CuZnSOD (copper-zinc superoxide dismutase) and alkaline phosphatase activity showed no significant changes in all 3 cotreated groups. These results suggest that aspirin, vitamin C or zinc given separately, exert a chemoprotective effect against chemically induced DMH colonic preneoplastic progression and colonic carcinogenesis in rats. The inhibitory effects are associated with maintaining the colonic tissue zinc levels and zinc enzymes at near normal without significant changes.

INTL PMID:24083715 **CI**

Das, S.;J. Subhashini;R. Isiah and J. Retna
Neo-adjuvant low dose fractionated radiotherapy and
chemotherapy in locally advanced carcinoma cervix:
Phase II clinical study.

European Journal of Cancer. 2013, 49: S719-S719.

[Das, S.; Subhashini, J.; Isiah, R.; Retna, J.] Christian
 Med Coll & Hosp, Vellore, Tamil Nadu, India.

INTL WOS:000326843604329 **CI**

Das, S.;S. Thomas;S. K. Pal;R. Isiah and S. John
Hypofractionated Palliative Radiotherapy in Locally Advanced Inoperable Head and Neck Cancer: CMC Vellore Experience.

Indian J Palliat Care. 2013, 19(2): 93-98.

Department of Radiation Oncology, Christian Medical College, Vellore, Tamil Nadu, India.

BACKGROUND: A novel, short duration, palliative radiotherapy schedule for inoperable head and neck cancer was evaluated in terms of palliation of cancer-related symptoms and acute toxicities.

MATERIALS AND METHODS: Thirty-six patients with inoperable head and neck cancer were included in the study (2010-2012). All patients received 40 Gy in 10 fractions (equivalent dose: 49.8 Gy in conventional fractionation) with 2 fractions per week. Treatment-related toxicity was assessed using Radiation Therapy Oncology Group criteria. Functional Assessment of Cancer Therapy (Head and Neck, FACT H and N) quality of life (QOL) tool was administered before starting and at the completion of radiotherapy. Mean value before and after treatment was compared (paired t-test, $P = 0.05$, two-tailed for significance).

RESULTS: Thirty-three patients (male: 29, female: 4, mean age: 57.8 +/- 9.7 years) were included in the analysis (three patients discontinued treatment due to socioeconomic reasons). All patients had advanced inoperable head and neck cancers (27% IVA, 61% IVB, 9% IVC, TNM stage and 3% recurrent disease). Distressing pain at primary site (42%), dysphagia (18%), neck swelling (30%), and hoarseness (10%) were common presentations. Incidence of grade III mucositis and dermatitis and pain was 18%, 3%, and 24%, respectively. Planned radiotherapy without any interruptions was completed by 73% patients. QOL assessment showed improvement in social well-being (17.4 vs. 20.01, $P = 0.03$), but no significant change was observed in head and neck specific score (25.1 vs. 25.0, $P = NS$) after treatment. Reduction of pain was observed in 88% patients and 60% patients had improvement of performance status. Median overall survival of the cohort was 7 months.

CONCLUSIONS: The study shows that this short duration palliative radiotherapy schedule is a clinically viable option for advanced inoperable head and neck cancer to achieve significant palliation of the main presenting symptoms like pain, dysphagia, and throat pain.

NAT PMID: 24049349 PMCID: 3775031 CI

Dastidar, A.

Pneumomediastinum, pneumoperitoneum and pneumothorax following iatrogenic perforation of bronchus: successful conservative management of a potentially serious complication.

J Pediatr Surg. 2013, 48(2): 456-458.

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Rigid bronchoscopy is a standard technique of removing a foreign body from paediatric airway. An iatrogenic airway injury during a bronchoscopy can worsen the existing respiratory distress. This article describes a potentially serious complication which was managed successfully in a conservative manner.

INTL PMID: 23414886 CI

Denkinger, C. M.;Y. Kalantri;S. G. Schumacher;J. S. Michael;D. Shankar;A. Saxena;N. Sriram;T. Balamugesh;R. Luo;N. R. Pollock;M. Pai and D. J. Christopher
Challenges in the development of an immunochromatographic interferon-gamma test for diagnosis of pleural tuberculosis.

PLoS One. 2013, 8(12): e85447.

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Department of Pathology, Stanford University, Stanford, California, United States of America.

Division of Infectious Diseases, Beth Israel Deaconess Medical Center, Boston, Massachusetts, United States of America ; Department of Laboratory Medicine, Boston Children's Hospital, Boston, Massachusetts, United States of America.

Existing diagnostic tests for pleural tuberculosis (TB) have inadequate accuracy and/or turnaround time. Interferon-gamma (IFNg) has been identified in many studies as a biomarker for pleural TB. Our objective

was to develop a lateral flow, immunochromatographic test (ICT) based on this biomarker and to evaluate the test in a clinical cohort. Because IFNg is commonly present in non-TB pleural effusions in low amounts, a diagnostic IFNg-threshold was first defined with an enzyme-linked immunosorbent assay (ELISA) for IFNg in samples from 38 patients with a confirmed clinical diagnosis (cut-off of 300pg/ml; 94% sensitivity and 93% specificity). The ICT was then designed; however, its achievable limit of detection (5000pg/ml) was over 10-fold higher than that of the ELISA. After several iterations in development, the prototype ICT assay for IFNg had a sensitivity of 69% (95% confidence interval (CI): 50-83) and a specificity of 94% (95% CI: 81-99%) compared to ELISA on frozen samples. Evaluation of the prototype in a prospective clinical cohort (72 patients) on fresh pleural fluid samples, in comparison to a composite reference standard (including histopathological and microbiologic test results), showed that the prototype had 65% sensitivity (95% CI: 44-83) and 89% specificity (95% CI: 74-97). Discordant results were observed in 15% of samples if testing was repeated after one freezing and thawing step. Inter-rater variability was limited (3%; 1 out of 32). In conclusion, despite an iterative development and optimization process, the performance of the IFNg ICT remained lower than what could be expected from the published literature on IFNg as a biomarker in pleural fluid. Further improvements in the limit of detection of an ICT for IFNg, and possibly combination of IFNg with other biomarkers such as adenosine deaminase, are necessary for such a test to be of value in the evaluation of pleural tuberculosis.

INTL PMID: 24376880 PMID: 3871622 . CI

Galappaththy, G. N. L.; P. Tharyan and R. Kirubakaran
Primaquine for preventing relapse in people with
Plasmodium vivax malaria treated with chloroquine.
Cochrane Database Syst Rev. 2013 Oct 26;10:CD004389.
doi: 10.1002/14651858.CD004389.pub3.

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Background Plasmodium vivax infections are an important contributor to the malaria burden worldwide. The World Health Organization recommends a 14-day course of primaquine (0.25 mg/kg/day, giving an adult dose of 15 mg/day) to eradicate the liver stage of the parasite and prevent relapse of the disease. Many people find a 14-day primaquine regimen difficult to complete, and there is a potential risk of haemolytic anaemia in people with glucose-6-phosphate-dehydrogenase enzyme (G6PD) deficiency. This review evaluates primaquine in P. vivax, particularly alternatives to the standard 14-day course. Objectives To compare alternative primaquine regimens to the recommended 14-day regimen for preventing relapses (radical cure) in people with P. vivax malaria treated for blood stage infection with chloroquine. We also summarize trials comparing primaquine to no primaquine that led to the recommendation for the 14-day regimen. Search methods We searched the Cochrane Infectious Diseases Group's Specialized Register, CENTRAL (The Cochrane Library), MEDLINE, EMBASE and LILACS up to 8 October 2013. We checked conference proceedings, trial registries and reference lists and contacted researchers and pharmaceutical companies for eligible studies. Selection criteria Randomized controlled trials (RCTs) and quasi-RCTs comparing various primaquine dosing regimens with the standard primaquine regimen (15 mg/day for 14 days), or with no primaquine, in people with vivax malaria treated for blood stage infection with chloroquine. Data collection and analysis We independently assessed trial eligibility, trial quality, and extracted data. We calculated risk ratios (RR) with 95% confidence intervals (CI) for dichotomous data, and used the random-effects model in meta-analyses

if there was significant heterogeneity. We assessed the overall quality of the evidence using the GRADE approach. Main results We included 15 trials (two cluster-RCTs) of 4377 adult and child participants. Most trials excluded people with G6PD deficiency. Trials compared various regimens of primaquine with the standard primaquine regimen, or with placebo or no treatment. All trials treated blood stage infection with chloroquine. Alternative primaquine regimens compared to 14-day primaquine Relapse rates were higher over six months with the five-day primaquine regimen than the standard 14-day regimen (RR 10.05, 95% CI 2.82 to 35.86; two trials, 186 participants, moderate quality evidence). Similarly, relapse over six months was higher with three days of primaquine than the standard 14-day regimen (RR 3.18, 95% CI 2.1 to 4.81; two trials, 262 participants, moderate quality evidence; six months follow-up); and with primaquine for seven days followed up over two months, compared to 14-day primaquine (RR 2.24, 95% CI 1.24 to 4.03; one trial, 126 participants, low quality evidence). Relapse with once-weekly supervised primaquine for eight weeks was little different over nine months follow-up compared to 14-day self-administered primaquine in one small study (RR 2.97, 95% CI 0.34 to 25.87; one trial, 129 participants, very low quality evidence). Primaquine regimens compared to no primaquine The number of people that relapsed was similar between people given five days of primaquine or given placebo or no primaquine (four trials, 2213 participants, high quality evidence; follow-up six to 15 months); but lower with 14 days of primaquine (RR 0.6; 95% CI 0.48 to 0.75; ten trials, 1740 participants, high quality evidence; follow-up seven weeks to 15 months). No serious adverse events were reported. Treatment-limiting adverse events were rare and non-serious adverse events were mild and transient. Trial authors reported that people tolerated the drugs. We did not find trials comparing higher dose primaquine regimens (0.5 mg/kg/day or more) for five days or more with the 14-day regimen. Authors' conclusions The analysis confirms the current World Health Organization recommendation for 14-day primaquine (15 mg/day) to prevent relapse of vivax malaria. Shorter primaquine regimens at the same daily dose are associated with higher relapse rates. The comparative effects with weekly primaquine are promising, but require further trials to establish equivalence or non-inferiority compared to the 14-day regimen in high malaria transmission settings.

INTL WOS:000326373000028 CI

George, B.;V. Mathews;K. M. Lakshmi;S. Melinkeri;A. Sharma;A. Viswabandya;S. Sharma;S. Das;R. Ahmed;A. Abraham;V. Nair;S. Apte;M. Chandy and A. Srivastava
The use of a fludarabine-based conditioning regimen in patients with severe aplastic anemia - a retrospective analysis from three Indian centers.

Clin Transplant. 2013, 27(6): 923-929.

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

Between 2001 and 2009, 121 patients with severe aplastic anemia (SAA) underwent hematopoietic stem cell transplantation (HSCT) using a conditioning protocol of fludarabine and cyclophosphamide at three Indian hospitals. Donors were HLA-identical sibling or family donors. Seventy-six patients were considered "high risk" as per criteria. The graft source included peripheral blood stem cells in 109 and G-CSF-stimulated bone marrow in 12. GVHD prophylaxis consisted of cyclosporine and mini-methotrexate. Engraftment occurred in 117 (96.6%) while two had graft failure and two expired in the first two wk. Neutrophil engraftment was seen at 12.3 d (range: 9-19) while platelet engraftment occurred at 12.4 d (range: 8-32). Grade II-IV acute GVHD was seen in 26.7% and grade IV GVHD in 8.6%. Chronic GVHD occurred in 44% and was extensive in 10%. The five-yr overall survival for the entire cohort is 75.8 +/- 3.9% with a survival of 95.6 +/- 3.1% in the low-risk group (n = 45) and 64.0 +/- 5.6% in the high-risk group (n = 76). Conditioning with fludarabine and cyclophosphamide is associated with very good long-term survival in patients undergoing HSCT for SAA.

INTL PMID: 24304374 CI

George, K.;M. S. Kamath and P. Tharyan
Minimally invasive versus open surgery for reversal of
tubal sterilization.

Cochrane Database Syst Rev. 2013 Feb 28;2:CD009174.
doi: 10.1002/14651858.CD009174.pub2.

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Background Although tubal sterilization procedures are considered to be permanent, requests for reversal of the procedure (re-canalisation) are not infrequent. The reversal procedure can be done either by an open laparotomy or by minimally invasive surgery (laparoscopic or robotic approach). **Objectives** To compare the relative effectiveness and safety of reversal of tubal sterilization by open laparotomy, laparoscopy and robotically assisted endoscopy. **Search methods** On 23 October 2012 we searched the Cochrane Menstrual Disorders and Subfertility Review Group Specialised Register; the Cochrane Central Register of Controlled Trials (CENTRAL) in The Cochrane Library (Issue 10, 2012); MEDLINE; EMBASE; LILACS; clinical trials registries; regional databases; conference proceedings; and references for relevant published, unpublished and ongoing trials. **Selection criteria** Randomised trials comparing the different methods of surgical reversal of tubal sterilisation. **Data collection and analysis** No trials that met the selection criteria were identified. **Main results** No data for evaluation were obtained **Authors' conclusions** Currently there is no evidence from randomised controlled trials to recommend or refute the use of a minimally invasive surgical approach (laparoscopic or robotic) or open surgery for reversal of tubal sterilization. There is a need for well conducted and reported randomised clinical trials to generate reliable evidence to inform clinical practice.

INTL WOS:000315460300021 CI

George, L.;P. Dincy;M. Chopra;M. Agarwala;S. Maheswaran;D. Deodhar;P. Rupali;M. Thomas and S. Pulimood

Novel multidrug therapy for disseminated
rhinosporidiosis, refractory to dapsone - case report.

Trop Doct. 2013, 43(3): 110-112.

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Rhinosporidiosis is a chronic granulomatous disorder, caused by *Rhinosporidium seeberi* endemic in India and Sri Lanka. The most common sites are the nasal mucosa and the nasopharynx and cutaneous lesions usually occur as a part of disseminated rhinosporidiosis. Dapsone has been frequently used in treating disseminated disease in immunocompetent individuals. Here we report a case of disseminated rhinosporidiosis in an immunocompromised individual on antiretroviral drugs, non-responsive to Dapsone and therefore treated with a multidrug therapy of Cycloserine, Dapsone and Ketoconazole with good response.

INTL PMID:23796478 CI

George, S. E.;G. Singh;B. S. Mathew;D. Fleming and G. Korula

Comparison of the effect of lignocaine instilled through
the endotracheal tube and intravenous lignocaine on
the extubation response in patients undergoing
craniotomy with skull pins: A randomized double blind
clinical trial.

J Anaesthesiol Clin Pharmacol. 2013, 29(2): 168-172.

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Vellore, Tamil Nadu, India.

BACKGROUND: A desirable combination of smooth extubation and an awake patient after neurosurgical procedures is difficult to achieve in patients with skull pins. Lignocaine instilled into endotracheal tube has been reported to suppress cough by a local mucosal anesthetizing effect. We aimed to evaluate if this effect will last till extubation, if given before pin removal.

MATERIALS AND METHODS: A total of 114 patients undergoing elective craniotomy were divided into three groups and were given 1 mg/kg of intravenous (IV), 2% lignocaine (Group 1), placebo (Group 2) and 1 mg/kg of 2% lignocaine sprayed down the endotracheal tube (Group 3) before skull pin removal. The effectiveness of each to blunt extubation response

was compared. Plasma levels of lignocaine were measured 10 min after administration of the study drug and at extubation. Sedation scores were noted, immediately after extubation and 10 min later.

RESULTS: Two percent of lignocaine instilled through endotracheal route was not superior to the IV route or placebo in attenuating cough or hemodynamic response at extubation when given 20-30 min before extubation. The plasma levels of lignocaine (0.8 mug/ml) were not high enough even at the end of 10 min to have a suppressive effect on cough if given IV or intratracheally (IT). Lignocaine did not delay awakening in these groups.

CONCLUSION: IT lignocaine in the dose of 1 mg/kg does not prevent cough at extubation if given 20-30 min before extubation. If the action is by a local mucosal anesthetizing effect, it does not last for 20-30 min to cover the period from pin removal to extubation.

INTL PMID: 23878435 PMCID: 3713661 CI

Goel, A.;C. E. Eapen and D. Danda

Infliximab and occult Hepatitis B infection: To treat or not to treat?

International Journal of Rheumatic Diseases. 2013, 16(4): 377-378.

Department of Hepatology, Christian Medical College, Vellore, India

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INTL CI

Goel, R.;D. Danda;S. Kumar and G. Joseph

Rapid control of disease activity by tocilizumab in 10 'difficult-to-treat' cases of Takayasu arteritis.

Int J Rheum Dis. 2013, 16(6): 754-761.

Department of Clinical Immunology and Rheumatology, CMC, Vellore, India.

AIM: To assess outcome of 10 'difficult to treat' patients with Takayasu arteritis (TA) treated with tocilizumab.

METHODS: Records of 10 patients with TA who received at least six infusions of tocilizumab were studied and data related to demography, medications, investigations, angiography and outcome were analyzed.

RESULTS: Median age, disease duration and Indian Takayasu Arteritis Score (ITAS) of 10 patients were 24.5

(13-53) years, 25.5 (1.5-60) months and 4.5 (0-13), respectively. All patients had active disease with ITAS of ≥ 1 and/or they were angiographically active in spite of treatment with steroids and second line agents for a median duration of 27 (15-60) months. Tocilizumab led to a clinical response with ITAS of 0 and reduction in acute phase reactants (APR) in 100% of patients by the fourth infusion. Six patients (60%) maintained clinical response with radiologically stable disease and normal APR up to the sixth infusion. Two out of three patients (66%) with normal APR at baseline achieved and maintained stable disease state up to the last infusion, in contrast to 49.2% (4/7) responders in those with baseline high APR. Tocilizumab facilitated rapid reduction in steroid dose from 24 \pm 15 to 5.4 \pm 4.9 mg/day ($P = 0.003$). However, following discontinuation of tocilizumab therapy after six infusions, only two patients maintained stable disease state and the majority of them needed rescue therapy. There was no major adverse event or fatality.

CONCLUSION: Tocilizumab may be an effective steroid-sparing option for rapid control of refractory disease activity in patients of TA. However, the benefit is not sustained after its withdrawal.

INTL PMID: 24382284 CI

Gopal, B.;S. N. Keshava;V. Moses;N. R. S. Surendrababu;E. Stephan;S. Agarwal;G. C. Koshy and S. Mammen

Role of percutaneous sclerotherapy in venous malformations of the trunk and extremities: A clinical experience.

Biomedical Imaging and Intervention Journal. 2013, 9(3):e18

Available online at <http://www.bijj.org/2013/3/e18> doi: 10.2349/bijj.9.3.e18

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Department of Vascular Surgery, Christian Medical College, Vellore, Tamil Nadu, India

Purpose: To evaluate the efficacy of Direct Percutaneous Ethanol (DPE)/Sodium Tetradecyl Sulphate (STS) foam instillation in venous malformation of the trunk and extremities, and its side effects.

Materials and methods: Fifteen patients with a diagnosis of venous malformation in the trunk wall and extremities were treated with DPE/STS foam instillation. Sclerotherapy results were analysed with

Ultrasound Doppler and MRI. Statistical Analysis: The study sample was described using mean and standard deviation (SD). The mean MRI and ultrasound values before and after the intervention were compared using the paired-t-test.

Results: There is significant agreement between pre-injection volume and post-injection volume on ultrasound Doppler and MRI, as well as significant differences between the pre- and post-injection pain score.

Conclusion: Injection sclerotherapy for venous malformations of trunk and extremities is a safe and effective treatment option. © 2013 Biomedical Imaging and Intervention Journal. All rights reserved.

INTL CI

Gopalakrishnan, R.;T. P. Subhalakshmi;A. Kuruvilla and K. S. Jacob

Clozapine re-challenge under the cover of Filgrastim.

J Postgrad Med. 2013, 59(1): 54-55.

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Rechallenge with clozapine, despite a history of clozapine-induced neutropenia is considered in patients with a good response to the drug in the past, for whom no other treatments are effective, and in cases where the risks of withholding treatment are greater than the risks of rechallenge. Dyscrasias that occur during rechallenge are reportedly earlier in onset and longer lasting. Strategies advocated during rechallenge include frequent monitoring of white blood counts, the use of lithium or Granulocyte-Colony Stimulating Factors. We report a case of a patient with treatment-resistant schizophrenia who developed neutropenia with clozapine as a result of which the drug was discontinued. However poor response to other first and second-generation antipsychotic medication and the persisting risk of harm to himself and others necessitated the reconsideration of clozapine. The patient was re-challenged with clozapine under the cover of Filgrastim, a Granulocyte-Colony Stimulating Factor.

NAT PMID: 23525060 CI

Hareendran, S.;B. Balakrishnan;D. Sen;S. Kumar;A. Srivastava and G. R. Jayandharan

Adeno-associated virus (AAV) vectors in gene therapy: immune challenges and strategies to circumvent them. Rev Med Virol. 2013, 23(6): 399-413.

Centre for Stem Cell Research, Christian Medical College, Vellore, Tamil Nadu, India.

AAV-based gene transfer protocols have shown remarkable success when directed to immune-privileged sites such as for retinal disorders like Lebers congenital amaurosis. In contrast, AAV-mediated gene transfer into liver or muscle tissue for diseases such as hemophilia B, alpha1 anti-trypsin deficiency and muscular dystrophy has demonstrated a decline in gene transfer efficacy over time. It is now known that in humans, AAV triggers specific pathways that recruit immune sensors. These factors initiate an immediate reaction against either the viral capsid or the vector encoded protein as part of innate immune response or to produce a more specific adaptive response that generates immunological memory. The vector-transduced cells are then rapidly destroyed due to this immune activation. However, unlike other viral vectors, AAV is not immunogenic in murine models. Its immunogenicity becomes apparent only in large animal models and human subjects. Moreover, humans are natural hosts to AAV and exhibit a high seroprevalence against AAV vectors. This limits the widespread application of AAV vectors into patients with pre-existing neutralising antibodies or memory T cells. To address these issues, various strategies are being tested. Alternate serotype vectors (AAV1-10), efficient expression cassettes, specific tissue targeting, immune-suppression and engineered capsid variants are some approaches proposed to minimise this immune stimulation. In this review, we have summarised the nature of the immune response documented against AAV in various pre-clinical and clinical settings and have further discussed the strategies to evade them.

INTL PMID: 24023004 CI

Ishi, S. V.;M. Lakshmi;S. T. Kakde;K. C. Sabnis;M. Jagannati;T. S. Girish;L. Jeyaseelan and A. M. Cherian
Randomised controlled trial for efficacy of unfractionated heparin (UFH) versus low molecular weight heparin (LMWH) in Thrombo-prophylaxis.

Journal of Association of Physicians of India. 2013, 61(DEC): 882-886.

Department of Internal Medicine, Bangalore Baptist Hospital, Bengaluru, India

Dept. of Biostatistics, Christian Medical College, Vellore, India

Objective: To study if low dose Unfractionated heparin (UFH) is as effective and safe as Low-molecular weight heparin (LMWH) and also economical as a prophylactic agent for venous thromboembolism in medically ill patients.

Methodology: A prospective double blind randomised controlled trial consisting of 92 patients fulfilling the inclusion criteria who were admitted to Bangalore Baptist Hospital, Bengaluru, between March 2008 and July 2009 were randomised to receive Unfractionated heparin (UFH) or Low-molecular weight heparin (LMWH).

Results: The result based on intention to treat (ITT)analysis with best outcome scenario: in the UFH arm there were 47 (97.9%) patients who had not developed DVT/PE as compared to 42 (95.5%) in the LMWH arm. The difference in proportion of patients who had not developed DVT/PE between UFH and LMWH was 2.4% (-5.0, 9.8). The results based on per protocol analysis: In the UFH arm there were 44 (97.8%) patients who had not developed DVT/PE as compared to 39 (95.1%) in the LMWH arm. The difference in proportion of patients who had not developed DVT/PE between the UFH and LMWH arm was 2.7% (-5.2, 10.5). Patients on UFH had higher major bleeding complications 4 (8.9%) as compared to 0 in LMWH arm. But with respect to other complications like thrombocytopenia (HIT) and mild or minimal bleeding both arms were comparable.

Conclusion: This study has demonstrated that low dose UFH is as effective as LMWH as a prophylactic agent for venous thromboembolism in medically ill patients and economical also. © JAPI.

NAT CI

Ismail, A. M.;P. Samuel;J. Ramachandran;C. E. Eapen;R. Kannangai and P. Abraham

Lamivudine Monotherapy in Chronic Hepatitis B Patients from the Indian Subcontinent: Antiviral Resistance Mutations and Predictive Factors of Treatment Response. Mol Diagn Ther. 2014 Feb;18(1):63-71. doi: 10.1007/s40291-013-0054-3.

Department of Clinical Virology, Christian Medical College, Vellore, 632 004, Tamil Nadu, India.

BACKGROUND AND OBJECTIVE: Management of chronic hepatitis B is a global public health challenge. There are several updated guidelines proposed based on treatment outcome data from the respective study populations. In this study, we aim to characterize the antiviral resistance mutations to lamivudine monotherapy in patients diagnosed with chronic hepatitis B from the Indian subcontinent.

METHODS: A total of 147 lamivudine-treated patients with a median treatment duration of 13 (interquartile range 8-24) months were studied. Virological response was measured by hepatitis B virus (HBV) DNA levels. Antiviral resistance mutations were identified by sequencing HBV reverse transcriptase domains. Factors associated with virological response and antiviral resistance mutations were analyzed.

RESULTS: Virological response was observed in 50 (35 %) patients while 84 (57 %) were non-responders. The virological response for the remaining 13 (9 %) patients was undetermined. Forty patients (27 %) developed lamivudine-resistant mutations. HBV genotypes, subgenotypes and hepatitis B surface antigen subtypes did not show significant association with virological response or lamivudine-resistant mutations. High HBV DNA levels and increased treatment duration were strongly associated with the development of lamivudine-resistant mutations ($p = 0.002$ and $p < 0.001$). Patients who continued to be positive for hepatitis B e antigen have an increased risk for treatment failure ($p = 0.010$). High baseline aspartate transaminase levels were significantly associated with subsequent lamivudine response ($p = 0.037$).

CONCLUSION: Considering the limited potency and high resistance rates to lamivudine therapy, our study emphasizes the use of more potent drugs in the management of chronic hepatitis B in the Indian subcontinent.

INTL PMID: 24030850 CI

Jacob, K. M. and R. S. Paterson

Navicular stress fractures treated with minimally invasive fixation.

Indian J Orthop. 2013, 47(6): 598-601.

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

Consultant Lower Limb Arthroscopy and Arthroplasty Surgeon, SPORTSMED. SA, Stepney, South Africa.

BACKGROUND: Stress fractures of the naviculum bone are uncommon injuries occurring predominantly in athletes. These fractures are usually treated nonoperatively with a nonweight bearing cast for a minimum of 6 weeks followed by rehabilitation. Further, there is a paucity of literature on the long term clinical followup of these patients. These fractures do not heal predictably with conservative management, which does not inspire great compliance and their clinical outcome is variable. We report on the outcome of these fractures following early operative intervention by minimally invasive fixation and early weight bearing and rehabilitation. We propose that this is reliable and a successful treatment regimen and its role as the definitive management of this clinical problem should be explored.

MATERIALS AND METHODS: Nine athletes with ten stress fractures of the navicular treated at our institution between April 1991 and October 2000. The mean age of the patients was 22.8 years (range 18-50 years). All patients were treated by minimally invasive screw fixation and early weight bearing mobilization without a cast. The average followup was 7 years (range 2-11 years).

RESULTS: Seven of the nine patients returned to their pre-fracture level of sporting activity at an average of 5 months (range 3-9 months). One patient returned to full sporting activity following a delay of 2 years due to an associated tibial stress fracture and one patient had an unsatisfactory result. Long term review at an average of 7 years showed that six of these eight patients who returned to sports remained symptom free with two patients experiencing minimal intermittent discomfort after prolonged activity.

CONCLUSIONS: We recommend percutaneous screw fixation as a reliable, low morbidity procedure allowing early return to full sporting activity without long term complications or recurrences.

NAT PMID: 24379466 PMCID: 3868142 CI

Jacob, T. J.;R. Manoharan;A. Kumar;S. Kirishnan and A. G. Cherian

A low-cost banding device for oesophageal varices using Foley catheters.

Trop Doct. 2013, 43(4): 134-135.

Department of Paediatric Surgery, Christian Medical College, ISSCC Building, Vellore 632004, India. tarunjki@gmail.com.

Our institution has devised a low cost method of banding oesophageal varices by loading cut Foley catheters on to a banding apparatus.

INTL PMID: 23938466 CI

Jasper, S.;S. S. Vedula;S. S. John;S. Horo;Y. J. Sepah and Q. D. Nguyen

Corticosteroids as adjuvant therapy for ocular toxoplasmosis.

Cochrane Database Syst Rev. 2013, 4: CD007417.

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

BACKGROUND: Ocular infestation with Toxoplasma gondii, a parasite, may result in inflammation in the retina, choroid, and uvea and consequently lead to complications such as glaucoma, cataract, and posterior synechiae.

OBJECTIVES: The objective of this systematic review was to assess the effects of adjunctive use of corticosteroids for ocular toxoplasmosis.

SEARCH METHODS: We searched CENTRAL (which contains the Cochrane Eyes and Vision Group Trials Register) (The Cochrane Library 2012, Issue 9), Ovid MEDLINE, Ovid MEDLINE In-Process and Other Non-Indexed Citations, Ovid MEDLINE Daily, Ovid OLDMEDLINE, (January 1950 to October 2012), EMBASE (January 1980 to October 2012), Latin American and Caribbean Literature on Health Sciences (LILACS) (January 1982 to October 2012), the metaRegister of Controlled Trials (mRCT) (www.controlled-trials.com), ClinicalTrials.gov (www.clinicaltrials.gov) and the WHO International Clinical Trials Registry Platform (ICTRP) (www.who.int/ictcp/search/en). We searched the reference lists of included studies for any additional studies not identified by the electronic searches. We did not use any date or language restrictions in the electronic searches for trials. We last searched the electronic databases on 11 October 2012.

SELECTION CRITERIA: We planned to include randomized and quasi-randomized controlled trials. Eligible trials would have enrolled participants of any age who were immunocompetent and were diagnosed with active ocular toxoplasmosis. Included trials would have compared anti-parasitic therapy plus corticosteroids versus anti-parasitic therapy alone, or different doses or times of initiation of corticosteroids.

DATA COLLECTION AND ANALYSIS: Two authors independently screened titles and abstracts retrieved from the electronic searches. We retrieved full-text articles of studies categorized as 'unsure' or 'include' after review of the abstracts. Two authors independently reviewed each full-text article. Discrepancies were resolved through discussion.

MAIN RESULTS: The electronic searches retrieved 368 titles and abstracts. We reviewed 20 full-text articles. We identified no trials eligible for inclusion in this systematic review.

AUTHORS' CONCLUSIONS: Although research has identified wide variation in practices regarding use of corticosteroids, our systematic review did not identify evidence from randomized controlled trials for the role of corticosteroids in the management of ocular toxoplasmosis. Several questions remain unanswered by well-conducted randomized trials in this context, including whether use of corticosteroids is more effective than use of anti-parasitic therapy alone, when corticosteroids should be initiated in the treatment regimen (early versus late course of treatment), and which dosage and duration of steroid use is best. These questions are easily amenable to research using a randomized controlled design and they are ethical due to the absence of evidence to support or discourage use of corticosteroids for this condition. The question of foremost importance, however, is whether they should be used as adjunct therapy (that is, additional) to anti-parasitic agents.

INTL PMID: 23633342 CI

Jasper, S.; S. S. Vedula; S. S. John; S. Horo; Y. J. Sepah and Q. D. Nguyen

Corticosteroids for ocular toxoplasmosis.

Cochrane Database of Systematic Reviews. 2013, (4).

[Jasper, Smitha; John, Sheeja S.; Horo, Saban] Christian Med Coll & Hosp, Dept Ophthalmol, Vellore, Tamil Nadu, India. [Vedula, Satyanarayana S.] Johns Hopkins Bloomberg Sch Publ Hlth, Dept Epidemiol, Baltimore, MD USA. [Sepah, Yasir J.; Quan Dong Nguyen] Johns Hopkins Univ, Sch Med, Wilmer Eye Inst, Baltimore, MD 21287 USA.

Nguyen, QD (reprint author), Johns Hopkins Univ, Sch Med, Wilmer Eye Inst, 600 North Wolfe St, Maumenee 745, Baltimore, MD 21287 USA. qnguyen4@jhmi.edu

Background Ocular infestation with *Toxoplasma gondii*, a parasite, may result in inflammation in the retina, choroid, and uvea and consequently lead to complications such as glaucoma, cataract, and posterior synechiae. **Objectives** The objective of this systematic review was to assess the effects of adjunctive use of corticosteroids for ocular toxoplasmosis. **Search methods** We searched CENTRAL (which contains the Cochrane Eyes and Vision Group Trials Register) (The Cochrane Library 2012, Issue 9), Ovid MEDLINE, Ovid MEDLINE In-Process and Other Non-Indexed Citations, Ovid MEDLINE Daily, Ovid OLDMEDLINE, (January 1950 to October 2012), EMBASE (January 1980 to October 2012), Latin American and Caribbean Literature on Health Sciences (LILACS) (January 1982 to October 2012), the metaRegister of Controlled Trials (mRCT) (www.controlled-trials.com), ClinicalTrials.gov (www.clinicaltrials.gov) and the WHO International Clinical Trials Registry Platform (ICTRP) (www.who.int/ictcp/search/en). We searched the reference lists of included studies for any additional studies not identified by the electronic searches. We did not use any date or language restrictions in the electronic searches for trials. We last searched the electronic databases on 11 October 2012. **Selection criteria** We planned to include randomized and quasi-randomized controlled trials. Eligible trials would have enrolled participants of any age who were immunocompetent and were diagnosed with active ocular toxoplasmosis. Included trials would have compared anti-parasitic therapy plus corticosteroids versus anti-parasitic therapy alone, or different doses or times of initiation of corticosteroids. **Data collection and analysis** Two authors independently screened titles and abstracts retrieved from the electronic searches. We retrieved full-text articles of studies categorized as 'unsure' or 'include' after review

of the abstracts. Two authors independently reviewed each full-text article. Discrepancies were resolved through discussion. Main results The electronic searches retrieved 368 titles and abstracts. We reviewed 20 full-text articles. We identified no trials eligible for inclusion in this systematic review. Authors' conclusions Although research has identified wide variation in practices regarding use of corticosteroids, our systematic review did not identify evidence from randomized controlled trials for the role of corticosteroids in the management of ocular toxoplasmosis. Several questions remain unanswered by well-conducted randomized trials in this context, including whether use of corticosteroids is more effective than use of anti-parasitic therapy alone, when corticosteroids should be initiated in the treatment regimen (early versus late course of treatment), and which dosage and duration of steroid use is best. These questions are easily amenable to research using a randomized controlled design and they are ethical due to the absence of evidence to support or discourage use of corticosteroids for this condition. The question of foremost importance, however, is whether they should be used as adjunct therapy (that is, additional) to anti-parasitic agents.

INTL WOS:000320654400038 **CI**

Jebaraj, I.;B. R. Chacko;G. K. Chiramel;T. Matthai and A. Parameswaran

A simplified staging system based on the radiological findings in different stages of ochronotic spondyloarthropathy.

Indian J Radiol Imaging. 2013, 23(1): 101-105.

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

This study describes a group of 26 patients with ochronotic spondyloarthropathy who were on regular treatment and follow-up at a tertiary level hospital and proposes a simplified staging system for ochronotic spondyloarthropathy based on radiographic findings seen in the thoracolumbar spine. This proposed classification makes it easy to identify the stage of the disease and start the appropriate management at an early stage. Four progressive stages are described: an inflammatory stage (stage 1), the stage of early discal calcification (stage 2), the stage of fibrous ankylosis (stage 3), and the stage of bony ankylosis (stage 4). To our knowledge, this is

the largest reported series of radiological description of spinal ochronosis, and emphasizes the contribution of the spine radiograph in the diagnosis and staging of the disease.

NAT **PMID: 23986625** **PMCID: 3737607** **CI**

Joseph, R.;S. A. Pulimood;P. Abraham and G. T. John
Successful treatment of verruca vulgaris with Thuja occidentalis in a renal allograft recipient.

Indian J Nephrol. 2013, 23(5): 362-364.

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

Human papillomavirus-driven verruca vulgaris infection is common in solid organ transplant recipients and increases the risk for squamous cell carcinoma. The available treatment modalities have limited response. We report a renal allograft recipient who presented with multiple warts not responding to cryotherapy and radiosurgery with one turning malignant, needing amputation of the finger. An extract from Thuja occidentalis (White cedar tree) cured the resistant warts on the other fingers, leaving only superficial scars and without affecting allograft function. We have reviewed the pharmacological and clinical properties of T. occidentalis.

NAT **PMID: 24049274** **PMCID: 3764712** **CI**

Kamath, M. S.;A. Joshi;A. M. Kamath and T. Aleyamma
Management of severe ovarian hyperstimulation syndrome with thawed plasma.

J Hum Reprod Sci. 2013, 6(1): 82-85.

Reproductive Medicine Unit, Christian Medical College, Vellore, India.

Severe ovarian hyperstimulation syndrome remains one of the life threatening complication of assisted reproductive technology. In refractory cases of late ovarian hyperstimulation syndrome (OHSS), clinicians are left with limited therapeutic options. We report a case of refractory OHSS which was managed successfully using thawed plasma. Thawed plasma transfusion could be potential therapeutic option for managing patients with severe ovarian hyperstimulation not responding to conventional treatment.

INTL **PMID: 23869160** **PMCID: 3713586** **CI**

Kang, G.

New-generation treatment? Targeted antiviral therapy for rotavirus.

Gastroenterology. 2013, 145(4): 711-714.

Division of Gastrointestinal Sciences, Christian Medical College, Vellore, India. Electronic address: gkang@cmcvellore.ac.in.

INTL PMID: 23973678 CI

Kaul, U.;M. Unverdorben;R. Degenhardt;A. Seth;V. K. Bahl;S. M. S. Hiremath;P. Chandra;A. S. Mullesari;P. S. Sandhu;S. Rao;O. George;H. Ackermann and M. Boxberger

The Paclitaxel-eluting PTCA-balloon in combination with a cobalt-chromium stent in two different sequences to treat de novo coronary artery lesions: An angiographic follow up study.

Indian Heart Journal. 2013, 65(5): 510-517.

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Clinical Research Institute, Center for Cardiovascular Diseases, Rotenburg-an-der-Fulda, Germany

All India Institute of Medical Sciences, New Delhi, India

Ruby Hall Clinic, Pune, India

Max Devki Devi Heart and Vascular Institute, India

Madras Medical Mission, Chennai, India

Nizams Institute of Medical Sciences, Hyderabad, India

Christian Medical College, Vellore, India

Department of Biomathematics, Center for Medical Informatics, University Frankfurt/Main, Germany

B.Braun Melsungen AG, Vascular Systems, Berlin, Germany

Introduction: The paclitaxel-coated balloon catheter (DCB) based on the PACCOATH± technology has yielded angiographic and clinical results superior to drug-eluting stents (DES) in situations like in-stent restenosis (ISR) and a trend towards superior results in small coronary vessels and side branches of coronary bifurcations. Using the DCB followed by cobaltchromium stent (CoCr) deployment or with a reverse sequence may yield different outcomes in terms of late loss.

Methods: 97 patients with de-novo coronary stenosis (55.6 ± 10.7 years, 79.4% male, 70%, length: 25 mm,

vessel diameter: 2.5 ± 4.0 mm) were randomly treated with the DCB (3 mg/mm²) followed by a CoCr-stent or stent first and DCB later. Six-month angiographic and one-year clinical follow-up intention-to-treat analyses were performed.

Results: Angiographic and demographic baseline data was comparable between the two groups. When comparing balloon first versus stent first technique, the primary outcome variables were not statistically different for mean in-segment (0.51 ± 0.56 mm vs. 0.36 ± 0.55 mm, $p = 0.23$) and in-stent (0.52 ± 0.55 mm vs. 0.46 ± 0.52 mm, $p = 0.65$) late lumen loss. The lesion related 12-month MACE rates were 5/49 (10.2%) and 2/48 (4.2%) ($p = 0.44$). Lesion related thrombotic events occurred in three patients in balloon first and in one patient in stent first group, two of which were associated with early discontinuation of continuous dual anti-platelet therapy, two with suboptimal PCI, and one each were performed in a thrombotic lesion and a bifurcation type 1.1.0.

Conclusion: Drug-coated balloon first followed by cobalt chromium stent deployment versus a reverse sequence is not associated with statistically significantly different 6-month angiographic or 12-month clinical outcomes. © 2013, Cardiological Society of India. All rights reserved.

NAT CI

Kolli, V. K.;I. Kanakasabapathy;M. Faith;H. Ramamoorthy;B. Isaac;K. Natarajan and P. Abraham
A preclinical study on the protective effect of melatonin against methotrexate-induced small intestinal damage: effect mediated by attenuation of nitrosative stress, protein tyrosine nitration, and PARP activation.

Cancer Chemother Pharmacol. 2013, 71(5): 1209-1218.

Department of Biochemistry, Christian Medial College, Bagayam, Vellore 632002, Tamil Nadu, India.

PURPOSE: One of the major toxic side effects of methotrexate (MTX) is enterocolitis. To date, there is no efficient standard treatment for this side effect. Nitrosative stress is reported to play a critical role in MTX-induced mucositis. The purpose of this study is to investigate whether pretreatment with melatonin, an inhibitor of nitro-oxidative stress, prevents MTX-induced mucositis in rats.

METHODS: Rats were pretreated with melatonin (20 and 40 mg/kg body weight) i.p. daily 1 h before MTX (7

mg/kg body weight) administration for three consecutive days. After the final dose of MTX, the rats were killed and the small intestines were used for analysis.

RESULTS: The small intestines of MTX-treated rats showed moderate to severe injury. The villi were distorted, blunted, and atrophied and focally absent in various segments of the small intestines. Crypt abscesses were also found, suggesting an inflammatory response. Pretreatment with melatonin had a dose-dependent protective effect on MTX-induced mucositis. Morphology was saved to a moderate extent with 20 mg melatonin pretreatment, and near-normal morphology was achieved with 40 mg melatonin pretreatment. Damage to the villi and crypt abscess was reduced. The villi/crypt ratio was almost restored. Melatonin pretreatment protected the small intestines from MTX-induced damage by attenuating nitrosative stress, protein tyrosine nitration and PARP expression.

CONCLUSION: Because of its versatility in protecting against nitro-oxidative stress and reducing inflammation, we suggest that melatonin could be beneficial in ameliorating MTX-induced enteritis in humans.

INTL PMID: 23420439 CI

Kumar, S.;K. Pile and D. Danda

Juvenile dermatomyositis management: moving but in need of a push.

Int J Rheum Dis. 2013, 16(5): 497-498.

Christian Medical College & Hospital, Vellore, India.

INTL PMID: 24164834 CI

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

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

Eur Arch Otorhinolaryngol. 2013 Oct 29. [Epub ahead of print]

Department of ENT, Unit IV, Christian Medical College and Hospital, Vellore, 632004, Tamilnadu, India, anjalilepcha@yahoo.com.

Migrainous vertigo is a common cause of dizziness presenting to an otorhinolaryngology/otoneurology clinic. Although it causes a substantial burden to the individual and society there are no randomized

controlled trials on prophylactic medication for this condition. Flunarizine, a calcium channel blocker has been used effectively in both migraine and vestibular conditions. This randomized control trial was undertaken in a tertiary academic referral center to evaluate the efficacy of flunarizine in patients with migrainous vertigo when compared to non-specific vestibular treatment of betahistine and vestibular exercises. The effect of flunarizine on two particularly disabling symptoms of vertigo and headache was studied. A total of 48 patients who were diagnosed with definitive migrainous vertigo completed the study of 12 weeks duration. Patients in arm A received 10-mg flunarizine daily along with betahistine 16 mg and paracetamol 1 gm during episodes, and arm B received only betahistine and paracetamol during episodes. Symptom scores were noted at the start of the study and at the end of 12 weeks. Analysis of the frequency of vertiginous episodes showed a significant difference between arm A and arm B ($p = 0.010$) and improvement in severity of vertigo between the two groups ($p = 0.046$). Headache frequency and severity did not improve to a significant degree in arm A as compared to arm B. The main side effects were weight gain and somnolence and this was not significantly different between the two groups. Flunarizine (10 mg) is effective in patients with migrainous vertigo who suffer from considerable vestibular symptoms.

INTL PMID: 24166742 CI

Lionel, A. P.;G. Chinnaswamy;R. R. John and S. Mathai

Ifosfamide Induced Renal Rickets.

Indian J Pediatr. 2013 Aug 4. [Epub ahead of print]

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

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

NAT PMID: 23912821 CI

Manvizhi, S.;B. S. Mathew;D. H. Fleming;G. Basu and G. T. John

Combined approach with therapeutic drug monitoring and pharmacogenomics in renal transplant recipients.

Indian J Nephrol. 2013, 23(1): 71-73.

Department of Pharmacology, Clinical Pharmacology Unit, Vellore, India.

In patients undergoing renal transplantation, dose individualization for tacrolimus is routinely achieved with therapeutic drug monitoring (TDM). The patient started on 5.5 mg/day of tacrolimus had a significantly elevated tacrolimus trough concentration. The tacrolimus dose was regularly reduced following TDM at many time periods in the post transplant period but the tacrolimus concentration was consistently elevated. Genomic analysis done after four years revealed mutations in the genes encoding for CYP3A5 and MDR1 (2677G > T). Pharmacogenomics alongside TDM, will soon emerge as the backbone of dose individualization. But for genomics to be beneficial, it should be advocated in the pre-transplant or early post transplant period.

NAT PMID: 23580812 PMCID: 3621246 CI

Mariappan, R.;A. H. Narayana Prabhu and B. Kuppuswamy
Comparing the Effects of Oral Clonidine Premedication With Intraoperative Dexmedetomidine Infusion on Anesthetic Requirement and Recovery From Anesthesia in Patients Undergoing Major Spine Surgery.

J Neurosurg Anesthesiol. 2013 Jul 24. [Epub ahead of print]

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

BACKGROUND: Clonidine, an alpha2 agonist, has been used in anesthesia for many years to provide sedation, anxiolysis, analgesia, controlled hypotension, and to provide opioid-sparing anesthesia. Recently, there has been a great interest in using the newer alpha2 agonist, dexmedetomidine, because of its more selectivity toward alpha2 adrenoreceptors. We compared the effects of clonidine with dexmedetomidine on anesthetic requirement and recovery from anesthesia.

METHODS: Seventy-four patients undergoing major spine surgery were randomly allocated to receive either oral clonidine premedication followed by an intraoperative saline infusion (group A) or placebo premedication followed by dexmedetomidine infusion in the intraoperative period (group B). Standard anesthesia protocols were followed for induction and

maintenance. Heart rate, blood pressure, and end-tidal concentrations of isoflurane were noted every 15 minutes after proning. Hypertensive responses were treated with bolus doses of propofol and fentanyl. Hypotensive episodes were treated with bolus doses of ephedrine or phenylephrine. Primary outcomes were the comparisons of the effect of these 2 drugs on anesthetic requirement and recovery from anesthesia. Secondary outcomes were the comparisons of the hemodynamic response, intraoperative analgesic requirement, and blood loss during surgery.

RESULTS: Demographic data, duration of surgery, total dose of fentanyl and propofol requirement, blood loss, and the recovery time were comparable between the 2 groups. Both drugs reduced the isoflurane requirement during surgery. However, the reduction was more and statistically significant with dexmedetomidine compared with clonidine group at 1 and 2 hours after proning (P=0.001, 0.039 at 1 and 2 h). Both drugs are equally effective in controlling the hemodynamics, and the number of episodes of hypotension, hypertension, and bradycardia were comparable between the 2 groups.

CONCLUSIONS: Both clonidine and dexmedetomidine have anesthetic-sparing effect; however, it was more with dexmedetomidine than with clonidine. Recovery from isoflurane anesthesia was similar between both groups. Both are equally effective in controlling the hemodynamic response and reducing the blood loss during spine surgery.

INTL PMID: 23887684 CI

Mariappan, R.;K. Prabhu;S. M. Thampi and A. Nandhakumar

Anaesthetic management of an unrecognized cerebral arteriovenous malformation bleed in a 45-day old baby.
Indian J Anaesth. 2013, 57(3): 302-304.

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

NAT PMID: 23983295 PMCID: 3748691 CI

Mathew, B. S.;G. Basu;A. M. Abraham;T. S. Vijayakumar;R. Prabha and D. H. Fleming
Sequential Pharmacokinetic Gancyclovir Exposure After Low Dose Valgancyclovir Prophylaxis in Kidney Transplant Recipients-An Interim Analysis.

Therapeutic Drug Monitoring. 2013, 35(5): 681-681.

[Mathew, B. S.; Prabha, Ratna; Fleming, D. H.] Christian Med Coll & Hosp, Dept Nephrol, Clin Pharmacol Unit, Vellore, Tamil Nadu, India. [Abraham, A. M.] Christian Med Coll & Hosp, Dept Clin Virol, Vellore, Tamil Nadu, India.

INTL WOS:000324887600082 CI

Mathew, S. K.;B. S. Mathew;G. S. Naik;R. P. Gupta;K. Subramani;G. G. Jacob and D. H. Fleming
A Comparison of Two Regimens (Extended Versus Short Infusion) of Meropenem in an Intensive Care Unit.

Therapeutic Drug Monitoring. 2013, 35(5): 697-697.

[Mathew, S. K.; Mathew, B. S.; Naik, G. S.; Gupta, R. P.; Fleming, D. H.] Christian Med Coll & Hosp, Dept Pharmacol & Clin Pharmacol, Vellore 632004, Tamil Nadu, India. [Subramani, K.; Jacob, G. G.] Christian Med Coll & Hosp, Div Crit Care, Surg Intens Care Unit, Vellore 632004, Tamil Nadu, India.

INTL WOS:000324887600127 CI

Messerer, M.;J. Dubourg;G. Raverot;D. Bervini;M. Berhouma;I. George;A. G. Chacko;G. Perrin;M. Levivier;R. T. Daniel;J. Trouillas and E. Jouanneau
Non-functioning pituitary macro-incidentomas benefit from early surgery before becoming symptomatic.

Clinical Neurology and Neurosurgery. 2013, 115(12): 2514-2520.

Département de Neurochirurgie, Centre Hospitalier Universitaire Vaudois, Université de Lausanne, Lausanne, Switzerland

Fédération d'Endocrinologie, Groupement Hospitalier Est, Hospices Civils de Lyon, Bron, France

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Faculté de Médecine Lyon-Sud, Université Lyon i, France

Objective Pituitary incidentalomas (PIs) constitute an increasingly clinical problem. While the therapeutic management is well defined for symptomatic non-functioning PIs (NFPIs), a controversy still exists for asymptomatic macro-NFPIs between surgery and a "wait and see" approach. The aim of this study is to compare surgical results between symptomatic and asymptomatic macro-NFPIs. Methods We conducted a retrospective study on 76 patients with newly diagnosed symptomatic and asymptomatic macro-NFPIs operated on between 2001 and 2010. We compared age, tumor size and surgical results between these two patient groups. Results After the initial evaluation, 48 patients were found to be symptomatic. Gross total removal (GTR) rate was significantly higher in asymptomatic (82%) than in symptomatic patients (58%; $p = 0.03$). Gross total removal was strongly associated with Knosp's classification ($p = 0.01$). Postoperative endocrinological impairment was significantly associated with the existence of preoperative symptoms ($p = 0.03$). It was 10 times less frequent in the asymptomatic group. In symptomatic patients, postoperative visual and endocrinological impairment were present in 49% and 78% versus 0% and 14% in asymptomatic patients respectively. Conclusions The endocrinological and visual outcome was better in those patients who underwent surgery for asymptomatic tumors. The extent of tumor resection was also significantly greater in smaller tumors. It would therefore be appropriate to offer surgery to patients with asymptomatic macro-NFPIs. © 2013 Elsevier B.V.

INTL CI

Pavamani, S. P.;S. Balukrishna;S. S. Varghese and B. P. Ravindran

Urinary toxicity in high risk prostate cancer patients treated with whole pelvis intensity modulated radiotherapy (WP-IMRT) with cone beam ct (CBCT) for image guidance.

European Journal of Cancer. 2013, 49: S692-S692.

[Pavamani, S. P.; Balukrishna, S.; Varghese, S. S.; Ravindran, B. P.] Christian Med Coll & Hosp, Vellore, Tamil Nadu, India.

INTL WOS:000326843604251 CI

Peedicayil, J.

Epigenetic Drugs in Cognitive Disorders.

Curr Pharm Des. 2013 Jul 19. [Epub ahead of print]

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Cognitive disorders are an important group of disorders affecting the brain for which currently used drugs are often of low efficacy and mainly of symptomatic value. There is increasing evidence suggesting that epigenetic changes in gene expression underlie cognitive disorders. Advances in epigenetics have given rise to a new class of drugs, epigenetic drugs, that reverse epigenetic changes in gene expression. At present most work on epigenetic drugs focuses on two types of drugs: histone deacetylase (HDAC) inhibitors, and drugs targeting DNA methylation. This article describes the role of epigenetic drugs in treating cognitive disorders, focusing on Alzheimer's disease, Huntington's disease, and Parkinson's disease. Epigenetic drugs may improve the clinical management of patients with cognitive disorders.

INTL PMID: 23888959 CI

Peedicayil, J.

Epigenetic drugs for Alzheimer's disease.

British Journal of Clinical Pharmacology. 2013, 75(4): 1152-1153.

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INTL WOS:000316326200030 CI

Philip, A.;R. Thomas;A. Job;V. R. Sundaresan;S. Anandan and R. R. Albert

Effectiveness of 7.5 percent povidone iodine in comparison to 1 percent clotrimazole with lignocaine in the treatment of otomycosis.

ISRN Otolaryngol. 2013, 2013: 239730.

Department of ENT Unit-1, Christian Medical College, Indian Subcontinent, Vellore 632004, India.

Objectives. Otomycosis is a common ENT disease frequenting the tropics. Its recurrent nature poses a great challenge to the treating physician. In spite of a number of antifungals in the market, the frequent nature of this disease warrants repeated use of these drugs, contributing to drug resistance and financial burden on the rural population. Our primary aims were to evaluate the effectiveness of povidone iodine in the treatment of otomycosis and to identify the most common fungal isolate in our population. Study Design and Setting. A single blinded prospective longitudinal study was done over a period of 12 months in a tertiary referral center. 34 patients in the age group 15-70 years clinically diagnosed with otomycosis were included in this study. These individuals were divided into two groups selected randomly. One arm received 7.5% povidone iodine otic drops and the other 1% Clotrimazole and lignocaine drops. Evaluation was based on resolution of symptoms and signs after treatment. Result. Both arms showed improvements which were comparable thus suggesting the role of povidone iodine in the management of otomycosis. Conclusion. Povidone iodine is an effective antifungal in the treatment of otomycosis.

INTL PMID: 23984100 PMID: 3747501 CI

Pond, G. R.;G. Di Lorenzo;A. Necchi;B. J. Eigl;M. P. Kolinsky;R. T. Chacko;T. B. Dorff;L. C. Harshman;M. I. Milowsky;R. J. Lee;M. D. Galsky;P. Federico;G. Bolger;M. Deshazo;A. Mehta;J. Goyal and G. Sonpavde

Prognostic risk stratification derived from individual patient level data for men with advanced penile squamous cell carcinoma receiving first-line systemic therapy.

Urol Oncol. 2013 Dec 12. pii: S1078-1439(13)00447-X. doi: 10.1016/j.urolonc.2013.10.007. [Epub ahead of print]

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BACKGROUND: Prognostic factors in men with penile squamous cell carcinoma (PSCC) receiving systemic therapy are unknown. A prognostic classification system in this disease may facilitate interpretation of outcomes and guide rational drug development. We performed a retrospective analysis to identify prognostic factors in men with PSCC receiving first-line systemic therapy for advanced disease.

PATIENTS AND METHODS: Individual patient level data were obtained from 13 institutions to study prognostic factors in the context of first-line systemic therapy for advanced PSCC. Cox proportional hazards regression analysis was conducted to examine the prognostic effect of these candidate factors on progression-free survival (PFS) and overall survival

(OS): age, stage, hemoglobin, neutrophil count, lymphocyte count, albumin, site of metastasis (visceral or nonvisceral), smoking, circumcision, regimen, ECOG performance status (PS), lymphovascular invasion, precancerous lesion, and surgery following chemotherapy. The effect of different treatments was then evaluated adjusting for factors in the prognostic model.

RESULTS: The study included 140 eligible men. Mean age across all men was 57.0 years. Among them, 8.6%, 21.4%, and 70.0% of patients had stage 2, 3, and 4 diseases, respectively; 40.7% had ECOG PS \geq 1, 47.4% had visceral metastases, and 73.6% received cisplatin-based chemotherapy. The multivariate model of poor prognostic factors included visceral metastases ($P<0.001$) and ECOG PS \geq 1 ($P<0.001$) for both PFS and OS. A risk stratification model constructed with 0, 1, and both poor prognostic factors was internally validated and demonstrated moderate discriminatory ability (c-statistic of 0.657 and 0.677 for OS and PFS, respectively). The median OS for the entire population was 9 months. Median OS was not reached, 8, and 7 months for those with 0, 1, and both risk factors, respectively. Cisplatin-based regimens were associated with better OS ($P = 0.017$) but not PFS ($P = 0.37$) compared with noncisplatin-based regimens after adjusting for the 2 prognostic factors.

CONCLUSIONS: In men with advanced PSCC receiving first-line systemic therapy, visceral metastases and ECOG PS \geq 1 were poor prognostic factors. A prognostic model including these factors exhibited moderate discriminatory ability for outcomes and warrants external validation. Patients receiving cisplatin-based regimens exhibited better outcomes compared with noncisplatin-based regimens after adjusting for prognostic factors.

INTL PMID: 24332646 CI

Pratheesh, R.;S. Rajaratnam;K. Prabhu;S. E. Mani;G. Chacko and A. G. Chacko

The current role of transcranial surgery in the management of pituitary adenomas.

Pituitary. 2013, 16(4): 419-434.

Section of Neurosurgery, Department of Neurological Sciences, Christian Medical College, Vellore, 632004, Tamil Nadu, India.

The aim of this study was to determine the factors influencing the use of a transcranial (TC) approach in

pituitary adenomas and suggest a decision-making tree for the surgical strategy. The data for 23 (4.6%) patients who underwent TC surgery from amongst 494 pituitary adenomas were retrospectively analyzed. Eight factors on magnetic resonance imaging (MRI) that could predict a difficult transsphenoidal (TS) surgery were noted. Adverse findings at TS surgery leading to a 2nd stage TC surgery were documented. Eighteen of the 23 cases were giant adenomas. Thirteen patients underwent TC surgery alone or as an initial approach when combined with TS while 10 underwent 2nd stage TC surgery following a TS approach. Most cases in the first group had 3 or more radiological factors in combination with a small sella. The 2nd group had higher sellar tumor volumes and fewer unfavourable radiological factors that led to the initial use of the TS approach. A hard, fibrous consistency or a significant residue obscured from the surgeon's view, and difficulty in hemostasis were additional factors prompting the use of a TC approach. Tumor excision $\geq 90\%$ could be achieved in 13 cases (56.5%). Post-operative RT was administered in 12 patients. There were 2 deaths (8.7%) and the major morbidity rate was 43 %. Despite advances in endoscopic surgery the TC approach may be required in 5% of cases. A study of the preoperative MRI for factors that predict difficulty with the TS approach might encourage the surgeon to consider a TC surgery either as an initial approach or combined with a TS surgery.

INTL PMID: 23076713 CI

Rajaian, S.;M. P. Rajadoss;S. Nayak and N. S. Kekre
Traumatic rectourethral fistula repair: A potential application of porcine small intestinal submucosa.
Indian J Urol. 2013, 29(2): 148-150.

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Rectourethral fistula is an uncommon but devastating condition. Traumatic rectourethral fistula is still uncommon and repair of traumatic rectourethral fistula involves a complex procedure. Most of the urologists would prefer to repair the fistula through perineal route especially when urethral reconstruction is also required. The repaired ends of the fistula are separated with various interposition flaps and grafts in order to prevent recurrence. Gracilis interposition muscle flap is commonly used. We describe the first case of

traumatic rectourethral fistula repair in a 45-year-old man using interposition of a porcine small intestinal submucosal (Biodesign (Surgisis(R))) graft.

NAT PMID: 23956521 **PMCID: 3737675** CI

Ramakant, P.;S. Chakravarthy;J. A. Cherian;D. T. Abraham and M. J. Paul

Challenges in management of phyllodes tumors of the breast: A retrospective analysis of 150 patients.

Indian J Cancer. 2013, 50(4): 345-348.

Department of Endocrine and Breast Surgery, Christian Medical College, Vellore, Tamil Nadu, India.

Introduction: Phyllodes tumors (PT) of the breast seem to get pre-operatively misdiagnosed as fibroadenomas resulting in inadequate resections and high local recurrence rates. **Materials and Methods:** Data of 150 patients with PT of the breast managed from January, 2003 to February, 2013 were retrospectively analyzed. Statistical analysis performed using SPSS version 17 (Pearson Chi-square test and analysis of variance test for analysis).

Aim: The aim of this study is to compare clinico-pathological profile and recurrence rates in patients with benign (B), borderline malignant (BL) and malignant (M) PT. **Results:** In a total of 150 patients with PT (n = 77 B, n = 24 BL, n = 49 M), mean age was 36.92, 44.04 and 40.46 years respectively (P 0.015) and mean tumor size being 8.15 cm, 14.7 cm and 12.9 cm respectively (P 0.000). Pre-operatively cytology suggestive of PT in 24% patients with B PT and 63% in M PT; core tissue biopsy suggestive of PT in 85.4% patients with B PT and 100% in M PT. Recurrence seen in 34.7% out of which 32.7% were post-lumpectomy performed elsewhere. Majority of B PT had lumpectomy (49.3%)/wide local excision (WLE, 31.2%) compared with M PT where 55.1% had simple mastectomy (SM) due to large tumor size. Local recurrence was more in M PT (53%) compared with B PT (20%). We found recurrence rates in L (39.3%) compared with WLE (27.3%) and SM (33.9%) (P 0.049). **Conclusions:** Larger tumor size, incomplete resection and M/BL histology predicted higher recurrence in PT. Core biopsy is much more accurate than fine needle cytology in the diagnosis.

NAT PMID: 24369215 CI

Sabaretnam, M.;P. Ramakant;D. T. Abraham and M. J. Paul
Radioactive iodine ablation does not prevent
recurrences in patients with papillary thyroid
microcarcinoma.

Clin Endocrinol (Oxf). 2013 Sep;79(3):444-5. doi: 10.1111/
cen.12130. Epub 2013 Apr 5.

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College, Vellore, India

INTL PMID:23253032 **CI**

Saura, C.;L. M. Tseng;S. Chan;R. T. Chacko;M. Campone;A.
Manikhas;S. M. Nag;C. G. Leichman;L. Dasappa;P. A.
Fasching;F. H. De Mendoza;W. Fraser Symmans;D. Liu;P.
Mukhopadhyay;C. Horak;G. Xing and L. Pusztai
Neoadjuvant doxorubicin/cyclophosphamide followed
by ixabepilone or paclitaxel in early stage breast cancer
and evaluation of β III-tubulin expression as a predictive
marker.

Oncologist. 2013, 18(7): 787-794.

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University of Texas, M.D. Anderson Cancer Center,
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Bristol-Myers Squibb, Wallingford, CT, United States

Yale Cancer Center, New Haven, CT, United States

Background. This randomized phase II trial was
 designed to compare the rate of pathologic complete

response (pCR) induced by neoadjuvant
 cyclophosphamide plus doxorubicin (AC) followed by
 ixabepilone or paclitaxel in women with early stage
 breast cancer (BC). Expression of β III-tubulin as a
 predictive marker was also evaluated. Patients and
 Methods. Women with untreated, histologically
 confirmed primary invasive breast adenocarcinoma
 received four cycles of AC followed by 1:1
 randomization to either ixabepilone 40 mg/m² (3-hour
 infusion) every 3 weeks for four cycles (n β 148) or
 weekly paclitaxel 80 mg/m² (1-hour infusion) for 12
 weeks (n β 147). All patients underwent a core needle
 biopsy of the primary cancer for molecular marker
 analysis prior to chemotherapy. β III-Tubulin expression
 was assessed using immunohistochemistry. Results.
 There was no significant difference in the rate of pCR
 in the ixabepilone treatment arm (24.3%; 90%
 confidence interval [CI],18.6-30.8) and the paclitaxel
 treatment arm (25.2%;90%CI, 19.4-31.7). β III-Tubulin-
 positive patients obtained higher pCR rates compared
 with β III-tubulin-negative patients in both treatment
 arms; however, β III-tubulin expression was not
 significantly associated with a differential response
 to ixabepilone or paclitaxel. The safety profiles of both
 regimens were generally similar, although neutropenia
 occurred more frequently in the ixabepilone arm (grade
 3/4: 41.3% vs. 8.4%). The most common
 nonhematologic toxicity was peripheral neuropathy.
 Conclusions. Neoadjuvant treatment of early stage
 BC with AC followed by ixabepilone every 3 weeks or
 weekly paclitaxel was well tolerated with no
 significant difference in efficacy. Higher response
 rates were observed among β III-tubulin-positive
 patients. © AlphaMed Press 2013.

INTL WOS:000322510100005 **CI**

Senthilkumaran, S.;S. S. David;N. N. Jena and P. Thirumalaikolundusubramanian

Epinephrine-induced myocardial infarction in severe anaphylaxis: is beta-blocker a bad actor or bystander?

American Journal of Emergency Medicine. 2013, 31(9): 1410-1410.

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INTL WOS:000324332900024 CI

Senthilkumaran, S.;S. S. David;R. G. Menezes and P. Thirumalaikolundusubramanian

Need for parenteral pyridoxine: A clarion call.

Indian J Nephrol. 2013 Jul;23(4):324-5. doi: 10.4103/0971-4065.114501.

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NAT PMID:23960360 CI

Senthilkumaran, S.;S. S. David;R. G. Menezes and P. Thirumalaikolundusubramanian

Role of fresh-frozen plasma in angioedema: Progress and problems.

Eur J Emerg Med. 2013 Aug;20(4):292-3. doi: 10.1097/MEJ.0b013e328360d8b6.

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INTL PMID:23797347 CI

Sharma, S. K.;A. Sharma;T. Kadiravan and P. Tharyan
Rifamycins (rifampicin, rifabutin and rifapentine) compared to isoniazid for preventing tuberculosis in HIV-negative people at risk of active TB.

Cochrane Database of Systematic Reviews. 2013, (7).

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Background Preventing active tuberculosis (TB) from developing in people with latent tuberculosis infection (LTBI) is important for global TB control. Isoniazid (INH) for six to nine months has 60% to 90% protective efficacy, but the treatment period is long, liver toxicity is a problem, and completion rates outside trials are only around 50%. Rifampicin or rifamycin-combination treatments are shorter and may result in higher completion rates. Objectives To compare the effects of rifampicin monotherapy or rifamycin-combination therapy versus INH monotherapy for preventing active TB in HIV-negative people at risk of developing active TB. Search methods We searched the Cochrane Infectious Disease Group Specialized Register;

Cochrane Central Register of Controlled Trials (CENTRAL); MEDLINE; EMBASE; LILACS; clinical trials registries; regional databases; conference proceedings; and references, without language restrictions to December 2012; and contacted experts for relevant published, unpublished and ongoing trials. Selection criteria Randomized controlled trials (RCTs) of HIV-negative adults and children at risk of active TB treated with rifampicin, or rifamycin-combination therapy with or without INH (any dose or duration), compared with INH for six to nine months. Data collection and analysis At least two authors independently screened and selected trials, assessed risk of bias, and extracted data. We sought clarifications from trial authors. We pooled relative risks (RRs) with their 95% confidence intervals (CIs), using a random-effects model if heterogeneity was significant. We assessed overall evidence quality using the GRADE approach. Main results Ten trials are included, enrolling 10,717 adults and children, mostly HIV-negative (2% HIV-positive), with a follow-up period ranging from two to five years. Rifampicin (three/four months) vs. INH (six months) Five trials published between 1992 to 2012 compared these regimens, and one small 1992 trial in adults with silicosis did not detect a difference in the occurrence of TB over five years of follow up (one trial, 312 participants; very low quality evidence). However, more people in these trials completed the shorter course (RR 1.19, 95% CI 1.01 to 1.30; five trials, 1768 participants; moderate quality evidence). Treatment-limiting adverse events were not significantly different (four trials, 1674 participants; very low quality evidence), but rifampicin caused less hepatotoxicity (RR 0.12, 95% CI 0.05 to 0.30; four trials, 1674 participants; moderate quality evidence). Rifampicin plus INH (three months) vs. INH (six months) The 1992 silicosis trial did not detect a difference between people receiving rifampicin plus INH compared to INH alone for occurrence of active TB (one trial, 328 participants; very low quality evidence). Adherence was similar in this and a 1998 trial in people without silicosis (two trials, 524 participants; high quality evidence). No difference was detected for treatment-limiting adverse events (two trials, 536 participants; low quality evidence), or hepatotoxicity (two trials, 536 participants; low quality evidence). Rifampicin plus pyrazinamide (two months) vs. INH (six months)

Three small trials published in 1994, 2003, and 2005 compared these two regimens, and two reported a low occurrence of active TB, with no statistically significant differences between treatment regimens (two trials, 176 participants; very low quality evidence) though, apart from one child from the 1994 trial, these data on active TB were from the 2003 trial in adults with silicosis. Adherence with both regimens was low with no statistically significant differences (four trials, 700 participants; very low quality evidence). However, people receiving rifampicin plus pyrazinamide had more treatment-limiting adverse events (RR 3.61, 95% CI 1.82 to 7.19; two trials, 368 participants; high quality evidence), and hepatotoxicity (RR 4.59, 95% CI 2.14 to 9.85; three trials, 540 participants; moderate quality evidence). Weekly, directly-observed rifapentine plus INH (three months) vs. daily, self-administered INH (nine months) A large trial conducted from 2001 to 2008 among close contacts of TB in the USA, Canada, Brazil and Spain found directly observed weekly treatment to be non-inferior to nine months self-administered INH for the incidence of active TB (0.2% vs 0.4%, RR 0.44, 95% CI 0.18 to 1.07, one trial, 7731 participants; moderate quality evidence). The directly-observed, shorter regimen had higher treatment completion (82% vs 69%, RR 1.19, 95% CI 1.16 to 1.22, moderate quality evidence), and less hepatotoxicity (0.4% versus 2.4%; RR 0.16, 95% CI 0.10 to 0.27; high quality evidence), though treatment-limiting adverse events were more frequent (4.9% versus 3.7%; RR 1.32, 95% CI 1.07 to 1.64 moderate quality evidence) Authors' conclusions Trials to date of shortened prophylactic regimens using rifampicin alone have not demonstrated higher rates of active TB when compared to longer regimens with INH. Treatment completion is probably higher and adverse events may be fewer with shorter rifampicin regimens. Shortened regimens of rifampicin with INH may offer no advantage over longer INH regimens. Rifampicin combined with pyrazinamide is associated with more adverse events. A weekly regimen of rifapentine plus INH has higher completion rates, and less liver toxicity, though treatment discontinuation due to adverse events is probably more likely than with INH.

INTL WOS:000322568300016 CI

Shetty, R.;S. Lamba and A. K. Gupta

Role of facial artery musculomucosal flap in large and recurrent palatal fistulae.

Cleft Palate Craniofac J. 2013 Nov;50(6):730-3. doi: 10.1597/12-115. Epub 2013 Feb 18.

Department of Plastic and Reconstructive Surgery, Christian Medical College, Vellore-632004, TN, India

Objective: Palatal fistulas are not uncommon after palatoplasty. Although there are currently many techniques that can be used to close large palatal fistulae, most of these procedures are usually cumbersome and mostly unreliable with high recurrence rates. The facial artery musculomucosal (FAMM) flap was described to circumvent these problems. The purpose of this study was to review our experience with the FAMM flap to reconstruct palatal fistulas, most of them being recurrent.

Materials and Methods: A retrospective analysis was done of 11 FAMM flaps performed between January 2007 and March 2012.

Results: There were no major complications. Venous congestion was seen in two cases. Two flaps developed terminal marginal necrosis. One patient had suture line dehiscence. There were no recurrences of the fistula after repair. All patients had a satisfactory closure of the fistula.

Conclusion: FAMM flap is a reliable and versatile flap that provides like with the like tissue and is a good option for closure of recurrent wide palatal fistulae. © Copyright 2013 American Cleft Palate-Craniofacial Association.

INTL PMID:23418920 CI

Shetty, S. P.;R. T. Varghese;D. Naik and T. V. Paul

Visual vignette. Carbamazepine-induced osteomalacia.-Untitled.

Endocrine Practice. 2013, 19(4): 738-738.

[Shetty, Shrinath Pratap; Varghese, Ron Thomas; Naik, Dukhabandu; Paul, Thomas V.] Christian Med Coll & Hosp, Dept Endocrinol Diabet & Metab, Vellore 632004, Tamil Nadu, India.

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INTL PMID: 23757623 WOS:000323703700032 CI

Simha, A.;A. Braganza;L. Abraham;P. Samuel and K. Lindsley

Anti-vascular endothelial growth factor for neovascular glaucoma.

Cochrane Database Syst Rev. 2013, 10: CD007920.

Department of Ophthalmology, Christian Medical College, Vellore, India, 632001.

BACKGROUND: Neovascular glaucoma (NVG) is a potentially blinding secondary glaucoma. It is caused by the formation of abnormal new blood vessels which prevent normal drainage of aqueous from the anterior segment of the eye. Anti-vascular endothelial growth factor (anti-VEGF) agents are specific inhibitors of the primary mediators of neovascularization. Studies have reported the effectiveness of anti-VEGFs for the control of intraocular pressure (IOP) in NVG.

OBJECTIVES: To compare the IOP lowering effects of intraocular anti-VEGF agents to no anti-VEGF treatment, as an adjunct to existing modalities for the treatment of NVG.

SEARCH METHODS: We searched CENTRAL (which contains the Cochrane Eyes and Vision Group Trials Register) (The Cochrane Library 2012, Issue 12), Ovid MEDLINE, Ovid MEDLINE In-Process and Other Non-Indexed Citations, Ovid MEDLINE Daily, Ovid OLDMEDLINE, (January 1950 to January 2013), EMBASE (January 1980 to January 2013), Latin American and Caribbean Literature on Health Sciences (LILACS) (January 1982 to January 2013), the metaRegister of Controlled Trials (mRCT) (www.controlled-trials.com), ClinicalTrials.gov (www.clinicaltrials.gov/) and the WHO International Clinical Trials Registry Platform (ICTRP) (www.who.int/ictpr/search/en). We did not use any date or language restrictions in the electronic searches for trials. We last searched the electronic databases on 11 January 2013.

SELECTION CRITERIA: We included randomized controlled trials (RCTs) and quasi-RCTs of people treated with anti-VEGF agents for NVG.

DATA COLLECTION AND ANALYSIS: Two authors independently assessed the search results for trials to be included in the review. Discrepancies were resolved by discussion with a third author. Since no trial met our inclusion criteria, no assessment of risk of bias or meta-analysis was undertaken.

MAIN RESULTS: No RCTs were found that met the inclusion criteria for this review. Two RCTs of anti-VEGF agents for treating NVG were not included in the review

due to the heterogeneity and uncontrolled assignment of adjunct treatments received by the study participants.

AUTHORS' CONCLUSIONS: Currently available evidence is insufficient to evaluate the effectiveness of anti-VEGF treatments, such as intravitreal ranibizumab or bevacizumab, as an adjunct to conventional treatment in lowering IOP in NVG. Well designed RCTs are needed to address this issue, particularly trials that evaluate long-term (at least six months) benefits and risks since the effects of anti-VEGF agents may be short-term only. An RCT comparing anti-VEGF agents with no anti-VEGF agents taking into account the need for co-interventions, such as panretinal photocoagulation (PRP), glaucoma shunt procedures, cyclodestructive procedures, cataract surgery, and deep vitrectomy, could be of use to investigate the additional beneficial effect of anti-VEGF agents in treating NVG. Since decisions for when and which co-interventions should be used are based on clinical criteria, they would not be appropriate for randomization. However, the design of a study on this topic should aim to balance groups by stratification of co-intervention at time of randomization or by enrolling a sufficient number of participants to conduct subgroup analysis by co-interventions (ideally 15 participants per treatment group for each subgroup). Alternatively, the inclusion criteria for a trial could limit participants to those who receive the same co-intervention.

INTL PMID: 24089293 WOS:000326373200009 CI

Solomon, L. B.;P. R. Boopalan;A. Chakrabarty and S. A. Callary

Can tibial plateau fractures be reduced and stabilised through an angiosome-sparing antero-lateral approach? Injury. 2013 Dec 10. pii: S0020-1383(13)00573-1. doi: 10.1016/j.injury.2013.11.035. [Epub ahead of print]

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INTRODUCTION AND AIM: Tibial plateau fractures (TPFs) are an independent, non-modifiable risk factor for surgical site infections (SSIs). Current antero-lateral approaches to the knee dissect through the anterior tibial angiosome (ATA), which may contribute to a higher rate of SSIs. The aim of this study was to develop an angiosome-sparing antero-lateral approach to allow reduction and fixation of lateral TPFs and to investigate its feasibility in a consecutive cohort.

METHODS: Twenty cadaveric knees were dissected to define the position of the vessels supplying the ATA from the lateral tibial condyle to the skin perforators. Based on these results, an angiosome-sparing surgical approach to treat lateral TPFs was developed. Fifteen consecutive patients were subsequently treated through this approach. Clinical outcomes included assessment of SSI and Lysholm score. Fracture healing and stability were assessed using the Rasmussen score and radiostereometric analysis (RSA).

RESULTS: At the latest follow-up between 1 and 4 years, there was no report of SSI. Nine patients (60%) had good or excellent Lysholm scores. The mean Rasmussen score at final follow-up was 17 (median 18, range 14-18) with 10 patients (66%) graded as excellent. Fracture fragment migration measured using RSA was below 2mm in all cases.

DISCUSSION: This study has demonstrated that an angiosome-sparing antero-lateral approach to the lateral tibial plateau is feasible. Adequate stability of these fracture types was achieved by positioning a buttress plate away from the bone and superficial to the regional fascial layer as an 'internal-external fixator'.

CONCLUSION: The angiosome-sparing approach developed was able to be used in a prospective cohort and the clinical results to date are encouraging. Future clinical studies need to investigate the potential benefits of this surgical approach when compared with the previously described antero-lateral approaches.

INTL PMID: 24380535 CI

Solomon, L. B.;S. A. Callary;P. R. J. V. C. Boopalan;A. Chakrabarty;J. J. Costi and D. W. Howie

Impaction bone grafting of segmental bone defects in femoral non-unions.

Acta Orthop Belg. 2013 Feb;79(1):64-70.

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Impaction bone grafting shows encouraging early results as a method of immediately restoring leg length, while allowing weight-bearing as tolerated, in the treatment of large segmental femoral defects after femoral shaft and metaphyseal non-unions. The operative technique followed is described in three consecutive cases and the effectiveness of impaction bone grafting for femoral non-unions with associated large segmental bone defects has been demonstrated. Between 80 and 120 cm³ of coarsely milled irradiated bone allograft was used to reconstruct the defects, which were contained in malleable metal mesh. All three patients were fully weight-bearing by three months postoperatively. At two years follow-up, plain radiographs demonstrated maintenance of reduction and healing in all three cases. © 2013, Acta Orthopaedica Belgica.

INTL PMID:23547518 CI

Solomon, P.;V. Sekharappa;V. Krishnan and K. S. David
Spontaneous resolution of postoperative lumbar pseudomeningoceles: A report of four cases.

Indian J Orthop. 2013, 47(4): 417-421.

Department of Orthopaedics, Spinal Disorder Surgery Unit, Christian Medical College, Vellore, Tamil Nadu, India.

Pseudomeningocele is an extradural cerebrospinal fluid collection arising from a dural defect, that may be congenital, traumatic, or more commonly as a result of postoperative complication. Majority of the postoperative pseudomeningoceles occurring after lumbar spine surgeries are small and resolve spontaneously. However, large pseudomeningoceles are rare and spontaneous resolution of such pseudomeningoceles has not been described. We report four cases of postoperative large lumbar pseudomeningoceles that presented as asymptomatic soft fluctuant swelling over the back which resolved spontaneously. We also reviewed the related literatures and operative records of these patients to find the possible mechanism of occurrence, their management, prevention, and reasons for spontaneous resolution. We conclude that nonoperative management under close observation can be employed for asymptomatic postoperative large lumbar pseudomeningoceles. Surgical exploration and repair should be reserved for symptomatic cases presenting with clinical features of intracranial hypotension, worsening neurology, external fistula or infection, thereby avoiding morbidity and potential complications associated with surgical treatment.

NAT PMID: 23960289 **PMCID: 3745699** CI

Sonbare, D. J.

Is Free Jejunal Transfer Possible Without Microvascular Anastomosis?

Annals of Thoracic Surgery. 2013, 95(4): 1507-1507.

Christian Med Coll & Hosp, Dept Gen Surg, New PG Quarters, Vellore 632004, Tamil Nadu, India.

Sonbare, DJ (reprint author), Christian Med Coll & Hosp, Dept Gen Surg, New PG Quarters, Vellore 632004, Tamil Nadu, India. dsonbare@yahoo.co.in

INTL WOS:000317150600065 CI

Stephen, E.;G. Joseph;I. Sen;S. Chacko;P. Premkumar;L. Varghese and D. Selvaraj

A novel cautery instrument for on-site fenestration of aortic stent-grafts: a feasibility study of 18 patients.

J Endovasc Ther. 2013, 20(5): 638-646.

1 Department of Vascular Surgery, Christian Medical College, Vellore, India.

PURPOSE: To report the bench-top evaluation and initial clinical use of an instrument for on-site fenestration of aortic stent-grafts.

METHODS: A stainless steel thermal cautery instrument was designed to create circular stent-graft fenestrations from 3 to 10 mm in diameter. Three operators independently bench-tested the instrument on thoracic stent-graft samples to evaluate size, shape, location, and quality of fenestrations created. For clinical use, on-site fenestration was performed 2 days before the endovascular procedure in a sterile room without access to supplemental oxygen. A fenestrator 1 or 2 mm smaller in diameter than the target vessel was used; the edges of the fenestrations were strengthened using flexible radiopaque nitinol wire. The aortic stent-graft was then re-sheathed and sterilized for added safety. Eighteen patients (17 men; mean age 51 years, range 18-80) with a variety of thoracic and juxtarenal pathologies were treated using Zenith TX2, Valiant Captivia, Zenith AAA, and Endurant stent-grafts modified in this manner.

RESULTS: After successful bench testing, the instrument was used to create 34 fenestrations in aortic stent-grafts deployed in the 18 patients. Size and location of fenestrations obtained were as desired. Subsequent catheterization of the fenestration/target vessel and covered stent deployment were successfully achieved in 31 (91%) fenestrations; 2 fenestrations had type III endoleaks and 1 fenestration was unused. There was no perioperative mortality, stroke, embolization, vessel dissection, renal failure, or graft infection. Follow-up to 1 year in the majority of patients has revealed no new fenestration-related problems.

CONCLUSION: This simple-to-use instrument makes on-site creation of aortic stent-graft fenestrations easy, accurate, and precise. The instrument is inexpensive, robust, and easily sterilized.

INTL PMID: 24093315 CI

Sudarsanam, T. D.;P. Rupali;P. Tharyan;O. C. Abraham and K. Thomas

Pre-admission antibiotics for suspected cases of meningococcal disease.

Cochrane Database Syst Rev. 2013, 8: CD005437.

Medicine Unit 2, Christian Medical College, Vellore, Tamil Nadu, India, 632 004.

BACKGROUND: Meningococcal disease can lead to death or disability within hours after onset. Pre-admission antibiotics aim to reduce the risk of serious disease and death by preventing delays in starting therapy before confirmation of the diagnosis.

OBJECTIVES: To study the effectiveness and safety of pre-admission antibiotics versus no pre-admission antibiotics or placebo, and different pre-admission antibiotic regimens in decreasing mortality, clinical failure and morbidity in people suspected of meningococcal disease.

SEARCH METHODS: We updated searches of CENTRAL (2013, Issue 4), MEDLINE (1966 to April week 4, 2013), EMBASE (1980 to May 2013), Web of Science (1985 to May 2013), CAB Abstracts (1985 to May 2013), LILACS (1982 to May 2013) and prospective trials registries to May 2013.

SELECTION CRITERIA: Randomised controlled trials (RCTs) or quasi-RCTs comparing antibiotics versus placebo or no intervention, in people with suspected meningococcal infection, or different antibiotics administered before admission to hospital or confirmation of the diagnosis.

DATA COLLECTION AND ANALYSIS: Two review authors independently assessed trial quality and extracted data from the search results. We calculated the risk ratio (RR) and 95% confidence interval (CI) for dichotomous data. We included only one trial so data synthesis was not performed. We assessed the overall quality of the evidence using the GRADE approach.

MAIN RESULTS: We found no RCTs that compared pre-admission antibiotics versus no pre-admission antibiotics or placebo. One open-label, non-inferiority RCT, conducted during an epidemic in Niger, evaluated a single dose of intramuscular ceftriaxone versus a single dose of intramuscular long-acting (oily) chloramphenicol. Ceftriaxone was not inferior to chloramphenicol in reducing mortality (RR 1.2, 95% CI 0.6 to 2.6; N = 503; 308 confirmed meningococcal meningitis; 26 deaths; moderate-quality evidence),

clinical failures (RR 0.8, 95% CI 0.3 to 2.2; N = 477, 18 clinical failures; moderate-quality evidence) or neurological sequelae (RR 1.3, 95% CI 0.6 to 2.6; N = 477; 29 with sequelae; low-quality evidence). No adverse effects of treatment were reported. Estimated treatment costs were similar. No data were available on disease burden due to sequelae.

AUTHORS' CONCLUSIONS: We found no reliable evidence to support or refute the use of pre-admission antibiotics for suspected cases of non-severe meningococcal disease. Evidence of moderate quality from one RCT indicated that single intramuscular injections of ceftriaxone and long-acting chloramphenicol were equally effective, safe and economical in reducing serious outcomes. The choice between these antibiotics would be based on affordability, availability and patterns of antibiotic resistance. Further RCTs comparing different pre-admission antibiotics, accompanied by intensive supportive measures, are ethically justifiable in participants with severe illness, and are needed to provide reliable evidence in different clinical settings.

INTL PMID: 23908052 WOS:000323928600034 CI
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Thampi, S. M.;D. David;T. T. Chandy and A. Nandhakumar
Response to Comments: Anaesthetic management of a patient with amyotrophic lateral sclerosis for transurethral resection of bladder tumour.

Indian J Anaesth. 2013 Nov;57(6):636-7. doi: 10.4103/0019-5049.123356.

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NAT PMID:24403641 PMCID:PMC3883416 CI
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Thampi, S. M.;D. David;T. T. Chandy and A. Nandhakumar
Anesthetic management of a patient with amyotrophic lateral sclerosis for transurethral resection of bladder tumor.

Indian J Anaesth. 2013, 57(2): 197-199.

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

NAT PMID: 23825825 PMCID: 3696273 CI
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Thomas, N.;A. J. Chinta;S. Sridhar;M. Kumar;K. A. Kuruvilla and A. K. Jana

Perinatal outcome of infants born to diabetic mothers in a developing country-comparison of insulin and oral hypoglycemic agents.

Indian Pediatrics. 2013, 50(3): 289-293.

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To study the perinatal outcomes of infants born to mothers with gestational diabetes treated with insulin or oral hypoglycemic agents in a developing country. Prospective observational cohort study. Tertiary-care perinatal center in southern India. Babies born to mothers with gestational diabetes. Maternal details were obtained and physical examination was performed on the neonates. Babies were given hourly feeds soon after birth and blood glucoses checked at 1, 3, 5, 9 and 12 hours of life; hematocrit and calcium levels were also measured. Perinatal outcomes were compared between mothers who required insulin or an oral hypoglycemic agent for treatment of diabetes. Of the 10,394 mothers who delivered during the study period, 574 (5.5%) were diagnosed to have gestational diabetes. 137 were treated with insulin and 141 with oral hypoglycemic agents. 44 (15.8%) babies were born preterm, 97 (35%) were large for gestational age, 13 (4.7%) were small for gestational age and 9 (3.2%) were macrosomic. Hypoglycemia was seen in 26 (9.3%) babies, congenital anomalies in 15 (5.4%) and birth injuries in 7 (2.5%). There was no difference between the two groups in any of the outcomes except for hyperbilirubinemia, which was more in the insulin group (13.7% vs 6.5%, P=0.04). There was no difference in the perinatal outcome whether the mother received insulin or an oral hypoglycemic agent for treatment of gestational diabetes other than the increased incidence of hyperbilirubinemia in the insulin group.

NAT PMID: 23255686 WOS:000316869600005 CI
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Thuppal, S. V.;R. Karthik;O. C. Abraham;C. A. Wanke;M. Mwamburi;N. Terrin;J. T. Cohen;D. Mathai;J. Muliyl and G. Kang

Cost Estimation of First-Line Antiretroviral Therapy with Zidovudine/Stavudine as the Nucleoside Backbone in India: A Pilot Study.

J Int Assoc Provid AIDS Care. 2013.

Department of Community Medicine and Public Health, Nutrition/Infection Unit, Tufts University, Boston, MA, USA.

Background: In India, a zidovudine-based regimen is preferred as the first-line drug treatment for HIV, despite high rates of drug toxicity. This study estimates the treatment costs for HIV.

Methods: Eligible patients were enrolled from Antiretroviral Therapy Center, Christian Medical College, India. Baseline demographic and clinical characteristics, medical and nonmedical expenditure, and lost income were collected.

Results: Of 41 patients enrolled and followed for 6 months, HIV treatment toxicity and opportunistic infections were reported by 12 (29%) and 13 (31.7%) patients, respectively. The median total costs, direct costs, and out-of-pocket expenditure were Indian rupees (INR) 9418 (US\$181), 8727 (US\$168), and 7157 (US\$138), respectively. Diagnostic tests accounted for 58% of the expenses. HIV treatment accounted for 34% of the median income earned INR 21 000 (US\$404). Expenditure for treatment with toxicity was 44% higher than without toxicity.

Conclusion: Current treatment is associated with toxicity, increasing treatment costs and imposing a significant economic burden.

INTL PMID: 24027170 CI

Turel, M. K.;R. K. Moorthy;G. A. Sam;P. Samuel;M. Murthy;K. S. Babu and V. Rajshekhar

Effect of pretreatment with a tyrosine kinase inhibitor (PP1) on brain oedema and neurological function in an automated cortical cryoinjury model in mice.

J Clin Neurosci. 2013, 20(4): 593-596.

Department of Neurological Sciences, Christian Medical College, Vellore 632 004, India.

Cerebral oedema is a significant cause of morbidity in neurosurgical practice. To our knowledge, there is no ideal drug for prevention or treatment of brain oedema. Based on the current understanding of the

pathogenesis of brain oedema, tyrosine kinase inhibitors could have a role in reducing brain oedema but preclinical studies are needed to assess their effectiveness. We evaluated the role of pretreatment with 4-amino-5-(4-methylphenyl)-7-(t-butyl) pyrazolo(3,4-d) pyrimidine (PP1), an Src tyrosine kinase inhibitor, in reducing cerebral oedema and preserving neurological function measured 24 hours after an automated cortical cryoinjury in mice. Sixteen adult male Swiss albino mice were subjected to an automated cortical cryoinjury using a dry ice-acetone mixture. The experimental group (n=8) received an intraperitoneal injection of PP1 dissolved in dimethyl sulfoxide (DMSO) at a dose of 1.5mg/kg body weight 45 minutes prior to the injury. The control group (n=8) received an intraperitoneal injection of DMSO alone. A further eight mice underwent sham injury. The animals were evaluated using the neurological severity score (NSS) at 24 hours post-injury, after which the animals were sacrificed and their brains removed, weighed, dehydrated for 48 hours and weighed again. The percentage of brain water content was calculated as: $\{[(\text{wet weight} - \text{dry weight})/\text{wet weight}] \times 100\}$. The mean (standard deviation, SD) NSS was 11.7 (1.8) in the experimental group and 10.5 (1.3) in the control group (p=0.15). The mean (SD) percentage water content of the brain was 78.6% (1.3%) in the experimental group and 77.2% (1.1%) in the control group (p=0.03). The percentage water content in the experimental and control groups were both significantly higher than in the sham injury group. The immediate pre-injury administration of PP1 neither reduced cerebral oedema (water content %) nor preserved neurological function (NSS) when compared to a control group in this model of cortical cryoinjury.

INTL PMID: 23485404 CI

Turel, M. K.;S. Sarkar;K. Prabhu;R. T. Daniel;K. S. Jacob and A. G. Chacko

Reduction in range of cervical motion on serial long-term follow-up in patients undergoing oblique corpectomy for cervical spondylotic myelopathy.

Eur Spine J. 2013, 22(7): 1509-1516.

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PURPOSE: To determine whether motion preservation following oblique cervical corpectomy (OCC) for

cervical spondylotic myelopathy (CSM) persists with serial follow-up.

METHODS: We included 28 patients with preoperative and at least two serial follow-up neutral and dynamic cervical spine radiographs who underwent OCC for CSM. Patients with an ossified posterior longitudinal ligament (OPLL) were excluded. Changes in sagittal curvature, segmental and whole spine range of motion (ROM) were measured. Nathan's system graded anterior osteophyte formation. Neurological function was measured by Nurick's grade and modified Japanese Orthopedic Association (JOA) scores.

RESULTS: The majority (23 patients) had a single or 2-level corpectomy. The average duration of follow-up was 45 months. The Nurick's grade and the JOA scores showed statistically significant improvements after surgery ($p < 0.001$). 17% of patients with preoperative lordotic spines had a loss of lordosis at last follow-up, but with no clinical worsening. 77% of the whole spine ROM and 62% of segmental ROM was preserved at last follow-up. The whole spine and segmental ROM decreased by 11.2 degrees and 10.9 degrees, respectively ($p \leq 0.001$). Patients with a greater range of segmental movement preoperatively had a statistically greater range of movement at follow-up. The analysis of serial radiographs indicated that the range of movement of the whole spine and the range of movement at the segmental spine levels significantly reduced during the follow-up period. Nathan's grade showed increase in osteophytosis in more than two-thirds of the patients ($p \leq 0.01$). The whole spine range of movement at follow-up significantly correlated with Nathan's grade.

CONCLUSIONS: Although the OCC preserves segmental and whole spine ROM, serial measurements show a progressive decrease in ROM albeit without clinical worsening. The reduction in this ROM is probably related to degenerative ossification of spinal ligaments.

INTL PMID: 23446959 PMCID: 3698339 CI

Varghese, C. M.;A. M. Varghese;K. A. Syed and R. R. Paul
Dacryocystectomy: An uncommon indication - A case report.

Int J Pediatr Otorhinolaryngol. 2014, 78(1): 139-141.

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Post traumatic nasolacrimal drainage obstruction is an uncommon presentation of naso-orbito-ethmoid fracture. Dacryocystorhinostomy (DCR) with or without silicon intubation is the universally accepted treatment modality. Here we report a case of recurrent lacrimal sac abscess due to post traumatic nasolacrimal drainage obstruction following naso-orbito-ethmoid fracture. The patient had previously undergone incision and drainage thrice and twice failed DCR. In the background of extensive nasal synechiae and twice failed DCR, dacryocystectomy was performed. Post operatively patient has improved and is symptom free for past 14 months. This is the first report of a successful dacryocystectomy for a post traumatic dacryocystitis.

INTL PMID: 24268316 CI

Varghese, R. T.

The advent of bariatric surgery for diabetes in India.

BMJ. 2013, 347: f3391.

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INTL PMID: 23894187 CI

Varghese, R. T.

NON-COMMUNICABLE DISEASE The advent of bariatric surgery for diabetes in India.

Bmj-British Medical Journal. 2013, 347.

Christian Med Coll & Hosp, Dept Endocrinol Diabet & Metab, Vellore, Tamil Nadu, India.

Varghese, RT (reprint author), Christian Med Coll & Hosp, Dept Endocrinol Diabet & Metab, Vellore, Tamil Nadu, India. ronthomasv@gmail.com

INTL WOS:000322532500001 CI

Varghese, R. T.;A. M. John and T. V. Paul
Catecholamine induced cardiomyopathy in
pheochromocytoma.

Indian J Endocrinol Metab. 2013, 17(4): 733-735.

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

Catecholamine induced cardiomyopathy in the setting of pheochromocytoma is an unusual clinical entity. Earlier studies have reported left ventricular dysfunction in around 10% of subjects with pheochromocytoma.[1] Catecholamine induced vasoconstriction, direct toxic effect of byproducts of catecholamine degradation and direct receptor-mediated mechanisms are thought to contribute to cardiomyopathy in subjects with pheochromocytoma. The presentation remains a diagnostic challenge as patients may already have hypertensive heart disease and acute coronary syndrome on account of uncontrolled secondary hypertension. We report a case of a 42-year-old male, who presented with features of pheochromocytoma induced cardiomyopathy.

NAT PMID: 23961496 PMCID: 3743380 CI
CI

Varghese, V. D.;P. R. Boopalan;V. T. Titus;A. T. Oommen
and T. S. Jepegnanam

Indices affecting outcome of neglected femoral neck
fractures following valgus intertrochanteric osteotomy.
J Orthop Trauma. 2013 Oct 25. [Epub ahead of print]

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Landline-04162282091.

OBJECTIVES: To evaluate preoperative neck resorption and postoperative valgus orientation as predictors of

union and functional outcome after valgus intertrochanteric osteotomy for treatment of neglected femoral neck fractures and nonunions.

DESIGN: Retrospective cohort study.

SETTING: Tertiary care center.Patients/participants: 40 consecutive patients with neglected femoral neck fracture and nonunions were treated with valgus intertrochanteric osteotomy and follow-up was available in 32 patients (age: average 43 y; range, 14 to 60 y) (nonunion duration: average 6 +/- 7 mo; range, 1 to 36 mo).

INTERVENTION: Valgus intertrochanteric osteotomy.

MAIN OUTCOME MEASUREMENTS: Clinical outcome was assessed with Harris Hip Score. Plain radiographs were evaluated for union, avascular necrosis, preoperative bone deficiency (neck resorption ratio), and postoperative femoral head fragment alignment (head-shaft angle).

RESULTS: Follow-up at 5 +/- 3 y (range, 2 to 12 y) after surgery showed union in 29 patients (91%) and Harris Hip Score was 82 +/- 13 points (range, 63 to 100 points). The three patients with persistent nonunion at the neck of femur had neck resorption ratio < 0.52. Increased postoperative HSA was associated with lower follow-up Harris Hip Score; postoperative valgus alignment > 15 degrees compared with the contralateral side was associated with poor functional outcome. The presence of avascular necrosis did not affect outcome.

CONCLUSIONS: Valgus intertrochanteric osteotomy resulted in union and satisfactory functional outcome in most patients who had neglected femoral neck fractures and nonunions. Preoperative neck resorption ratio < 0.5 was a risk factor for nonunion and excessive valgus alignment was a risk factor for poor functional outcome after osteotomy.

LEVEL OF EVIDENCE: Prognostic Level II. See Instructions for Authors for a complete description of levels of evidence.

INTL PMID: 24164787 CI
CI

Velayutham, P. K.; S. D. Adhikary; S. K. Babu; R. Vedantam; G. Korula and A. Ramachandran

Oxidative stress-associated hypertension in surgically induced brain injury patients: effects of beta-blocker and angiotensin-converting enzyme inhibitor.

J Surg Res. 2013, 179(1): 125-131.

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

BACKGROUND: Postoperative hypertension is a common problem in patients undergoing surgical procedures, and the modification of this response could result in improved surgical outcome. Although it is recognized that the incidence of postoperative hypertension is higher in neurosurgical procedures, mechanisms behind this are not well understood. Oxidative stress is an important component of brain injury, and free radicals can influence blood pressure by a number of mechanisms. This study examined the effect of pretreatment with antihypertensive agents on postoperative hypertension in patients undergoing neurosurgery for supratentorial brain tumors and the role of oxidative stress in the process.

METHODS: Forty-nine consecutive patients who underwent surgery for supratentorial brain tumors were divided into three groups (control, Tab. Glucose; atenolol; and lisinopril groups). Blood was drawn at three time points (1 d before the surgery, at the time of dura opening, and at the time of extubation). Hemodynamic parameters in all three groups and levels of malondialdehyde, protein carbonyl content, nitrate, and alpha-tocopherol in serum at various time points were analyzed.

RESULTS: The results showed that perioperative hemodynamic changes were highly associated with oxidative stress parameters in all the three groups. It was seen that atenolol and lisinopril significantly decreased levels of malondialdehyde, protein carbonyl content, and nitrate in the intraoperative period ($P < 0.05$), an effect which continued postoperatively.

CONCLUSIONS: The results demonstrate that pretreatment with beta-receptor blocker (atenolol) or angiotensin-converting enzyme inhibitor (lisinopril) reduces postoperative hypertension in patients undergoing neurosurgery, and inhibition of oxidative stress may be a potential mechanism for this effect.

INTL PMID: 23020955

CI

Yu, Y. C.; J. Sun; W. L. Lai; T. X. Wu; S. Koshy and Z. D. Shi
Interventions for managing relapse of the lower front teeth after orthodontic treatment.

Cochrane Database of Systematic Reviews. 2013, (9).

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Lai, WL (reprint author), Sichuan Univ, West China Hosp Stomatol, State Key Lab Oral Dis, Dept Orthodont, 14, Sect 3, Ren Min Nan Rd, Chengdu 610041, Sichuan, Peoples R China. wenlilai@hotmail.com

Background Orthodontic relapse can be defined as the tendency for teeth to return to their pre-treatment position, and this occurs especially in lower front teeth (lower canines and lower incisors). Retention, to maintain the position of corrected teeth, has become one of the most important phases of orthodontic treatment. However, 10 years after the completion of orthodontic treatment, only 30% to 50% of orthodontic patients effectively retain the satisfactory alignment initially obtained. After 20 years, satisfactory alignment reduces to 10%. When relapse occurs, simple effective strategies are required to effectively manage the problem. The periodontal, physiological or psychological conditions may be different from those before orthodontic treatment, so re-treatment methods may also need to be different. Objectives To assess the effects of interventions used to manage relapse of the lower front teeth after first fixed orthodontic treatment. Search methods The following electronic databases were searched: the Cochrane Oral Health Group Trials Register (to 9 November 2012), the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library 2012, Issue 10), MEDLINE via OVID (1950 to 9 November 2012), EMBASE via OVID (1980 to 9 November 2012). There were no restrictions regarding language or date of publication. A thorough handsearch was done in relation to the following journals: American Journal of

Orthodontics and Dentofacial Orthopedics (1970 to 9 November 2012), Angle Orthodontist (1978 to 9 November 2012), European Journal of Orthodontics (1979 to 9 November 2012), Journal of Orthodontics (1978 to 9 November 2012), Chinese Journal of Stomatology (1953 to 9 November 2012), West China Journal of Stomatology (1983 to 9 November 2012), Chinese Journal of Dental Materials and Devices (1992 to 9 November 2012) and Chinese Journal of Orthodontics (1994 to 9 November 2012). Selection criteria We would have included randomised controlled trials (RCTs) which compared any of the following: fixed options (including labial braces, lingual braces and fixed lingual wire), removable options (including Hawley's retainer with active components such as Hawley's retainer with spring elastomeric module, Bloore removable aligner and any other modifications on the Hawley's retainer to correct the lower front teeth, and invisible removable aligners such as Invisalign and Clearstep) and no active treatment for the management of relapsed lower front teeth after orthodontic treatment. We excluded RCTs of participants with craniofacial deformities/syndromes or serious skeletal deformities who received prior surgical/surgical orthodontic treatment. Data collection and analysis Two review authors, independently and in duplicate, assessed the results of the searches to identify studies for inclusion. The Cochrane Collaboration statistical guidelines were to be followed for data synthesis. Main results We did not identify any RCTs which met the inclusion criteria for this review. Authors' conclusions This review has revealed that there was no evidence from RCTs to show that one intervention was superior to another to manage the relapse of the alignment of lower front teeth using any method or index, aesthetic assessment by participants and practitioners, treatment time, patient's discomfort, quality of life, cost-benefit considerations, stability of the correction, and side effects including pain, gingivitis, enamel decalcification and root resorption. There is an urgent need for RCTs in this area to identify the most effective and safe method for managing the relapse of alignment of the lower front teeth.

INTL WOS:000325129900006 CI

Aaron, S.;A. K. Patil;M. Sunithi;A. Sivadasan and M. Alexander

Cerebral Venous Thrombosis Recurrence with Negative Prothrombotic Markers.

Cerebrovascular Diseases. 2013, 36: 51-51.

[Aaron, S.; Patil, A. K.; Sunithi, M.; Sivadasan, A.; Alexander, M.]

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INTL WOS:000323941400124 PMCID: CO

Abalos, E.;E. Oyarzun;V. Addo;J. B. Sharma;J. Matthews;J. Oyieke;S. N. Masood;M. A. El Sheikh;B. Brocklehurst;F. Farrell;S. Gray;P. Hardy;N. Jamieson;E. Juszczak and P. Spark

CORONIS - International study of caesarean section surgical techniques: The follow-up study.

BMC Pregnancy Childbirth. 2013 Nov 21;13:215. doi: 10.1186/1471-2393-13-215.

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All India Institute of Medical Sciences, Delhi, India

Christian Medical College and Hospital, Vellore, India

Kenyatta National Hospital, University of Nairobi, Kenya

Fatima Bai Hospital, Karachi, Pakistan

Soba University Hospital, University of Khartoum, Sudan

The Institute for Women's Health, London and National Perinatal Epidemiology Unit CTU, Oxford, United Kingdom

National Perinatal Epidemiology Unit CTU, Oxford, United Kingdom

Background: The CORONIS Trial was a 2×2×2×2 non-regular, fractional, factorial trial of five pairs of alternative caesarean section surgical techniques on a range of short-term outcomes, the primary outcome being a composite of maternal death or infectious morbidity. The consequences of different surgical techniques on longer term outcomes have not been well assessed in previous studies. Such outcomes include those related to subsequent pregnancy: mode of delivery; abnormal placentation (e.g. accreta); postpartum hysterectomy, as well as longer term pelvic problems: pain, urinary problems, infertility. The Coronis Follow-up Study aims to measure and compare

the incidence of these outcomes between the randomised groups at around three years after women participated in the CORONIS Trial. **Methods/Design:** This study will assess the following null hypotheses: In women who underwent delivery by caesarean section, no differences will be detected with respect to a range of long-term outcomes when comparing the following five pairs of alternative surgical techniques evaluated in the CORONIS Trial: 1. Blunt versus sharp abdominal entry. 2. Exteriorisation of the uterus for repair versus intra-abdominal repair. 3. Single versus double layer closure of the uterus. 4. Closure versus non-closure of the peritoneum (pelvic and parietal). 5. Chromic catgut versus Polyglactin-910 for uterine repair. The outcomes will include (1) women's health: pelvic pain; dysmenorrhoea; deep dyspareunia; urinary symptoms; laparoscopy; hysterectomy; tubal/ovarian surgery; abdominal hernias; bowel obstruction; infertility; death. (2) Outcomes of subsequent pregnancies: inter-pregnancy interval; pregnancy outcome; gestation at delivery; mode of delivery; pregnancy complications; surgery during or following delivery. **Discussion:** The results of this follow-up study will have importance for all pregnant women and for health professionals who provide care for pregnant women. Although the results will have been collected in seven countries with limited health care resources (Argentina, Chile, Ghana, India, Kenya, Pakistan, Sudan) any differences in outcomes associated with different surgical techniques are likely to be generalisable throughout the world. **Trial registration:** ISRCTN31089967. © 2013 The CORONIS Collaborative Group; licensee BioMed Central Ltd.

INTL PMID: 24261693 **CO**

Abhilash, K. P.; J. J. Arul and D. Bala

Fatal overdose of iron tablets in adults.

Indian J Crit Care Med. 2013, 17(5): 311-313.

Department of Medicine 4, Christian Medical College, Vellore, Tamil Nadu, India.

Acute iron toxicity is usually seen in children with accidental ingestion of iron-containing syrups. However, the literature on acute iron toxicity with suicidal intent in adults is scant. We report, the first instance of two adults with fatal ingestion of a single drug overdose with iron tablets from India. Two young adults developed severe gastro-intestinal bleeding and fulminant hepatic failure 48 h after deliberate

consumption of large doses of iron tablets. Serum iron levels measured 36 h after ingestion were normal presumably due to the redistribution of iron to the intracellular compartment. Despite aggressive supportive management in medical intensive care unit of a tertiary care hospital, the patients succumbed to the toxic doses of iron.

NAT PMID: 24339645 PMCID: 3841496 **CO**

Ahmed, M.; S. N. Keshava; S. Mammen; A. G. Chacko and K. Prabhu

An unusual case of reversible cerebral vasoconstriction syndrome presenting with a large intraparenchymal haematoma.

Neurol India. 2013, 61(5): 535-537.

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

NAT PMID: 24262465 **CO**

Alexander, S.; P. M. Raj; S. Varughese; V. G. David; T. Veerasamy and C. K. Jacob

Medical image. Disseminated infection with Nocardia asteroides.

N Z Med J. 2013 Jun 28;126(1377):70-1

Department of Nephrology, Christian Medical College, Ida Scudder Road, Vellore, Tamil Nadu, India. suceena@gmail.com

INTL PMID: 23831881 **CO**

Anand, R.; K. D. Gill and A. A. Mahdi

Therapeutics of Alzheimer's disease: Past, present and future.

Neuropharmacology. 2014, 76 Pt A: 27-50.

Department of Biochemistry, Christian Medical College, Vellore 632002, Tamilnadu, India. Electronic address: griffindoc@gmail.com.

Alzheimer's disease (AD) is the most common cause of dementia worldwide. The etiology is multifactorial, and pathophysiology of the disease is complex. Data indicate an exponential rise in the number of cases of AD, emphasizing the need for developing an effective treatment. AD also imposes tremendous emotional and financial burden to the patient's family and community. The disease has been studied over a century, but acetylcholinesterase inhibitors and memantine are the only drugs currently approved for its management. These drugs provide symptomatic improvement alone

but do less to modify the disease process. The extensive insight into the molecular and cellular pathomechanism in AD over the past few decades has provided us significant progress in the understanding of the disease. A number of novel strategies that seek to modify the disease process have been developed. The major developments in this direction are the amyloid and tau based therapeutics, which could hold the key to treatment of AD in the near future. Several putative drugs have been thoroughly investigated in preclinical studies, but many of them have failed to produce results in the clinical scenario; therefore it is only prudent that lessons be learnt from the past mistakes. The current rationales and targets evaluated for therapeutic benefit in AD are reviewed in this article. This article is part of the Special Issue entitled 'The Synaptic Basis of Neurodegenerative Disorders'.

INTL PMID: 23891641CO

Arora, S. and A. Joel

Pancreatic cancer in a case of idiopathic chronic pancreatitis.

Indian Journal of Medical Research. 2013, 138(OCT): 568-568.

Department of Medical Oncology, Christian Medical College Hospital, Vellore, Tamil Nadu 632 004, India

NATCO

Arthur, A.;A. Alexander;S. Bal;A. Sivadasan and S. Aaron

Ophthalmic masquerades of the atherosclerotic carotids.

Indian J Ophthalmol. 2013 Nov 11. [Epub ahead of print]

Department of Neurological Sciences, Neurology Unit, Christian Medical College & Hospital, Vellore, Tamil Nadu, India.

Patients with carotid atherosclerosis can present with ophthalmic symptoms. These symptoms and signs can be due to retinal emboli, hypoperfusion of the retina and choroid, opening up of collateral channels, or chronic hypoperfusion of the globe (ocular ischemic syndrome). These pathological mechanisms can produce many interesting signs and a careful history can bring out important past symptoms pointing toward the carotid as the source of the patient's presenting symptom. Such patients are at high risk for an ischemic stroke, especially in the subsequent few days following their first acute symptom. It is important for clinicians to be familiar with these ophthalmic symptoms and

signs caused by carotid atherosclerosis for making an early diagnosis and to take appropriate measures to prevent a stroke. This review elaborates the clinical features, importance, and implications of various ophthalmic symptoms and signs resulting from atherosclerotic carotid artery disease.

NAT PMID: 24212230CO

Augustine, A. M.;A. K. Jana;K. A. Kuruvilla;S. Danda;A. Lepcha;J. Ebenezer;R. R. Paul;A. Tyagi and A. Balraj

Universal Neonatal Hearing Screening - Experience in a Tertiary Care Hospital in Southern India.

Indian Pediatr. 2013 Oct 5. pii: S097475591300554. [Epub ahead of print]

Department of ENT, Christian Medical College, Vellore;

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Medical College, Vellore, Tamil Nadu, India.

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OBJECTIVE: To implement a universal neonatal hearing screening program using automated auditory brainstem response audiometry in a tertiary care set-up and assess the prevalence of neonatal hearing loss.

DESIGN: Observational prospective cohort study.

SETTING: Tertiary care referral center.

PARTICIPANTS: 9448 babies born in the tertiary care hospital over a period of 11 months.

INTERVENTION: The neonates were subjected to a two stage sequential screening using the BERA phone. Neonates suspected of hearing loss underwent confirmatory testing using auditory steady state response audiometry and serological testing for TORCH infections and connexin 26 gene.

MAIN OUTCOME MEASURES: Feasibility of the screening program, prevalence of neonatal hearing loss and risk factors found in association with neonatal hearing loss.

RESULTS: 164 babies were identified as suspected for hearing loss. Among 45 babies who had confirmatory testing, 39 were confirmed to have hearing loss (4.1 per 1000) and were rehabilitated appropriately. 30 babies had one or more risk factors, 6 had evidence of TORCH infection and 1 had connexin 26 gene mutation.

CONCLUSION: Universal neonatal hearing screening using BERAphone is a feasible service, vital for early identification and rehabilitation of neonatal hearing loss. The estimated prevalence of confirmed hearing loss was comparable to that in literature. Overcoming the large numbers of loss to follow-up proves to be a challenge in the implementation of such a program.

NAT PMID: 24277966CO

Augustine, A. M.;S. B. Chrysolyte;K. Thenmozhi and V. Rupa

Assessment of Auditory and Psychosocial Handicap Associated with Unilateral Hearing Loss Among Indian Patients.

Indian Journal of Otolaryngology and Head & Neck Surgery. 2013, 65(2): 120-125.

[Augustine, Ann Mary; Chrysolyte, Shipra B.; Thenmozhi, K.; Rupa, V.] Christian Med Coll & Hosp, Dept ENT, Unit Speech & Hearing 3, Vellore 632004, Tamil Nadu, India.

Rupa, V (reprint author), Christian Med Coll & Hosp, Dept ENT, Unit Speech & Hearing 3, Vellore 632004, Tamil Nadu, India.

rupavedantam@cmcvellore.ac.in

In order to assess psychosocial and auditory handicap in Indian patients with unilateral sensorineural hearing loss (USNHL), a prospective study was conducted on 50 adults with USNHL in the ENT Outpatient clinic of a tertiary care centre. The hearing handicap inventory for adults (HHIA) as well as speech in noise and sound localization tests were administered to patients with USNHL. An equal number of age-matched, normal controls also underwent the speech and sound localization tests. The results showed that HHIA scores ranged from 0 to 60 (mean 20.7). Most patients (84.8 %) had either mild to moderate or no handicap. Emotional subscale scores were higher than social subscale scores ($p = 0.01$). When the effect of sociodemographic factors on HHIA scores was analysed, educated individuals were found to have higher social subscale scores ($p = 0.04$). Age, sex, side and duration of hearing loss, occupation and income did not affect HHIA scores. Speech in noise and sound localization were significantly poorer in cases compared to controls ($p < 0.001$). About 75 % of patients refused a rehabilitative device. We conclude that USNHL in Indian adults does not usually produce severe handicap. When present, the handicap is more emotional than social. USNHL significantly affects

sound localization and speech in noise. Yet, affected patients seldom seek a rehabilitative device.

NAT WOS:000318876400006CO

Balaji, G. G.;J. S. Arockiaraj;A. C. Roy and B. Deepak
Primary Epithelioid Angiosarcoma of the Calcaneum-A Diagnostic Dilemma.

J Foot Ankle Surg. 2013 Dec 19. pii: S1067-2516(13)00489-4. doi: 10.1053/j.jfas.2013.10.010. [Epub ahead of print]

Assistant Professor in Orthopaedics, Department of Orthopaedics, Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry, India. Electronic address: drgopi9596@gmail.com.

Assistant Professor in Orthopaedics, Department of Orthopaedics Unit 1, Christian Medical College, Vellore, Tamil Nadu, India.

Assistant Professor in Pathology, Department of Orthopaedics Unit 1, Christian Medical College, Vellore, Tamil Nadu, India.

Primary epithelioid angiosarcoma of the bone is very rare. We report a rare case of epithelioid angiosarcoma of the calcaneum and the difficulties we had in diagnosing this condition. A 22-year-old woman presented with complaints of pain and swelling of the left ankle of 8 years' duration. Examination revealed swelling and tenderness over the lateral aspect of calcaneum. Plain radiographs showed an osteolytic lesion of the calcaneum. She underwent curettage and bone grafting, with bone substitutes. Histopathologic examination showed epithelioid angiosarcoma in contrast to the needle biopsy, which had showed an aneurysmal bone cyst. The patient was counseled about the need for amputation. She refused limb ablative surgery, and the likelihood of local recurrence and systemic spread and the need for close follow-up were explained. At the end of 3 years of follow-up, she was pain free and had no evidence of recurrence. We present this case because of the rare site, histopathologic challenges in diagnosing the condition, and unique presentation of the disease.

INTL PMID: 24361010CO

Balakrishna, J. P.;G. Chacko and M. T. Manipadam
Glomerulopathy in a patient with sarcocystis infestation.
Indian J Pathol Microbiol. 2013, 56(3): 285-287.
 Department of General Pathology, Christian Medical
 College, Vellore, Tamil Nadu, India.

To date, sarcocystis has been considered an asymptomatic infection in humans. Even though cases with glomerulonephritis have been reported in animals with sarcocystis, there have been no reports of a similar occurrence in humans. We report a case of acute proliferative glomerulonephritis and leukocytoclastic vasculitis in a patient with sarcocystis infestation.

NAT PMID: 24152512CO

Banerji, J. S.;R. M. Kumar and A. Devasia
Extramedullary hematopoiesis in the adrenal: Case report and review of literature.
Can Urol Assoc J. 2013, 7(5-6): E436-438.
 Department of Urology, Christian Medical College,
 Vellore, India;

Extramedullary haematopoiesis (EMH) is common in the spleen, liver and lymph nodes, or in para osseus sites. EMH in the adrenal is rare, with fewer than 10 cases reported. We report the case of a 40-year-old male who underwent laparoscopic adrenalectomy for an incidentally detected adrenal mass. The histology showed extramedullary hematopoiesis. In patients with a known history of haemolytic anaemia, an enlarged adrenal gland in an asymptomatic individual could represent extramedullary haematopoiesis. A confirmatory biopsy would be all that is necessary to avoid adrenalectomy.

INTL PMID: 23826059 PMCID: 3699094CO

Banerji, J. S.;S. K. Singh and N. S. Kekre
Renal cell carcinoma in acquired renal cystic disease following renal transplantation.
ANZ J Surg. 2014 Jan;84(1-2):91-2. doi: 10.1111/ans.12255.
 Epub 2013 Oct 28.
 Department of Urology, Christian Medical College,
 Vellore, India.

INTL PMID: 24164859CO

Barman, A.;R. Bhide;A. Viswanathan;J. George;R. Thomas
 and G. Tharion
Gorham's disease of the spine.
NeuroRehabilitation. 2013, 33(1): 121-126.

Department of Physical Medicine and Rehabilitation,
 Christian Medical College, Vellore, Tamil Nadu, India.
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BACKGROUND: Gorham's disease of the spine is very rare and usually associated with poor prognosis. Till date very few cases have been reported in the literature. It is characterized by osseous invasion by angiomatous vascular mass without skip areas, eventually causing lysis of affected bone. Morbidity and mortality are high in those with spinal and/or visceral involvement. Neurological complications increase the mortality to 33% whereas with chylothorax, mortality increases to more than 50%.

OBJECTIVES: To describe the clinical course and the challenges in planning and implementing effective rehabilitation services for management of patients with Gorham's disease of the spine.

METHODS: We report two patients with Gorham's disease who had neurological deficits secondary to spinal cord involvement, and their rehabilitation perspectives.

RESULTS: Both patients achieved satisfactory ambulation and functional outcomes.

CONCLUSION: Multiple revision surgeries may be required to ensure spinal stability. When working with these patients, one must remain vigilant about spinal stability as well as about possible serious pulmonary complications, and be prepared to make appropriate management decisions when necessary.

INTL PMID: 23949031CO

Behera, K. K.;N. Kapoor;M. S. Seshadri and S. Rajaratnam
Acute adrenal insufficiency due to primary antiphospholipid antibody syndrome.
Indian J Endocrinol Metab. 2013, 17(Suppl 1): S240-242.
 Department of Endocrinology, Diabetes and Metabolism,
 Christian Medical College, Vellore, Tamil Nadu, India.

INTRODUCTION: We report a case of acute adrenal insufficiency (AAI) in a patient with antiphospholipid syndrome (APS).

CASE REPORT: A 44-year-old female patient presented to us with acute abdominal pain associated with recurrent vomiting and giddiness. On examination, her

blood pressure was 80/50 mm Hg. Systemic examination was normal. Further evaluation revealed hypocortisolemia with elevated plasma adrenocorticotropin hormone indicative of primary adrenal insufficiency. Her abdominal computed tomography scan showed features of evolving bilateral adrenal infarction. Etiological work-up revealed prolonged activated thromboplastin time, which didn't correct with normal plasma, her anti-cardiolipin antibody and lupus anticoagulant were also positive. She was diagnosed to have APS with adrenal insufficiency and she was started on intravenous steroids and heparin infusion.

CONCLUSION: AAI due to the APS can present with acute abdominal pain followed by hypotension. A high index of suspicion is needed to make the correct diagnosis and to initiate appropriate treatment.

NAT PMID: 24251172 PMCID: 3830318 CO

Bhatt, A. D.;R. Pai;G. Rebekah;G. A. Nehru;S. Dhananjayan;A. Samuel;A. Singh;A. Joel;A. Korula and R. T. Chacko

Clinicopathologic features of non-small cell lung cancer in India and correlation with epidermal growth factor receptor mutational status.

Indian J Cancer. 2013, 50(2): 94-101.

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

INTRODUCTION: We performed retrospective analysis of 106 patients with lung cancer for which formalin-fixed paraffin-embedded tissues was available. Their epidermal growth factor receptor (EGFR) mutation status and treatment outcomes are described.

MATERIALS AND METHODS: All patients with confirmed non-small cell lung cancer (NSCLC) during Jan 2008 to Dec 2010 were included. EGFR sequencing was performed with ABI PRISM 310 genetic analyzer.

RESULTS: Forty-two (39.6%) patients had mutation in one of the four exons characterized. Patients whose EGFR mutational status was not available at presentation before the start of treatment were started on chemotherapy, n = 46 (43.39%). If EGFR mutational analysis was available and mutations were present, the patients were started on either upfront tyrosine kinase inhibitor (TKI), n = 15 (14.15%) or if on chemotherapy arm were allowed to finish six cycles and then start with maintenance TKIs, n = 26 (24.52%). The median progression free survival for patients with

and without mutations was 11 months (95% CI,7-14) and 9 months (95% CI,7-10) respectively. A median PFS of 14 months (95%CI, 12-16) was seen in the mutation-positive group that received both chemotherapy followed by switch maintenance with TKIs versus 8 months (95%CI, 7-8 months) in the group that received only TKI.

CONCLUSION: The prevalence of EGFR mutations in this population of NSCLC patients was 39.6% with exon 19 mutation being the most common. The observed benefit of addition of chemotherapy over TKI in EGFR mutation-positive group raises the question, can we offer the therapy of chemotherapy-TKI combination to EGFR mutation-positive lung cancer patients as shown in the present study.

NAT PMID: 23979198 CO

Bhatt, A. D.;R. Pai;G. Rebekah;S. Dhananjayan;G. ArunNehru;A. Samuel;A. Singh;A. Joel;A. Korula and R. T. Chacko

Clinicopathological features of non-small cell lung cancer in south India and correlation with epidermal growth factor receptor EGFR mutational status.

European Journal of Cancer. 2013, 49: S832-S833.

[Bhatt, A. D.] Avinash Canc Clin, Pune, Maharashtra, India. [Pai, R.; Dhananjayan, S.; ArunNehru, G.; Korula, A.] Christian Med Coll & Hosp, Dept Pathol, Vellore, Tamil Nadu, India. [Rebekah, G.] Christian Med Coll & Hosp, Dept Biostat, Vellore, Tamil Nadu, India. [Samuel, A.; Singh, A.; Joel, A.; Chacko, R. T.] Christian Med Coll & Hosp, Dept Med Oncol, Vellore, Tamil Nadu, India.

INTL WOS:000326843605233 CO

Bhattacharya, S. and M. S. Kamath

Reducing multiple births in assisted reproduction technology.

Best Pract Res Clin Obstet Gynaecol. 2013 Dec 4. pii: S1521-6934(13)00160-0. doi: 10.1016/j.bpobgyn.2013.11.005.

[Epub ahead of print]

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Reproductive Medicine Unit, Christian Medical College, Vellore, India.

Multiple pregnancy, a complication of assisted reproduction technology, is associated with poorer maternal and perinatal outcomes. The primary reason

behind this is the strategy of replacing more than one embryo during an assisted reproduction technology cycle to maximise pregnancy rates. The solution to this problem is to reduce the number of embryos transferred during in-vitro fertilisation. The transition from triple- to double-embryo transfer, which decreased the risk of triplets without compromising pregnancy rates, was easily implemented. The adoption of a single embryo transfer policy has been slow because of concerns about impaired pregnancy rates in a fresh assisted reproduction technology cycle. Widespread availability of effective cryopreservation programmes means that elective single embryo transfer, along with subsequent frozen embryo transfers, could provide a way forward. Any such strategy will need to consider couples' preferences and existing funding policies, both of which have a profound influence on decision making around embryo transfer.

INTL PMID: 24361002 **CO**

Bhide, R. P.;A. Barman;S. M. Varghese;A. Chatterjee;S. Mammen;J. George and R. Thomas

A Rare Presentation of Subacute Progressive Ascending Myelopathy Secondary to Cement Leakage in Percutaneous Vertebroplasty.

Am J Phys Med Rehabil. 2013 Dec 6. [Epub ahead of print] From the Department of Physical Medicine & Rehabilitation (RPB, AB, SMV, AC, JG, RT) and Department of Radio-diagnosis (SM), Christian Medical College, Vellore, Tamil Nadu, India.

Percutaneous vertebroplasty is used to manage osteoporotic vertebral body compression fractures. Although it is relatively safe, complications after vertebroplasty ranging from minor to devastatingly major ones have been described. Cement leakage into the spinal canal is one such complication. Subacute progressive ascending myelopathy is an infrequent neurologic complication after spinal cord injury, typically presenting as ascending neurologic deficit within weeks after the initial insult. The precise cause of subacute progressive ascending myelopathy still remains an enigma, considering the rarity of this disorder. The authors present the case of a 62-yr-old woman with osteoporotic vertebral fracture who underwent percutaneous vertebroplasty and developed T6 complete paraplegia because of cement leakage. A few weeks later, the neurologic level

ascended to higher cervical level (C3). To date, no case of subacute progressive ascending myelopathy secondary to cement leakage after percutaneous vertebroplasty has been reported. Literature is reviewed regarding subacute progressive ascending myelopathy, and the rehabilitation challenges in the management of this patient are discussed.

INTL PMID: 24322431 **CO**

Boopalan, P. R.;A. Sait;T. S. Jepegnanam;T. Matthai and V. D. Varghese

The Efficacy of Single-stage Open Intramedullary Nailing of Neglected Femur Fractures.

Clin Orthop Relat Res. 2014 Feb;472(2):759-64. doi: 10.1007/s11999-013-3293-z. Epub 2013 Sep 21.

Department of Orthopaedics Unit III, Christian Medical College, Vellore, 632004, Tamilnadu, India, jpboopy@me.com.

BACKGROUND: Neglected femur fractures are not rare in the developing world. Treatment options include single-stage open reduction and intramedullary nailing, or open release, skeletal traction, and then second-stage open intramedullary nailing, with bone grafting. Single-stage procedures have the potential advantage of avoiding neurovascular complications secondary to acute lengthening, but they require a second operation, with potentially increased resource use and infection risk.

QUESTIONS/PURPOSES: We sought to determine the (1) likelihood of union, (2) complications and reoperations, and (3) functional results with single-stage open intramedullary nailing without bone grafting in patients with neglected femur fractures.

METHODS: Between January 2003 and December 2007, 17 consecutive patients presented to our practice with neglected femoral shaft fractures. All were treated with single-stage nailing without bone grafting. There were 15 men and two women with a median age of 27 years. The average time from fracture to treatment was 13 weeks (range, 4-44 weeks). Eleven patients underwent open nailing with interlocked nails and six were treated with cloverleaf Kuntscher nails. Patients were followed for a minimum of 6 months (mean, 33 months; range, 6-72 months). The mean preoperative ROM of the knee was 28 degrees (range, 10 degrees -150 degrees) and femoral length discrepancy was 3.1 cm (range, 1-5 cm).

RESULTS: All fractures united and the mean time to union was 16 weeks (range, 7-32 weeks). There were no neurologic complications secondary to acute lengthening. The mean postoperative ROM of the knee was 130 degrees (range, 60 degrees -150 degrees). All patients were able to return to preinjury work. Sixteen patients regained their original femoral length.

CONCLUSIONS: One-stage open intramedullary nailing of neglected femoral diaphyseal fractures without bone grafting was safe and effective, and obviated the need for a two-stage approach. Although the findings need to be replicated in larger numbers of patients, we believe this technique may be useful in treating patients with this injury, and may offer advantages in resource-constrained environments. **LEVEL OF EVIDENCE:** Level IV, therapeutic study. See the Instructions for Authors for a complete description of levels of evidence.

INTL PMID:24057191CO

Boorugu, H.;A. Chrispal;K. Gopinath;S. Chandy;J. J. Prakash;A. M. Abraham;O. Abraham and K. Thomas
Central nervous system involvement in scrub typhus.
Trop Doct. 2014 Jan;44(1):36-7. doi: 10.1177/0049475513512646. Epub 2013 Nov 12.

Assistant Professor, Department of Internal Medicine, Christian Medical College, Vellore, India.

Scrub typhus is an emerging infectious disease in India. Among its protean clinical manifestations, central nervous system involvement is common. In this prospective observational study, altered sensorium, headache, seizures and aseptic meningitis were found to be common central nervous system manifestations. Prompt treatment with doxycycline reduces morbidity and mortality.

INTL PMID:24226290CO

Chadha, V. K.;R. Sarin;P. Narang;K. R. John;K. K. Chopra;R. Jitendra;D. K. Mendiratta;V. Vohra;A. N. Shashidhara;G. Muniraj;P. G. Gopi and P. Kumar
Trends in the annual risk of tuberculous infection in India (vol 17, pg 312, 2013).
International Journal of Tuberculosis and Lung Disease. 2013, 17(6): 851-851.

[Muniraj, G.] Christian Med Coll & Hosp, Dept Community Med, Vellore, Tamil Nadu, India.

INTL WOS:000319845700031CO

Chandramohan, A.;K. Sathyakumar;R. A. John;M. T. Manipadam;D. Abraham;T. V. Paul;N. Thomas and M. J. Paul

Atypical ultrasound features of parathyroid tumours may bear a relationship to their clinical and biochemical presentation.

Insights Imaging. 2013 Nov 29. [Epub ahead of print]

Department of Radiology, Christian Medical College, Vellore, Tamil Nadu, India, 632004, anuradhachandramohan@gmail.com.

OBJECTIVES: To describe atypical ultrasound features of parathyroid lesions and correlate them with clinical presentation and histopathology.

MATERIALS AND METHODS: Retrospective review of 264 patients with primary hyperparathyroidism who underwent ultrasound imaging prior to parathyroidectomy was performed. Patients with atypical ultrasound findings (n = 26) were identified; imaging findings were correlated with clinical presentation and histopathology.

RESULTS: Twenty-one (80 %) lesions were adenomas, two (8 %) were adenomas with cellular atypia, and three (11.5 %) were carcinomas. Seventeen (65 %) lesions showed cystic change; five (19 %) of them had >50 % cystic change. These lesions were adenomas with cystic degeneration. Cystic degeneration had significant positive correlation with the lesion size and PTH level, but cystic adenomas correlated negatively with lesion weight. Six (23 %) lesions were isoechoic and one (4 %) was hyperechoic; histology predominantly revealed haemorrhage, hyalinisation and fibrosis; one lesion showed fat deposition and another had multiple granulomas within the adenoma. Twenty (83 %) lesions had heterogeneous echotexture and showed combinations of acinar dilatation, necrosis, haemorrhage and fibrosis. Heterogeneous lesions tended to be significantly larger and heavier, and they were associated with higher PTH levels. Four (15 %) lesions had calcifications. Scintigraphy was concordant in 22 (96 %), n = 23. One scintigraphy-negative lesion was a cystic parathyroid adenoma.

CONCLUSION: Atypical ultrasound features of parathyroid lesions pose a diagnostic challenge. Awareness of these features would help improve lesion detection.

TEACHING POINTS: 1. Cystic change is significantly related to the size, weight and measured parathyroid hormone levels. 2. Cystic change in parathyroid

tumours indicated a slightly higher risk of malignancy.
 3. Heterogeneous parathyroid adenomas are larger in size and heavier, and they have higher PTH levels.
 4. Awareness of atypical ultrasound features will improve preoperative clinical prediction.

INTL PMID: 24293304CO

Chandy, S.;K. Ramanathan;A. Manoharan;D. Mathai and K. Baruah

Assessing effect of climate on the incidence of dengue in Tamil Nadu.

Indian J Med Microbiol. 2013, 31(3): 283-286.

Department of Medicine, Unit 1 and Infectious Diseases, Christian Medical College, Vellore, India.

Incidence of dengue is reported to be influenced by climatic factors. The objective of this study is to assess the association of local climate with dengue incidence, in two geographically distinct districts in Tamil Nadu. The study uses climate data, rainfall and mean maximum and minimum temperature to assess its association if any, with dengue incidence in two districts of Tamil Nadu, South India. According to this study while precipitation levels have an effect on dengue incidence in Tamil Nadu, non-climatic factors such as presence of breeding sites, vector control and surveillance are important issues that need to be addressed.

NAT PMID: 23883717CO

Chaturvedi, S.;A. Jahan;A. Korula and I. Agarwal

A 12-year-old boy with renal failure and haemoptysis.

Clinical Kidney Journal. 2013, 6(6): 650-652.

Paediatric Nephrology Unit, Department of Paediatrics, Christian Medical College, Vellore, Tamilnadu, India

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

INTLCO

Chaturvedi, S.;A. Pulimodd and I. Agarwal

Quiz page December 2013: Hypoplastic nails, bowed elbows, and nephrotic syndrome. Nail-patella syndrome (hereditary osteo-onychodysplasia, Turner-Keiser syndrome, Fong disease).

Am J Kidney Dis. 2013, 62(6): A25-27.

Paediatric Nephrology Unit, Department of Paediatrics, Christian Medical College, Vellore, Tamilnadu, India. Electronic address: swasti.chaturvedi@gmail.com.

INTL PMID: 24267390CO

Chaturvedi, S.;A. Pulimodd and I. Agarwal

Hypoplastic Nails, Bowed Elbows, and Nephrotic Syndrome.

American Journal of Kidney Diseases. 2013, 62(6): XXV-XXVII.

[Chaturvedi, Swasti; Agarwal, Indira] Christian Med Coll & Hosp, Paediat Nephrol Unit, Dept Paediat, Vellore 632004, Tamil Nadu, India. [Pulimodd, Anna] Christian Med Coll & Hosp, Dept Pathol, Vellore 632004, Tamil Nadu, India.

Chaturvedi, S (reprint author), Christian Med Coll & Hosp, Vellore 632004, Tamil Nadu, India.

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INTL WOS:000327523800001CO

Chaturvedi, S.;D. H. Lipszyc;C. Licht;J. Craig and R. Parekh

Pharmacological Interventions for Hypertension in Children: A Systematic review and meta-analysis.

Pediatric Nephrology. 2013, 28(8): 1357-1358.

[Chaturvedi, Swasti] Christian Med Coll & Hosp, Vellore, Tamil Nadu, India. [Lipszyc, Deborah H.] Hosp Sick Children, Inst Med Sci, Toronto, ON M5G 1X8, Canada. [Licht, Christoph; Parekh, Rulan] Hosp Sick Children, Toronto, ON M5G 1X8, Canada. [Craig, Jonathan] Westmead Children Hosp, Sydney, NSW, Australia.

INTL WOS:000321387201039CO

Chaudhary, N. and A. Borker

Pediatric Precursor B-cell Lymphoblastic Lymphoma Presenting with Extensive Skeletal Lesions.

Ann Med Health Sci Res. 2013, 3(2): 262-264.

Department of Child Health, Christian Medical College, Vellore, India.

Lymphoblastic lymphoma (LL) of the B cell type is uncommon, and extranodal presentation is even rarer. It is difficult to suspect this diagnosis without clinically obvious lymph nodal mass or bone marrow

involvement. A 3-year-old girl presented with progressive pain and swelling of the right knee joint of 3 months duration. Radiograph revealed expansile lytic lesion at the supracondylar area of the right femur; with pathological fracture and multiple lytic areas in both femora. She neither had lymphadenopathy nor organomegaly. Her blood counts, peripheral smear examination and bone marrow examination were normal. Right supracondylar biopsy revealed diagnosis of a precursor B cell LL. Computerized tomography scan revealed a hypodense, poorly enhancing lesion in the left adnexal region. Although rare, precursor B-cell LL may present with extensive bone lesions. Early and accurate diagnosis of this entity is very important due to its high cure rates.

INTL PMID: 23919201 PMCID: 3728874 CO

Chaudhary, N.;K. P. Kulkarni;T. Seth and R. S. Arora
CURRENT OUTCOMES OF LANGERHANS CELL
HYSTIOCYTOSIS (LCH) AMONG CHILDREN IN INDIA: A
SYSTEMATIC REVIEW.

Pediatric Blood & Cancer. 2013, 60: 153-153.

[Chaudhary, N.] Christian Med Coll & Hosp, Vellore, Tamil Nadu, India. [Kulkarni, K. P.] Stollery Children Hosp, Edmonton, AB, Canada. [Seth, T.] All India Inst Med Sci, New Delhi, India. [Arora, R. S.] Max Healthcare, Med Oncol, New Delhi, India.

INTL WOS:000324735501108 CO

Chowdhury, S. D.;B. Ramakrishna;C. E. Eapen;A. Goel;U. G. Zachariah;A. Chandramohan;S. Pugazendhi;B. S. Ramakrishna and G. Kurian

Fibrosis in non-alcoholic fatty liver disease: correlation with simple blood indices and association with tumor necrosis factor-alpha polymorphisms.

Trop Gastroenterol. 2013, 34(1): 31-35.

Department of Gastrointestinal Sciences, Christian Medical College, Vellore 632004, India.

AIM: The study was conducted with an aim to evaluate the clinico-pathological profile, the correlation of AST:ALT ratio and APRI with histological fibrosis, and the frequency of two specific polymorphisms (-238, -308) in the TNF alpha promoter region in patients with NAFLD.

METHODS: The present study compared aspartate transaminase/alanine transaminase (AST/ALT) ratio and AST-to-platelet ratio index (APRI) with fibrosis score in

29 patients who underwent liver biopsy for NAFLD. Single nucleotide polymorphisms (SNP) in the tumor necrosis factor-alpha (TNF-alpha) promoter region at positions -308 and -238 were examined by polymerase chain reaction-restriction fragment length polymorphism.

RESULTS: AST/ALT ratio correlated better than the APRI with liver fibrosis in patients with NAFLD (AUROC of 0.9 compared to 0.68). TNF-alpha promoter region SNPs were present in only a minority of patients, and did not correlate with fibrosis severity.

CONCLUSIONS: AST/ALT ratio correlated well with liver fibrosis in Indian patients with NAFLD. The SNPs studied had no role in development of fibrosis in Indian patients with NAFLD.

INTL PMID: 23923372 CO

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

Metastasis of renal cell carcinoma to the duodenal papilla.

Indian J Gastroenterol. 2013 Oct 10. [Epub ahead of print]

Department of Gastroenterology, Christian Medical College, Vellore, 632 004, India, sudipto.d.c@gmail.com

NAT PMID: 24122316 CO

Danda, D.

It bites the heart or does it not?

International Journal of Rheumatic Diseases. 2013, 16(1): 1-2.

Christian Med Coll & Hosp, Vellore, Tamil Nadu, India.

Danda, D (reprint author), Christian Med Coll & Hosp, Vellore, Tamil Nadu, India.

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INTL WOS:000315489700001 CO

D'Sa S, R.;S. Singh;S. Satyendra and P. Mathews

Case report of *Aspergillus* osteomyelitis of the ribs in an immunocompetent patient.

J Glob Infect Dis. 2013, 5(3): 118-120.

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

Aspergillus is a saprophytic fungus which is universally found in the environment. Most people breathe in the spores of *Aspergillus* every day without development of disease. It commonly affects immunocompromised

hosts. There are only few reported cases in an immunocompetent host. It most commonly affects the respiratory system, causing superficial or invasive disease. It also affects the skin, brain and eye in severely immunocompromised patients. Aspergillosis of the bone is extremely rare. Amongst all the reported cases of invasive aspergillosis the incidence of osteomyelitis is less than three percent. In these cases commonly of the spine is reported. We present a case of *Aspergillus* osteomyelitis of the ribs in an immunocompetent host.

INTL PMID: 24049367 PMCID: 3766334 CO

Dutta, A. K.;U. G. Zachariah;K. G. Sajith;A. Balekuduru;M. K. Sahu;S. D. Chowdhury and A. Chacko

Asymptomatic portal hypertension incidentally detected during upper gastrointestinal endoscopy.

Trop Gastroenterol. 2013, 34(1): 36-37.

Department of Gastrointestinal Sciences, Christian Medical College, Vellore 632 004, Tamil Nadu, India.

Esophageal or gastric varices may be incidentally seen during endoscopy for dyspeptic or reflux symptoms. However, the frequency of their occurrence in these patients is unknown. Our center follows the scope and treat strategy for adult patients with dyspeptic or reflux symptoms and this provided us an opportunity to study this. Apart from providing an idea on the etiological spectrum, our data suggests that patients with incidentally detected varices have well preserved liver function which may provide a window for better management.

INTL PMID: 23923373 CO

Elias, J. E.;I. Mackie;C. E. Eapen;P. Chu;J. C. Shaw and E. Elias

Porto-pulmonary hypertension exacerbated by platelet transfusion in a patient with ADAMTS13 deficiency.

Journal of Hepatology. 2013, 58(4): 827-830.

[Elias, Joshua E.] Univ Hosp Leicester, Dept Med, Leicester, Leics, England. [Mackie, Ian] UCL, Dept Haematol, Haemostasis Res Unit, London, England. [Eapen, Chundamannil E.] Christian Med Coll & Hosp, Vellore, Tamil Nadu, India. [Chu, Patrick] Royal Liverpool Univ Hosp, Dept Haematol, Liverpool, Merseyside, England. [Shaw, Jean C.; Elias, Elwyn] Univ Hosp Birmingham, Liver Unit, Birmingham, W Midlands, England.

Elias, E (reprint author), 10 Pritchatts Rd, Birmingham B15 2QT, W Midlands, England.

elwyn.elias@doctors.net.uk

We propose that porto-pulmonary hypertension (PPH) may arise as a consequence of deficiency of ADAMTS13 (a plasma metalloprotease that regulates von Willebrand factor size and reduces its platelet adhesive activity) and provide a clinical case history to support our hypothesis. A patient with non-cirrhotic intrahepatic portal hypertension (NCIPH), ulcerative colitis and celiac disease developed symptoms of PPH, which had advanced beyond levels which would have made her an eligible candidate for liver transplantation (mean pulmonary artery pressure (PAP) 49 mmHg). She was known to have severe ADAMTS13 deficiency, which we considered to be causative of, or contributory to her NCIPH. We postulated that increasing porto-systemic shunting associated with advancing portal hypertension would make the next encountered vascular bed, the lung, susceptible to the pathogenic process that was previously confined to the portal system, with pulmonary hypertension as its consequence. Her pulmonary artery pressures fell significantly during the next year on weekly replacement of plasma ADAMTS13 by infusions of fresh frozen plasma and conventional drug treatment of her pulmonary hypertension. Her pulmonary artery pressures had fallen to acceptable levels when, in response to platelet infusion, it rose precipitously and dangerously. The sequence strongly supports our hypothesis that PPH is a consequence of ADAMTS13 deficiency and is caused by platelet deposition in afferent pulmonary vessels. (C) 2012 European Association for the Study of the Liver. Published by Elsevier B.V. All rights reserved.

INTL WOS:000317375600028 CO

George, N.;F. Fredrick;A. Mohapatra;B. Veeraraghavan;S. T. Kakde;A. T. Valson and G. Basu

Non-O1, non-O139 Vibrio cholerae sepsis in a patient with nephrotic syndrome.

Indian J Nephrol. 2013, 23(5): 378-380.

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

Non-O1, non-O139 *Vibrio cholerae* is an encapsulated bacterium, ubiquitous in the marine environment and generally considered to be non-pathogenic. However, it is known to cause diarrheal illness, wound infection, and bacteremia in immunocompromised hosts. Here we have describe non-O1, non-O139 *V. cholerae* sepsis in a patient with nephrotic syndrome following exposure to sea-water. Interestingly, the exposure occurred remotely 4 months prior to the onset of nephrotic syndrome. The occurrence of florid sepsis after a prolonged interval from the time of exposure is peculiar and raises the possibility of an association between occult *Vibrio* sepsis and nephrotic syndrome.

NAT PMID: 24049279 PMCID: 3764717 CO

Giri, S.;A. J. Kindo and J. Kalyani

Candidemia in intensive care unit patients: a one year study from a tertiary care center in South India.

J Postgrad Med. 2013, 59(3): 190-195.

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

BACKGROUND: The occurrence of candidemia is on a rise worldwide. Non-albicans *Candida* species have emerged as major causes of candidemia in many countries. Added to it is the problem of antifungal resistance in *Candida* isolates.

OBJECTIVES: To find out the prevalence of candidemia in our intensive care unit (ICU) setup along with the antifungal susceptibility pattern of *Candida* isolates and various risk factors associated with candidemia.

MATERIALS AND METHODS: All *Candida* isolates from blood stream infections of ICU patients were included in the 1 year study period (November 2008-October 2009). The isolates were speciated using various phenotypic tests. Antifungal susceptibility testing was done by disk diffusion methods according to Clinical and Laboratory Standards Institute guidelines and also using CANDIFAST. Various risk factors associated with the development of candidemia were looked into.

RESULTS: A total of 39 *Candida* isolates were isolated during the study period of 1 year (prevalence of 0.65%). *Candida tropicalis* (74.35%) was the most common isolate followed by *Candida albicans*, *Candida parapsilosis*, *Candida krusei* and *Candida glabrata*. All the 39 *Candida* isolates (100%) were sensitive to amphotericin B while 12 isolates (30.8%) were resistant to fluconazole. The risk factors commonly associated with candidemia patients were long term antibiotic therapy (64.1%), use of central venous catheters (56.4%), urinary catheters (53.9%), steroid therapy (35.9%) and diabetes mellitus (33.3%).

CONCLUSION: Candidemia is emerging as a significant problem in hospitalized patients, especially in ICU setups. Non-albicans *Candida* species are the major cause of candidemia as found in our study and few other studies in India. Multicentric studies involving many hospitals are required to know the true prevalence of candidemia and the status of antifungal drug resistance among *Candida* isolates in our country.

NAT PMID: 24029196 CO

Giri, S.;A. J. Kindo;S. Rao and A. R. Kumar

Unusual causes of fungal rhinosinuitis: a study from a tertiary care centre in South India.

Indian J Med Microbiol. 2013, 31(4): 379-384.

Department of Gastrointestinal Sciences, Williams Research Building, Christian Medical College, Vellore, Tamil Nadu, India.

PURPOSE: The frequency of mycotic infections of the nose and paranasal sinuses has been increasing over the past three decades. Apart from the common causes of fungal rhinosinuitis such as *Aspergillus* species and *Penicillium* species, there have been reports of rare and unusual fungi isolated from India and other countries.

OBJECTIVE: The objective of this study is to find out the prevalence of fungal infections of the nose and paranasal sinuses caused by unusual fungal isolates at a tertiary care teaching hospital in South India.

MATERIALS AND METHODS: Duration of the study period was from April 2009 to March 2010. Specimens were collected from the nose and paranasal sinuses of all clinically and radiologically diagnosed cases of rhinosinuitis. All the clinical specimens were processed by standard methods for fungal culture. This included initial screening by 10% potassium hydroxide,

inoculation of the specimen onto Sabouraud dextrose agar and incubation at 25 degrees C and 37 degrees C, followed by slide culture and other special techniques wherever necessary. Histopathological examination was also performed for the specimens.

RESULTS: A total of 60 specimens were received for fungal culture from cases of rhinosinusitis during the period, out of which 45 showed no growth. There were nine cases of *Aspergillus flavus*, 1 each of *Aspergillus fumigatus* and *Penicillium* species. The rest four specimens grew rare fungal isolates, i.e. *Acremonium* sp., *Scedosporium apiospermum*, *Cladosporium cladosporioides* and *Lasiodiplodia theobromae*. Histopathological findings were also positive for these four cases.

CONCLUSION: Apart from the common causes, unusual fungal pathogens were isolated from cases of rhinosinusitis during the study period, which is in accordance with similar reports from other parts of India and some other countries.

NAT PMID: 24064646 CO

Goel, A.;B. Ramakrishna;J. Muliylil;K. Madhu;K. G. Sajith;U. Zachariah;J. Ramachandran;S. N. Keshava;R. Selvakumar;G. M. Chandy;E. Elias and C. E. Eapen

Use of serum vitamin B12 level as a marker to differentiate idiopathic noncirrhotic intrahepatic portal hypertension from cryptogenic cirrhosis.

Dig Dis Sci. 2013, 58(1): 179-187.

Hepatology Department, Christian Medical College, Vellore, Tamil Nadu, 632004, India. drashishgoel@cmcvellore.ac.in

BACKGROUND AND AIMS: Idiopathic non-cirrhotic intrahepatic portal hypertension (NCIPH) is often misdiagnosed as cryptogenic cirrhosis. Serum vitamin B12 levels can be raised in cirrhosis, probably because of excess release or reduced clearance. Because NCIPH is characterised by long periods of preserved liver function, we examined whether serum B12 level could be used as a marker to differentiate NCIPH from cryptogenic cirrhosis.

METHODS: We analysed serum B12 levels in 45 NCIPH and 43 cryptogenic cirrhosis patients from January 2009 to September 2011.

RESULTS: Serum B12 levels were significantly lower in NCIPH patients than in cryptogenic cirrhosis patients ($p < 0.001$) and were useful in differentiating

the two disorders (area under ROC: 0.84; 95% C.I: 0.76-0.93). Low serum B12 level (≤ 250 pg/ml) was noted in 25/72 (35%) healthy controls, 14/42 (33%) NCIPH patients, and 1/38 (3 %) cryptogenic cirrhosis patients. In patients with intrahepatic portal hypertension of unknown cause, serum B12 level ≤ 250 pg/ml was useful for diagnosing NCIPH (positive predictive value: 93 %, positive likelihood ratio 12.7), and serum B12 level $> 1,000$ pg/ml was useful in ruling out NCIPH (negative predictive value: 86 %, negative likelihood ratio: 6.67). Low serum B12 levels (≤ 250 pg/ml) correlated with diagnosis of NCIPH after adjusting for possible confounders (O.R: 13.6; 95% C.I:1.5-126.2). Among patients in Child's class A, serum B12 level was ≤ 250 pg/ml in 14/35 NCIPH patients compared with 1/21 cryptogenic cirrhosis patients (O.R: 13.3; 95% C.I: 1.6-111).

CONCLUSION: Serum vitamin B12 level seems to be a useful non-invasive marker for differentiation of NCIPH from cryptogenic cirrhosis.

INTL PMID: 22918688 CO

Gouse, M.;K. M. Jacob and P. M. Poonnoose
Traumatic floating clavicle: a case report and literature review.

Case Rep Orthop. 2013: 386089.

Department of Orthopaedics, Christian Medical College, Vellore 632004, India.

Bipolar fracture dislocations of the clavicle are rare injuries, usually the result of high-energy direct trauma. Since the original description by Porral in 1831, only a handful of individual case reports and case series by Beckman and Sanders have been reported in the literature. Management of these injuries has remained controversial ranging from nonoperative to aggressive surgery. We report on the case of a young army cadet who had a fracture of the lateral end of the clavicle, with an anterior dislocation of the sternoclavicular joint. Despite being planned for surgery, at the patients request, it was decided to manage the lesion conservatively with graded physiotherapy. At one-year follow-up, he had full pain-free, functional range of movement of the shoulder. This young high demand patient had a good outcome with conservative management, despite going against the current trend towards surgical treatment. We present this case with a review of the literature,

highlighting the various management options for this rare lesion.

INTL PMID: 24381774 PMCID: 3867956 CO
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Gupta, A. and B. Ramakrishna

Hepatic angiomyolipoma: a case report with diagnostic challenge.

Indian J Pathol Microbiol. 2013, 56(3): 279-281.

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

Angiomyolipomas are rare benign tumors derived from perivascular epithelioid cells that occur frequently in kidney and rarely in the liver. We present a case of hepatic angiomyolipoma, with various clinical and radiological differential diagnoses. A 34-year-old male was found to have a palpable mass on the left side of the abdomen. Imaging showed heterogeneously enhancing mass lesion 15 cm x 7 cm, in the left lobe and segment 4 of the liver. Various benign and malignant diagnoses were entertained. The needle biopsy did not reveal any evidence of malignancy. Patient underwent resection of the lesion in view of the large size, which was diagnosed as angiomyolipoma. Angiomyolipoma is a benign tumor and accurate diagnosis is important to prevent overtreatment. Histology and immunohistochemistry may help in clinching the diagnosis, in proper clinical setting.

NAT PMID: 24152510 CO
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Gupta, V.;S. M. Zachariah and N. Thomas

"Illuminating" - early diagnosis of intestinal perforation in a neonate.

Indian Pediatr. 2013, 50(9): 897.

Department of Neonatology, Christian Medical College, Vellore 632004, India. niranjan@cmcvellore.ac.in.

NAT PMID: 24096854 WOS:000324650700026 CO
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Hooda, A. and B. Kunwar

Takayasu arteritis presenting as multiple arch vessel aneurysms.

Heart Asia. 2013, 5(1): 84.

Heart Asia 2013;0:84. doi:10.1136/heartasia-2013-010272

Department of Cardiology, Christian Medical College and Hospital, Vellore, Tamil Nadu 632004, India

INTL CO
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Jain, P.;A. Mohamed;E. Sigamani;V. Suri;A. K. Mahapatra;A. Kumar and S. Gulati

Bilateral Thalamic Lesions in a Child.

European Neurology. 2013, 70(1-2): 33-34.

Department of Pediatrics, All India Institute of Medical Sciences, New Delhi 110 029, India

Department of Pathology, Neurosciences Centre, India

Department of Neurosurgery, Neurosciences Centre, India

Department of Radio-Diagnosis, JPN Apex Trauma Centre, All India Institute of Medical Sciences, New Delhi, India

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

INTL CO
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Jamkhandi, D. M.;P. Gaikwad;D. Singh and K. George

Melanosis peritonei in pregnancy: a case report and review of literature.

Gynecological Surgery. 2013: 1-2.

Department of Community Health and Development, Christian Medical College, Vellore, 632002, India

Department of General Surgery Unit-1, Christian Medical College, Vellore, 632004, India

INTL CO
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John, A. M.;K. K. Behera;T. Mathai;H. Parmar and T. V. Paul

Mazabraud syndrome.

Indian J Endocrinol Metab. 2013, 17(4): 740-742.

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

A 25 year old lady presented with pain and swelling of left thigh. On examination she was found to have tenderness of left femur with a separate soft tissue swelling within the thigh muscle. Further evaluation revealed expansile bony lesion on X-ray of left tibia and multiple hot spots on bone scan suggestive of

fibrous dysplasia. The soft tissue swelling on excision and histopathological examination was found to be intramuscular myxoma. The combination of the above two, called Mazabraud syndrome is being reported.

NAT **PMID: 23961498** . **PMCID: 3743382** . **CO**

Kamath, V.;P. Sarda;M. P. Chacko and U. Sitaram
Pseudothrombocytopenia observed with ethylene diamine tetra acetate and citrate anticoagulants, resolved using 37°C incubation and Kanamycin.
Indian Journal of Pathology and Microbiology. 2013, 56(3): 306-308.

Departments of Pathology, Christian Medical College, Vellore, Tamil Nadu, India

Department of Transfusion Medicine and Immunohaematology, Christian Medical College and Hospital, Vellore - 632 004, Tamil Nadu, India

Pseudothrombocytopenia (PTP) is defined by falsely low platelet counts on automated analyzers caused by in vitro phenomena including large platelet aggregates in blood samples. Diagnosis and resolution of PTP is crucial as it can lead to unwarranted interventions. We discuss a case of PTP in a pre-surgical setting, which was resolved using 37°C incubation and Kanamycin.

NAT **CO**

Kamath, V.;P. Sarda;M. P. Chacko and U. Sitaram
Pseudothrombocytopenia observed with ethylene diamine tetra acetate and citrate anticoagulants, resolved using 37 degrees C incubation and Kanamycin.
Indian J Pathol Microbiol. 2013, 56(3): 306-308.

Department of Transfusion Medicine and Immunohaematology, Christian Medical College, Vellore, Tamil Nadu, India.

Pseudothrombocytopenia (PTP) is defined by falsely low platelet counts on automated analyzers caused by in vitro phenomena including large platelet aggregates in blood samples. Diagnosis and resolution of PTP is crucial as it can lead to unwarranted interventions. We discuss a case of PTP in a pre-surgical setting, which was resolved using 37 degrees C incubation and Kanamycin.

NAT **PMID: 24152519** . **CO**

Kisku, S. and R. J. Thomas

An uncommon twist: isolated fallopian tube torsion in an adolescent.

Case Rep Surg. 2013, 2013: 509424.

Department of Paediatric Surgery, Christian Medical College, Vellore, Tamil Nadu 632004, India.

We report a 13-year-old girl with bilateral paratubal cysts and left isolated fallopian tube torsion (IFTT). Paratubal cysts are uncommon in children, and IFTT is a rare complication. Awareness of this entity and prompt surgical intervention could potentially salvage the fallopian tube preserving fertility.

INTL **PMID: 24024061** . **PMCID: 3760127** . **CO**

Kolethekkat, A. A.;R. R. Paul;M. Kurien;S. Kumar;R. Al Abri and K. Thomas

Diagnosis of adult chronic rhinosinusitis: Can nasal endoscopy predict intrasinus disease?

Oman Med J. 2013 Nov;28(6):427-31. doi: 10.5001/omj.2013.120.

ENT Division, Department of Surgery, Sultan Qaboos University Hospital, PO Box 38, P C 123, Al Khoudh, Oman

Oman Medical Specialty Board, Al Khoud, Oman

Department of ENT, Speech and Hearing, Christian Medical College, Vellore, Tamil Nadu, India

Department of Radio diagnoses, Christian Medical College, Vellore, Tamil Nadu, India

Objectives: To define the role of endoscopic evaluation of middle meatus in adult patients clinically diagnosed to have chronic rhinosinusitis and its ability to predict intra-sinus mucosal involvement as compared to CT scan.

Methods: This prospective analytical study was conducted on consecutive patients with diagnosis of chronic rhino-sinusitis who were symptomatic and fulfilled the American Academy of Otolaryngology - Head and Neck Surgery Task Force criteria. The patients were enrolled prospectively and were subjected to rigid diagnostic nasal endoscopy and classified as defined by the revised Sinus Allergy Health Partnership Task Force criteria. The patients then underwent non contrast CT sinuses on the same day. Results were analyzed as a diagnostic test evaluation using CT as a gold standard.

Results: Among the 75 study patients with symptom based chronic rhino-sinusitis, nasal endoscopy was abnormal in 65 patients (87%). Of these patients, 60/

65 (92%) showed positive findings on CT scan. Ten patients had normal endoscopy, of these 6/10 (60%) had abnormal CT scan. Sensitivity and specificity of diagnostic nasal endoscopy against CT scan were 91% (95% CI: 81-97) and 44% (95% CI: 14-79), respectively. The likelihood ratio for positive nasal endoscopy to diagnose chronic rhino-sinusitis was 1.6 and the likelihood ratio to rule out chronic rhino-sinusitis when endoscopy was negative was 0.2.

Conclusion: Nasal endoscopy is a valid and objective diagnostic tool in the work up of patients with symptomatic chronic rhinosinusitis. When clinical suspicion is low (<50%) and endoscopy is negative, the probability of rhino-sinusitis is very low (<17%) and there is no need to perform a CT scan to reconfirm this finding routinely. Endoscopy alone is able to diagnose chronic rhinosinusitis in >90% of patients when clinical suspicion is high (88%) as defined in this study by AAO-HNS Task Force criteria. Negative endoscopy, however, does not totally exclude the sinus disease in patients fulfilling task force criteria. CT scan may be needed on follow-up if there is clinical suspicion in 10% of these patients who are negative on endoscopy if symptoms persists. It is thus possible to reduce the number of CT scans if patients are carefully selected based on clinical criteria and endoscopy is done initially as part of their evaluation. © OMSB, 2013.

INTL PMID:24223247 PMCID: PMC3815865 CO

Korula, S.;A. Ekbote;N. Kumar;S. Danda;I. Agarwal and S. Chaturvedi

Renal manifestations of Tuberous Sclerosis: a descriptive analysis.

Pediatric Nephrology. 2013, 28(8): 1400-1401.

[Korula, Sophy; Ekbote, Alka; Kumar, Naresh; Danda, Sumita; Agarwal, Indira; Chaturvedi, Swasti] Christian Med Coll & Hosp, Vellore, Tamil Nadu, India.

INTL WOS:000321387201156 CO

Kundavaram, A. P.;A. J. Jonathan;S. D. Nathaniel and G. M. Varghese

Eschar in scrub typhus: a valuable clue to the diagnosis. *J Postgrad Med.* 2013, 59(3): 177-178.

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

BACKGROUND: Scrub typhus is an acute febrile illness widely prevalent in the 'tsutsugamushi triangle' region of the world. Clinical features include fever, myalgia, headache, rash, and a pathognomonic eschar. An eschar is formed by the bite of chigger mite that inoculates the causative agent of Scrub typhus *Orientia tsutsugamushi*. The aim of this study is to determine the most common sites of eschars over the bodies of patients with Scrub typhus.

MATERIALS AND METHODS: In a retrospective analysis, we examined a total of 418 patients who presented to Christian Medical College, Vellore between 2009 and 2012 with an acute febrile illness and an eschar on clinical examination and confirmed to have scrub typhus with a positive Scrub typhus IgM ELISA test. We studied the distribution of eschars over the bodies of 418 patients with Scrub typhus.

RESULTS: There was a significant difference in the distribution of eschars between males and females with a preponderance of the chest and abdomen (42.3%) among females and the axilla, groin and genitalia (55.8%) in males. Some unusual sites of an eschar were the cheek, ear lobe and dorsum of the feet.

CONCLUSION: The eschar is the most useful diagnostic clue in patients with acute febrile illness in areas endemic for Scrub typhus and therefore should be thoroughly examined for its presence especially over the covered areas such as the groin, genitalia, infra-mammary area and axilla.

NAT PMID: 24029193 CO

Kundavaram, P. P.;S. Majumdar and S. Das

Intra-aural Route of Insecticide Poisoning.

Toxicol Int. 2013, 20(2): 192-193.

Department of Medicine 4, Christian Medical College, Vellore, Tamil Nadu, India.

Organophosphate (OP) compounds are commonly ingested with the intention of deliberate self-harm. Parenteral route of OP compound exposure is an uncommon yet significant source of toxicity. Deliberate injections via intravenous, intramuscular, and

subcutaneous routes and accidental dermal absorption due to occupational exposure have been described earlier. We report an unusual case of intentional insecticide poisoning by pouring the OP compound into both ears. This was successfully treated with aural irrigation using normal saline and prompt administration of the antidote.

INTL PMID: 24082515 PMCID: 3783688 **CO**

Loganathan, G. and P. Singh

Gastric malignant melanoma.

Indian J Gastroenterol. 2013 Aug 4. [Epub ahead of print]

G L Hospital, Kalaimagal Street, Swarnapuri, Salem, 636 004, India

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

NAT PMID:23912632 **CO**

Mahajan, R. and E. G. Simon

Urinary Retention as a Cause of Hyponatremia in an Elderly Man.

Indian Journal of Clinical Biochemistry. 2013: 1-2.

Department of Gastrointestinal Sciences, Christian Medical College, Vellore, 632004, India

Hyponatremia is a common disorder in elderly and can result in changes in cognition, seizures, coma or even respiratory arrest if not recognised and treated. Syndrome of inappropriate anti diuretic hormone secretion (SIADH) is the most common cause of hyponatremia in elderly hospitalised patients and in most cases the etiology cannot be determined on routine investigations. We present a 76 year old male with symptomatic hyponatremia who had chronic urinary retention due to a urethral stricture. His sodium levels improved with catheterisation and worsened again after the catheter was removed. This supports the hypothesis that urinary retention and bladder distension can stimulate ADH release from the posterior pituitary, producing a picture similar to SIADH. © 2013 Association of Clinical Biochemists of India.

NAT **CO**

Manipadam, M. T.;S. K. Bhagat;G. Gopalakrishnan;N. S. Kekre;N. K. Chacko and S. Prasanna

Warty carcinoma of the penis: A clinicopathological study from South India.

Indian J Urol. 2013, 29(4): 282-287.

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

AIMS: There are few studies on the pathology of warty carcinoma (WC) of the penis and these have been from South America. Penile cancers are not uncommon in India. We reviewed the frequency of subtypes of penile squamous carcinoma (SC) and the pathological features and outcome of WC when compared to squamous carcinoma-not otherwise specified (SC-NOS). We also compared the clinicopathological features of WC in our series with those published earlier.

MATERIALS AND METHODS: We studied 103 cases of penile cancers over 6 years. Cases were classified into different subtypes according to established histologic criteria. Clinicopathologic features were studied in detail and compared among the different subtypes, especially between WC and SC-NOS. The patients were followed-up and disease free survival in months was noted.

RESULTS: SC-NOS constituted 75.7% of all penile cancer cases in our series. The frequency of other subtypes was WC: 9.7%, verrucous: 3.9%, basaloid type and papillary type: 0.97% each, and mixed types 8.7%. The average tumor size and depth of invasion did not differ significantly between the two subtypes. Frequency of lymphovascular emboli and percentage of lymph node metastasis in WC (30 and 10%) were lesser than in SC-NOS (49.37 and 26.58%), respectively. There were no recurrences after partial penectomy in the WC subtype. In the SC-NOS type, three cases had recurrence after partial/total penectomy.

CONCLUSION: Warty carcinoma constitutes nearly 10% of all penile squamous cell cancers. These patients seem to have a less aggressive behavior than SC-NOS.

NAT PMID: 24235788 PMCID: 3822342 **CO**

Mathuram, A. J.; P. Mohanraj and M. S. Mathews
Rhino-orbital-cerebral infection by Syncephalastrum racemosum.

Journal of Association of Physicians of India. 2013, 61(5): 339-340.

Department of Medicine, Christian Medical College, Vellore, India

Department of Microbiology, Christian Medical College, Vellore, India

Invasive rhino-sinusitis infection has been known to be caused by zygomycetes commonly belonging to the genera Rhizopus, Mucor and Rhizomucor. We report a middle aged diabetic gentleman who had invasive rhino-orbitalcerebral infection with Syncephalastrum racemosum. This genera belonging to zygomycetes group of fungi which usually causes skin and soft tissue infection but invasive infection with this fungus is rarely known. © JAPI.

NAT **CO**

Mathuram, A.; R. V. Rijn and G. M. Varghese
Salmonella typhi rib osteomyelitis with abscess mimicking a 'cold abscess'.

J Glob Infect Dis. 2013, 5(2): 80-81.

Department of Medicine and Infectious Diseases, Christian Medical College, Vellore, Tamil Nadu, India.

Salmonella enterica serovar typhi (Salmonella typhi) causing typhoid fever is common in many parts of the world particularly in developing countries. Extra-intestinal manifestations such as osteomyelitis are rare in immunocompetent individuals. We report a case of Salmonella typhi osteomyelitis of a rib with overlying abscess mimicking a 'cold abscess', treatment outcomes and discuss relevant literature.

INTL **PMID: 23853436** **PMCID: 3703215** **CO**

Mayilvaganan, S.; P. Ramakant; D. T. Abraham and M. J. Paul
Carotid artery encasement by Thyroid Carcinoma.

World Journal of Endocrine Surgery. 2013, 5(1): 31-32.

Department of Endocrine Surgery, Christian Medical College, Vellore, Tamil Nadu, India

NAT **CO**

Moorthy, R. K. and V. Rajshekhar

Comment on: Large pontine tubercular abscess treated surgically.

Br J Neurosurg. 2013 Oct;27(5):707. doi: 10.3109/02688697.2013.815328. Epub 2013 Jul 12.

Department of Neurological Sciences, Christian Medical College, Vellore, India

INTL **PMID:23848830** **CO**

Nair, M. K. C.; D. S. Chacko; M. R. Darwin; K. Padma; B. George and P. S. Russell

Menstrual Disorders in Adolescents: Few Observations Reply.

Indian Journal of Pediatrics. 2013, 80(2): 178-178.

[Nair, M. K. C.; Chacko, D. S.; Darwin, M. Renjit; Padma, K.; George, B.] Coll Med, Child Dev Ctr, Thiruvananthapuram 695011, Kerala, India. [Russell, P. S.] Christian Med Coll & Hosp, Dept Psychiat, Child & Adolescent Psychiat Unit, Vellore, Tamil Nadu, India.

Nair, MKC (reprint author), Coll Med, Child Dev Ctr, Thiruvananthapuram 695011, Kerala, India. cdcmkc@gmail.com

NAT **WOS:000316336800025** **CO**

Pandya, N. R.; M. J. Paul; L. Choudhry; B. R. Gnanamuthu; K. Krishnan; J. Franklyn and J. P. Kalita

Disseminated echinococcosis of the lung and central compartment of the neck.

World Journal of Endocrine Surgery. 2013, 5(1): 25-27.

Department of Thoracic Surgery, Christian Medical College and Hospital, Vellore, Tamil Nadu, India

Department of Endocrine Surgery, Christian Medical College and Hospital, Vellore, Tamil Nadu, India

Department of General Surgery, Christian Medical College and Hospital, Vellore, Tamil Nadu, India

Echinococcosis is a ubiquitous zoonosis. The causal organism is a flat tapeworm whose larval form causes infestations in human beings, who are its accidental hosts. It is known to occur in all parts of the body with the highest incidence in the liver, followed by the lung. Hydatid cysts in the neck are rare by themselves. We report a case of hydatidosis of the lung and central compartment of the neck, in a man who presented with pulmonary symptoms only. Computerized tomogram of the chest had revealed a hydatid cyst in the left lung and another incidental hydatid cyst in the neck. He underwent successful excision of both the cysts in one sitting.

NAT **CO**

Parihar, M.;B. Koshy and V. M. Srivastava
Mosaic double aneuploidy: Down syndrome and XYY.
Indian J Hum Genet. 2013, 19(3): 346-348.
Cytogenetics Unit, Christian Medical College, Vellore,
Tamil Nadu, India.

Chromosomal abnormalities are seen in nearly 1% of live born infants. We report a 5-year-old boy with the clinical features of Down syndrome, which is the most common human aneuploidy. Cytogenetic analysis showed a mosaicism for a double aneuploidy, Down syndrome and XYY. The karyotype was 47, XY,+21[19]/48, XYY,+21[6]. ish XYY (DXZ1 x 1, DYZ1 x 2). Mosaic double aneuploidies are very rare and features of only one of the aneuploidies may predominate in childhood. Cytogenetic analysis is recommended even if the typical features of a recognized aneuploidy are present so that any associated abnormality may be detected. This will enable early intervention to provide the adequate supportive care and management.

NAT . . . PMID: 24339550 . PMCID: 3841562 . CO

Parimal, S.;R. Pai;M. T. Manipadam and S. Nair
Lennert's lymphoma: clinicopathological profile of five cases.
Indian J Pathol Microbiol. 2013, 56(3): 248-251.
Department of General Pathology, Christian Medical College, Vellore, Tamil Nadu, India.

BACKGROUND AND AIM: Lennert's lymphoma is a rare variant of peripheral T-cell lymphoma (PTCL) not otherwise specified (NOS) rich in epithelioid histiocytes. This study aims to analyze the clinical, morphologic, and immunophenotypic profile of cases of Lennert's lymphoma from our country and determines the utility of T-cell receptor (TCR) gene rearrangement in the diagnosis.

MATERIALS AND METHODS: All cases diagnosed as Lennert's lymphoma during the period of January 2001 to August 2011 were included in this study. Hematoxylin and eosin (H and E) stained slides and immunohistochemistry results were analyzed and TCR gene rearrangement was performed.

RESULTS: There were five cases of Lennert's lymphoma diagnosed in our institution during this period, which included two males and three females. All cases showed effacement of lymph node architecture by diffuse infiltration of small lymphoid T cells [CD3+, CD4+, CD8+, T-cell intracellular antigen 1 (TIA-1+), Granzyme B-] and clusters of epithelioid

histiocytes throughout the lymph node and scattered large transformed cells (CD20-, CD30+, CD15-/+) . TCR rearrangement was done in three cases by polymerase chain reaction (PCR) and showed the presence of a clonal T-cell population.

CONCLUSIONS: Lennert's lymphoma constituted 0.11% of all non-Hodgkin lymphomas (NHLs) in our institution. Differentiation from classical Hodgkin's lymphoma is sometimes difficult by morphology and immunohistochemistry alone and TCR gene rearrangement was extremely useful in diagnosis.

NAT . . . PMID: 24152502 CO

Patnaik, S.;M. Mohapatra;D. K. Satpathy;S. Das and A. K. Mohanty
Anterior sacral meningocele with spinal epidural abscess: A case report with review of literature.
Journal of Pediatric Neurology. 2013, 11(2): 141-145.
Department of Pediatric Intensive Care, Christian Medical College, Vellore, Tamilnadu, India

Department of Radiology, Kalinga Institute of Medical Sciences, Bhubaneswar, India

Department of Neurosurgery, Kalinga Hospital Limited, Bhubaneswar, India

Department of Pediatrics, Kalinga Institute of Medical Sciences, Bhubaneswar, India

An 8-month-old boy presented with high fever with seizures and weakness of legs. Cerebrospinal fluid analysis revealed acute pyogenic meningitis and magnetic resonance imaging revealed anterior sacral meningocele with epidural abscess. He was managed by surgery through posterior approach along with antibiotics. Clinical presentation, differential diagnosis, diagnostic modalities and management of this rare clinical condition is briefly discussed in this article. © 2013 - IOS Press and the authors. All rights reserved.

INTL CO

Peter, J. V.; L. Thomas; P. Graham; J. Moran; K. P. Abhilash; S. Jasmine and R. Iyyadurai

PERFORMANCE OF CLINICAL SCORING SYSTEMS IN ACUTE ORGANOPHOSPHATE POISONING.

Internal Medicine Journal. 2013, 43: 49-49.

[Peter, John Victor; Thomas, Lovely; Abhilash, K. P.; Jasmine, Sudha; Iyyadurai, Ramya] Christian Med Coll & Hosp, Med Intens Care Unit, Vellore, Tamil Nadu, India. [Graham, Petra] Macquarie Univ, Dept Stat, Sydney, NSW 2109, Australia.

INTL WOS:000318911400143 CO

Peter, J. V.; L. Thomas; P. L. Graham; J. L. Moran; K. P. Abhilash; S. Jasmine and R. Iyyadurai

Performance of clinical scoring systems in acute organophosphate poisoning.

Clin Toxicol (Phila). 2013, 51(9): 850-854.

Medical Intensive Care Unit, Christian Medical College and Hospital, Vellore, TN, India.

INTRODUCTION: Clinical scoring systems are used to predict mortality rate in hospitalized patients. Their utility in organophosphate (OP) poisoning has not been well studied.

METHODS: In this retrospective study of 396 patients, we evaluated the performance of the Acute Physiology and Chronic Health Evaluation (APACHE) II score, the Simplified Acute Physiology Score (SAPS) II, Mortality Prediction Model (MPM) II, and the Poisoning Severity Score (PSS). Demographic, laboratory, and survival data were recorded. Receiver operating characteristic (ROC) curves were generated, and the area under the curve (AUC) was calculated to study the relationship between individual scores and mortality rate.

RESULTS: The mean (standard deviation) age of the patients was 31.4 (12.7) years, and at admission, their pseudocholinesterase (median, interquartile) level was 317 (222-635) U/L. Mechanical ventilation was required in 65.7% of the patients and the overall mortality rate was 13.1%. The mean (95% confidence interval) scores were as follows: APACHE-II score, 16.4 (15.5-17.3); SAPS-II, 34.4 (32.5-36.2); MPM-II score, 28.6 (25.7-31.5); and PSS, 2.4 (2.3-2.5). Overall, the AUC for mortality was significantly higher for APACHE-II (0.77) and SAPS-II (0.77) than the PSS (0.67). When patients were categorized, the AUCs were better for WHO Class II (0.71-0.82) than that for Class I compounds (0.60-0.66). For individual compounds, the AUC for APACHE-II was highest in quinalphos (0.93, n = 46) and chlorpyrifos

(0.86, n = 38) and lowest in monocrotophos (0.60, n = 63). AUCs for SAPS-II and MPM-II were marginally but not significantly lower than those for APACHE-II. The PSS was generally a poorer discriminator compared to the other scoring systems across all categories.

CONCLUSIONS: In acute OP poisoning, the generic scoring systems APACHE-II and SAPS-II outperform the PSS. These tools may be used to predict the mortality rate in OP poisoning.

INTL PMID: 24066733 CO

Peter, J.; G. Joseph; S. David and D. Danda

Regression of takayasu retinopathy after revascularization of occluded branches of the aortic arch by percutaneous angioplasty.

Retinal Cases and Brief Reports. 2013, 7(3): 262-266.

Department of Ophthalmology, Schell Eye Hospital, Christian Medical College, Arni Road, Vellore 632 001, India

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

Department of Rheumatology and Immunology, Christian Medical College Hospital, Vellore, India

Purpose: To present a patient with decreased vision because of Takayasu retinopathy who had improvement in vision and regression of retinopathy after percutaneous angioplasty of occluded aortic arch vessels. Methods: Interventional case report.

Results: A 37-year-old woman with multiple cerebral infarcts and recurrent seizures was referred with painless progressive reduction in vision in the right eye of few months' duration and left eye for 2 years. Vision was 20/120 in the right eye and perception of light in the left eye. There was mild disk pallor in the right eye, optic atrophy in the left eye, and microaneurysms in both eyes. Angiographic findings were consistent with type I Takayasu arteritis. Angioplasty and stenting was performed initially to the right subclavian and common carotid arteries and to the left subclavian, and left internal carotid arteries 6 weeks later. There was improvement in vision to 20/80 and regression of Takayasu retinopathy in the right eye at 3 months post procedure that improved further to 20/50, 6 months post procedure. Vision, as expected, remained poor in the left eye despite revascularization.

Conclusion: Restoration of flow in the aortic arch vessels may result in reversal of ischemic retinal

changes in patients with Takayasu retinopathy.
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INTL CO

Peter, J.;S. David;G. Joseph;S. Horo;D. Danda and J. V. Peter

Rare retinal manifestations in Takayasu arteritis.

J Rheumatol. 2013, 40(8): 1404-1405.

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

INTL PMID: 23908531 CO

Philip, A.;V. Rajan Sundaresan;P. George;S. Dash;R. Thomas;A. Job and V. K. Anand

A reclusive foreign body in the airway: a case report and a literature review.

Case Rep Otolaryngol. 2013, 2013: 347325.

Department of Otorhinolaryngology, Head and Neck Surgery, Christian Medical College, Vellore, Tamil Nadu 632004, India.

A foreign body in the larynx is an airway emergency that requires urgent evaluation and treatment. Irregular foreign bodies tend to orient in a sagittal plane and may produce only partial obstruction, allowing adequate air movement, hence making them undetectable for a long period of time. We report a case of a laryngotracheal foreign body that remained reclusive for 9 years.

INTL PMID: 24312739 PMCID: 3838836 CO

Phukan, C.;T. J. Nirmal;R. M. Kumar and N. S. Kekre
Peripheral primitive neuroectodermal tumor of the adrenal gland: A rare entity.

Indian J Urol. 2013, 29(4): 357-359.

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

Peripheral primitive neuroectodermal tumor (PNET) is an uncommon tumor and the overall incidence is 1% of all sarcomas. PNET of the adrenal gland is an even rarer entity. A 37-year-old female was evaluated for an episode of loin pain. Ultrasonography showed a large heterogenous left adrenal mass with internal echogenic components. Computed tomography did not show any fat density within to suggest a myelolipoma. Biopsy suggested a poorly differentiated neoplasm with a possibility of PNET of the adrenal gland.

NAT PMID: 24235803 PMCID: 3822357 CO

Pradhan, Z. S. and P. Jacob

Infectious scleritis: Clinical spectrum and management outcomes in India.

Indian J Ophthalmol. 2013, 61(10): 590-593.

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

In this retrospective case series, we studied the predisposing factors, causative organisms, clinical spectrum, and outcomes of 12 cases of culture-proven infectious scleritis. Nine of 12 patients had a history of preceding trauma (surgical or accidental). Past surgical history included small-incision cataract surgery (4), pterygium surgery (1), and trabeculectomy (1). Six patients had multifocal scleral abscesses due to *Pseudomonas*, *Klebsiella*, or *Nocardia*. Only 2 patients retained useful vision (>6/18). A poor visual acuity at presentation usually resulted in a worse visual outcome ($P = 0.005$). Four eyes developed phthisis. The addition of surgical intervention did not result in a significantly better visual outcome than medical management alone ($P = 0.209$), but resulted in a higher globe preservation rate ($P = 0.045$). Therefore, we concluded that infection must be ruled out in cases of scleritis with preceding history of trauma, and aggressive surgical intervention improves the anatomical outcome but does not change the visual outcome.

NAT PMID: 24212312 PMCID: 3853459 CO

Praharaj, I.;S. Sujatha;M. A. Ashwini and S. C. Parija
Co-infection with *Nocardia asteroides* Complex and *Strongyloides stercoralis* in a Patient with Autoimmune Hemolytic Anemia.

Infection. 2013 Aug 8. [Epub ahead of print]

Wellcome Trust Research Laboratory, Department of Gastrointestinal Sciences, Christian Medical College, Vellore, India, ira.praharaj@gmail.com.

We describe an unusual case of pulmonary nocardiosis co-existing with *Strongyloides stercoralis* hyperinfection syndrome in a patient with autoimmune hemolytic anemia who was being treated with corticosteroids. This case highlights the importance of being aware of the possibility that infections can co-exist in immunosuppressed patients. To the best of our knowledge, this is the first report of co-infection with *Nocardia asteroides* and *S. stercoralis*.

INTL PMID: 23925638 CO

Praharaj, I.;S. Sujatha;S. C. Parija and S. Mahadevan
Unusual manifestation of Salmonella enterica serotype enteritidis infection in a case of Langerhans cell histiocytosis.

Indian J Med Microbiol. 2013, 31(4): 409-411.

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

Nontyphoidal Salmonella (NTS) are established foodborne pathogens, most commonly reported in cases of gastroenteritis. These pathogens are however, increasingly being implicated in cases of bacteraemia and other extraintestinal manifestations. We report a case of a scalp abscess due to Salmonella enterica serotype Enteritidis, which is a serotype of NTS, in a child suffering from a haematologic malignancy. The child was on steroid and anticancer chemotherapy and developed the abscess secondary to bacteraemia with Salmonella Enteritidis. The abscess was drained and resolved following a course of intravenous antibiotic treatment.

NAT PMID: 24064654CO

Ralph, R. and A. Chrispal

Klippel-trenaunay syndrome of the upper limb - A rare congenital anomaly.

Journal of Association of Physicians of India. 2013, 61(5): 337.

Department of Medicine - Unit II, Christian Medical College and Hospital, Vellore, Tamil Nadu, India

NATCO

Ramachandran, J.;A. Chandramohan;S. K. Gangadharan;L. S. Unnikrishnan;L. Priyambada and A. Simon

Visceral larva migrans presenting as multiple liver abscesses.

Trop Doct. 2013, 43(4): 154-157.

Professor and Head, Department of Hepatology, Christian Medical College Hospital, Vellore, Tamilnadu 632004, India. jeyapati@yahoo.com.

Eosinophilic necrotizing granulomas in the liver, known as visceral larva migrans (VLM), are a rare cause of liver abscesses. The term VLM refers to infections in human tissues caused by the larval stages of ascarid worms of dogs and cats. We report two cases of VLM which presented with high grade fever and abdominal pain for 3-4 months. Marked peripheral eosinophilia,

multiple confluent perivenous lesions in the right lobe of liver with characteristic migratory tracts on imaging and biopsy evidence of necrotizing eosinophilic granulomas led to the diagnosis. Complete recovery was achieved with repeated courses of a combination of anthelmintics.

INTL PMID: 24100348CO

Ramakant, P.;R. Mukha;A. J. Cherian;D. Naik;T. V. Paul;D. T. Abraham and M. J. Paul

Do giant adrenal myelolipomas behave differently? A clinicopathological comparative study.

World Journal of Endocrine Surgery. 2013, 5(1): 12-15.

Department of Endocrine Surgery, Christian Medical College, Vellore, Tamil Nadu, India

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

Department of Endocrinology, Christian Medical College, Vellore, Tamil Nadu, India

Adrenal myelolipomas (AM) may present with abdominal distension, pain, rupture, hemorrhage or other complications. Indications for surgery are still debatable. It is possible that larger size may be a risk factor for symptoms or complications in AM. To compare the clinical and pathological characteristics between giant AM (>10 cm) and AM <10 cm. Retrospective data analysis was done on 26 of 32 patients with myelolipoma who underwent surgery between January, 2005 and July, 2012. Patients were divided in two groups: Group 1 (n = 14) with giant AM > 10 cm and group 2 (n = 12) AM < 10 cm. Results were analyzed using independent sample t-test (SPSS v.17). Twenty-six myelolipomas managed surgically were identified from 338 adrenal tumors. None were functioning on biochemical evaluation. Comparing group 1 vs 2, the differences noted were: Commonest age group at presentation was 4th decade vs 5th decade, clinical presentation with abdominal pain was 11 vs 7 (p = 0.05), surgical approach was open in 11 vs 6, and laparoscopic in 3 vs 6 (p = 0.03), mean tumor size was 15.57 vs 6.67 cm, mean tumor weight 794 vs 93 gm, internal hemorrhage on histopathology in 14 vs 10 (p = 0.05). Giant AM have a significantly higher rate of symptomatic presentation, pathological features of hemorrhage and necrosis and requirement for open surgery as compared to myelolipomas <10 cm in our series.

NATCO

Ramakrishna, B. S. and S. V. Kumar
Stem Cell Signaling Pathways in Colorectal Cancer.
Current Colorectal Cancer Reports. 2013: 1-9.

Center for Stem Cell Research, Christian Medical College,
 Vellore, 632002, India

Department of Gastroenterology, SRM Institutes for
 Medical Science, Vadapalani, Chennai, 600026, India

Sporadic colorectal cancer (CRC) is most often caused by cancer stem cells that form only a small part of the cell population of tumors at clinical presentation, but are responsible for their biological attributes including invasion, metastasis, radioresistance and chemoresistance. Like stem cells in adult tissue, cancer stem cells show evidence of symmetric division to maintain their population and also divide asymmetrically to generate more-differentiated cells. We review here the different signaling mechanisms associated with cancer stem cells in CRC. Wnt, Notch, and Hedgehog signaling are very important for maintenance and proliferation of the cancer stem cell population in CRC. In addition, signaling related to dietary components and body metabolism and signals from the gut microbiome, transduced via appropriate receptors and signaling pathways, contribute to generation and maintenance of cancer stem cells. The critical function of the tumor microenvironment, including stromal and endothelial cells, in enabling cancer stem cells to induce CRC is also briefly reviewed. © 2013 Springer Science+Business Media New York.

INTL **CO**

Rathore, S.;A. Pramanick;A. Regi and J. Lionel
Aplastic Anemia in Pregnancy.
Journal of Obstetrics and Gynecology of India. 2013: 1-3.
DOI: 10.1007/s13224-013-0431-1

Department of Obstetrics and Gynecology Unit III,
 Christian Medical College, Vellore, 632004, India

NAT **CO**

Ravindran, V.;G. R. Rempel and L. Ogilvie
Embracing survival: A grounded theory study of
parenting children who have sustained burns.
Burns. 2013 Jun;39(4):589-98. doi: 10.1016/
j.burns.2012.12.016. Epub 2013 Feb 1.

[Ravindran, Vinitha] Univ Alberta, Edmonton, AB, Canada. [Ravindran, Vinitha] Christian Med Coll & Hosp, Coll Nursing, Vellore, Tamil Nadu, India. [Rempel, Gwen R.] Univ Alberta, Alberta Heritage Fdn Hlth Res, Fac Nursing, Edmonton, AB, Canada. [Ogilvie, Linda] Univ Alberta, Prairie Metropolis Ctr, Fac Nursing, Edmonton, AB, Canada.

Ravindran, V (reprint author), Christian Med Coll & Hosp, Coll Nursing, Vellore, Tamil Nadu, India.

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 linda.ogilvie@ualberta.ca

The positive effect of supportive family environment on burn-injured child's long term outcome is well established. How parents provide this support as they recover with their children is not addressed especially in low and middle income countries where the burn burden is high. It is assumed that parents are non-compliant in bringing their children for follow up. Using grounded theory methodology this study aimed to explore and discover the process of parenting children in India with burn injury. Semi-structured interviews with 22 family members of 12 burn-injured children and field notes yielded rich data. The analysis by open and focused coding and constant comparisons of participants' accounts revealed a parenting process of embracing survival. For parents embracing survival involved (1) suffering the trauma along with their burn-injured child, (2) sustaining the survival of their child, and (3) shielding the child from stigma related to scarring and disfigurement. Parents perceived minimal support from health professionals and family members. Mothers and fathers formed a team and did their best for their burn-injured children. Assessing and meeting the needs of the parents and empowering parents to provide effective long term care are vital components of burn care. The health professionals' perceptive on parenting burn-injured children need to be explored. (c) 2013 Elsevier Ltd and ISBI. All rights reserved.

INTL PMID:23375535 WOS:000320210000008 CO

Rupa, V.;I. Agarwal and V. Rajshekhar
Congenital Perilymph Fistula Causing Recurrent Meningitis: Lessons Learnt from a Single-Institution Case Series.

Otolaryngol Head Neck Surg. 2013 Dec 13. [Epub ahead of print]

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

ObjectiveTo study the steps involved in definitive evaluation and successful management of patients with congenital perilymph fistula presenting with recurrent meningitis.**Study Design**Case series with chart review.**Setting**Tertiary care center.**Subjects and Methods**The case records of 11 patients (12 ears) treated for congenital perilymph fistula presenting with recurrent meningitis were reviewed to ascertain their clinical, radiological, and intraoperative features and outcome following surgery.**Results**Most patients presented after at least 3 episodes of meningitis (range, 2-10 episodes). Ipsilateral hearing loss was present in 9 of 12 ears, with normal hearing in 3 patients. High-resolution computed tomography and/or magnetic resonance imaging scanning of the temporal bone contributed to the diagnosis in 75% of cases but was normal in 3 cases (25%). Oval window and round window defects were the most common (66.7% and 63.6%, respectively). Four ears (33.3%) had more than 1 defect. The unusual presentations included 2 patients who presented in adulthood, a patient with a defect in the medial wall of the attic, and 3 patients with normal radiological findings. Follow-up ranged from 1 to 11 years (median, 2 years). There were 2 failures following simple fistula closure with cessation of symptoms after vestibular obliteration. No patient was readmitted with recurrent meningitis after definitive surgery.**Conclusion**Up to 25% of patients with recurrent meningitis secondary to congenital perilymph fistula may have normal audiological and radiological assessment necessitating exploratory tympanotomy. Vestibular obliteration, rather than simple fistula closure, prevents recurrence.

INTL PMID: 24334961 **CO**

Sabharwal, S.;N. T. John;R. M. Kumar and N. S. Kekre
Primary renal angiosarcoma.

Indian J Urol. 2013, 29(2): 145-147.

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

Primary angiosarcoma of the kidney is a rare tumor with only a few case reports in the literature. Management is not standardized and the prognosis is poor. However, clinicians need to be aware of this uncommon entity.

NAT PMID: 23956520 PMCID: 3737674 **CO**

Sagar, A.;S. Sabharwal and N. S. Kekre

Bilateral vesical inguinal hernia: A perineal 'Mickey mouse'.

Indian J Urol. 2013, 29(2): 154-155.

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

Bladder being a content of inguinal hernias is a rare event and it being the sole component is extremely uncommon. Usually, elderly obese males are affected and symptomatology depends on the extent of bladder involvement. However, recognition of this entity is important in the treatment of LUTS as well as to avoid inadvertent bladder injury during hernia repair.

NAT PMID: 23956523 PMCID: 3737677 **CO**

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

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

Br J Neurosurg. 2013 Sep 25. [Epub ahead of print]

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

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

INTL PMID: 24066683 **CO**

Sathishkumar, D.;R. George;A. Irodi and M. Thomas
PHACES syndrome with moyamoya vasculopathy - a case report.

Dermatol Online J. 2013, 19(8): 19271.

Christian Medical College.

“PHACES” (OMIM 606519) is a neurocutaneous disorder, and facial hemangiomas are the hallmark of this syndrome. The syndrome encompasses posterior fossa brain malformations, facial hemangiomas, arterial anomalies, aortic coarctation, cardiac anomalies, eye abnormalities, and sternal defects.

INTL PMID: 24021449 CO

Sekharappa, V.;J. Arockiaraj;R. Amritanand;V. Krishnan;K. S. David and S. G. David

Gorham’s Disease of Spine.

Asian Spine J. 2013, 7(3): 242-247.

Spinal Disorder Surgery Unit, Department of Orthopaedics, Christian Medical College, Vellore, India.

Gorham’s disease is a rare disorder characterized by clinical and radiological disappearance of bone by proliferation of non-neoplastic vascular tissue. The disease was first reported by Jackson in 1838 in a boneless arm. The disease was then described in detail in 1955 by Gorham and Stout. Since then, about 200 cases have been reported in the literature, with only about 28 cases involving the spine. We report 2 cases of Gorham’s disease involving the spine and review related literature to gain more understanding about this rare disease.

INTL PMID: 24066223 PMCID: 3779779 CO

Sen, I.;E. Stephen;K. Malepathi;S. Agarwal;N. K. Shyamkumar and S. Mammen

Neurological complications in carotid body tumors: a 6-year single-center experience.

J Vasc Surg. 2013, 57(2 Suppl): 645-68S.

Department of Vascular Surgery, Christian Medical College, Vellore, India. vascular@cmcvellore.ac.in

OBJECTIVE: Carotid body tumors are considered rare. However, there has been an increase in the number of these tumors managed at our center in recent years. Delayed presentation with large tumors is common. We studied the clinical profile, interventions, and outcomes of these tumors and assessed the factors influencing operative neurological morbidity and recurrence.

METHODS: This retrospective study was conducted at the Christian Medical College in Vellore, a tertiary care center in south India. We analyzed the inpatient and outpatient records of patients diagnosed to have carotid body tumors undergoing excision from January 1, 2005 to December 31, 2011. Patients diagnosed to have vagal paragangliomas were excluded.

RESULTS: Thirty-four of 48 tumors were excised from 32 patients (11 female, 21 male). Average age at presentation was 38.2 years, and three patients had familial bilateral tumors. All patients presented with a painless neck mass. There were 27 Shamblin group III, six Shamblin group II, and one Shamblin group I tumor. Eleven Shamblin group II/III tumors were associated with transient cranial nerve palsy or paresis (32.3%). Two Shamblin group III tumors were associated with perioperative stroke (5.8%). Preoperative embolization was done in 17 tumors, 12 of which were associated with neurological complications (two stroke, nine nerve palsy, one hemianopia). One patient underwent thrombolysis for a middle cerebral artery thrombus and recovered completely on follow-up, and another with a capsuloganglionic infarct managed conservatively had minimal persistent disability. Three patients had persistent nerve palsy (8.8%). Although complications were more common in patients with higher Shamblin group tumors, the difference was not statistically significant.

CONCLUSIONS: The overall rate of neurological complications is higher with tumors of higher Shamblin groups. Preoperative embolization was not effective in reducing neurological complications. The rates of postoperative stroke and permanent cranial nerve palsy after resection of large tumors are acceptable.

INTL PMID: 23336858 CO

Sen, I.;E. Stephen;S. Agarwal;S. Chugh and N. Walter
Inflammatory carotid pseudotumor: case report and review of the literature.

Vascular. 2013 Mar 19. [Epub ahead of print]

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

Inflammatory carotid pseudotumor is a rare differential of a unilateral neck swelling in the carotid triangle. A 48-year-old man presented with a firm non-tender gradually progressive left neck swelling for five months. Computed tomography angiogram revealed

a mass encasing the common carotid. Patient underwent excision; histopathology was reported as inflammatory pseudotumor. Patient had a recurrence after eight months. Steroids were prescribed with which the swelling resolved, patient remained recurrence free at two-year follow-up.

INTL PMID: 23512900 **CO**

Sen, I.;I. Samarasam;S. Chandran and G. Mathew
Gastric intramural and portal venous gas following blunt abdominal injury.

Arch Trauma Res. 2013, 2(2): 95-96.

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

INTRODUCTION: Gastric emphysema or pneumatosis is a rare finding. Early endoscopy and urgent laparotomy is advised in post-trauma patients.

CASE PRESENTATION: A 29 year old man presented with blunt abdominal injury following a high-speed motorbike crash He complained of abdominal pain and abdomen was distended. CT abdomen revealed air in the gastric wall with disruption of gastric mucosa. He had normal white cell counts, bleeding parameters and blood gases. He was treated conservatively with nasogastric decompression, intravenous analgesics and antibiotics with which he recovered well.

CONCLUSIONS: Early surgical management is indicated in post-trauma patients in whom bowel infarction is suspected. In a stable patient, a negative laparotomy is a major additional stress post trauma - conservative management with close clinical observation is a suitable management alternative.

INTL PMID: 24396802 **PMCID: 3876551** **CO**

Senapati, J.;A. J. Devasia;S. Sudhakar and A. Viswabandya
Asymptomatic gastrosplenic fistula in a patient with marginal zonal lymphoma transformed to diffuse large B cell lymphoma-a case report and review of literature.

Ann Hematol. 2013 Dec 21. [Epub ahead of print]

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

INTL PMID: 24362455 **CO**

Senthilkumaran, S.;S. S. David;R. G. Menezes and P. Thirumalaikolundusubramanian

Acute myocardial infarction triggered by bee sting: An alternative view.

Emerg Med Australas. 2013 Dec;25(6):615. doi: 10.1111/1742-6723.12140. Epub 2013 Oct 11.

Department of Emergency and Critical Care Medicine, Sri Gokulam Hospital and Research Institute, Salem, India

Accident and Emergency Medicine, Christian Medical College and Hospital, Vellore, India

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Internal Medicine, Chennai Medical College and Research Center, Trichy, India

INTL PMID:24125090 **CO**

Senthilkumaran, S.;S. S. David;R. Manikam and P. Thirumalaikolundusubramanian

Atropine resistant bradycardia and hyperkalemia: Our experiences.

Am J Emerg Med. 2013 Sep;31(9):1415. doi: 10.1016/j.ajem.2013.06.020. Epub 2013 Jul 29.

Department of Emergency and Critical Care Medicine, Sri Gokulam Hospitals and Research Institute, Salem-636004, Tamil Nadu, India

Department of Emergency Medicine, Christian Medical College and Hospital, Vellore, India

Department of Emergency Medicine, University Malaya, Kuala Lumpur, Malaysia

Department of Internal Medicine, Chennai Medical College and Research Center, Irungalur, Trichy, India

INTL PMID:23906623 **CO**

Shah, K.;R. Sreekanth;B. Thomas and S. Danda

Tel Hashomer camptodactyly syndrome: a case report.

West Indian Med J. 2013, 62(1): 81-83.

Department of Clinical Genetics, Christian Medical College, Vellore, India. kratishah@yahoo.co.in

Tel Hashomer camptodactyly syndrome (THCS) is a rare autosomal recessive camptodactyly with muscular involvement. The manifestations of THCS other than camptodactyly are clubbed feet, thenar and hypothenar hypoplasia, abnormal palmar creases and dermatoglyphic ridges, spina bifida and mitral valve prolapse. The syndrome was first described by Goodman et al in 1972 and thereafter two further cases with similar phenotype were seen. Herein, we present

another case report and review of the literature of other syndromes associated with camptodactyly and mitral valve prolapse. Further cases with this syndrome need to be reported for mapping of the candidate loci. This will help in planning management and genetic counselling.

INTL PMID: 24171333CO

Sheela, C. S.;P. Ramakant;G. Shah;V. Chandramohan;D. Abraham and M. J. Paul

Primary squamous cell carcinoma of breast presenting as a cystic mass.

J Postgrad Med. 2013, 59(2): 155-156.

Department of Endocrine and Breast Surgery, Christian Medical College, Vellore, Tamil Nadu, India.

NAT PMID: 23793323CO

Simon, E. G.;A. Chacko;A. K. Dutta;A. J. Joseph and B. George

Acute nonvariceal upper gastrointestinal bleeding—experience of a tertiary care center in southern India.

Indian J Gastroenterol. 2013, 32(4): 236-241.

Clinical Gastroenterology and Hepatology, Christian Medical College, Vellore 632 004, India.

BACKGROUND AND AIM: Over the last few decades, epidemiologic studies from the West have shown changing trends in etiology and clinical outcomes in patients with nonvariceal upper gastrointestinal bleed (NVUGIB). There are limited data from India on the current status of NVUGIB. The aim of this study therefore was to assess the etiological profile and outcomes of patients with NVUGIB at our center.

METHODS: We prospectively studied all patients (>/=15 years) who presented with NVUGIB over a period of 1 year. The clinical and laboratory data, details of endoscopy, and course in hospital were systematically recorded. Outcome measures assessed were rebleeding rate, surgery, and mortality.

RESULTS: Two hundred and fourteen patients (age, >/=15 years) presented to us with NVUGIB during the study period. The mean age was 49.9 +/- 16.8 years and 73.8 % were males. Peptic ulcer was the commonest cause (32.2 %) of NVUGIB. About one third of patients required endoscopic therapy. Rebleeding occurred in 8.9 % patients, surgery was required in 3.7 %, and mortality rate was 5.1 %. Rebleeding and mortality were significantly higher among inpatients

developing acute NVUGIB compared to those presenting directly to the emergency room.

CONCLUSIONS: Peptic ulcer was the most common cause of NVUGIB. Outcomes (rebleed, surgery, and mortality) at our center appear similar to those currently being reported from the West.

NAT PMID: 23526425CO

Singh, A.;P. Chatterjee;M. C. Pai and R. T. Chacko

Multicystic peritoneal mesothelioma: not always a benign disease.

Singapore Med J. 2013, 54(4): e76-78.

Department of Medical Oncology, Christian Medical College, Vellore 632004, Tamil Nadu, India.

Mesothelioma is a slow-growing insidious lesion of neoplastic aetiology arising from the pleural, peritoneal or pericardial mesothelium. It shows a predilection for the surfaces of the pelvic viscera and has a high rate of recurrence after excision. Cystic mesotheliomas are not associated with asbestos exposure. We report a case of cystic mesothelioma of the peritoneum encasing the ovary, which presented as a cystic adnexal mass. As highlighted in this case and other recent reports, a cystic mesothelioma should not be referred to as a benign cystic mesothelioma, as it has potential for locoregional invasion, as well as distant nodal and serosal metastases. This tumour should be treated with aggressive cytoreductive surgery and appropriate chemotherapy. We review the differential diagnosis of this rare entity and suggest guidelines for its differentiation.

INTL PMID: 23624458CO

Singh, R. K.;B. Thangakunam;B. Isaac and D. J. Christopher
Cannonball shadow in the lungs and pulmonary embolism in a young man.

BMJ Case Rep. 2013 Jul 12;2013. pii: bcr2012007541. doi: 10.1136/bcr-2012-007541.

Department of Pulmonary Medicine, Christian Medical College, Vellore, Tamil Nadu, India.
drranjitsingh@yahoo.com

INTL PMID: 23853007CO

Singh, R. K.;B. Thangakunam;B. T. Isaac and A. Gupta
Disseminated solitary fibrous tumour of the lung and pleura.

BMJ Case Rep. 2013 Sep 18;2013. pii: bcr2013009362. doi: 10.1136/bcr-2013-009362.

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

Solitary fibrous tumours (SFTs) are a heterogeneous group of rare spindle-cell tumours. Classically they presented as a solitary pleural-based mass. Pulmonary parenchymal SFT is rare and multiple bilateral lesions are extremely rare. We present the clinical, imaging and histological features of SFT which are presented as multiple nodular lesions of the lung and pleura with probable distant metastasis.

INTL PMID: 24049085CO

Singh, R. K.;D. J. Christopher;T. J. Isaac;V. Jeyaraj and T. Balamugesh

Endobronchial rhinosporidiosis.

J Bronchology Interv Pulmonol. 2013, 20(2): 164-166.

Department of Pulmonary Medicine, Christian Medical College, Vellore, Tamilnadu, India.
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Rhinosporidiosis is a chronic granulomatous disease caused by *Rhinosporidium seeberi*. We report a rare case of rhinosporidiosis, with involvement of the skin, nasal cavity, larynx, oropharynx, and the bronchial tree. The patient underwent bronchoscopic electrocautery excision of the endobronchial lesion with good symptomatic improvement.

INTL PMID: 23609254CO

Sinha, R.;I. Agarwal;W. M. Bawazir and L. J. Bruce
Distal renal tubular acidosis with hereditary spherocytosis.

Indian Pediatr. 2013, 50(7): 693-695.

Pediatric Nephrology Division, Department of Pediatrics, Christian Medical College, Vellore, India.
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Hereditary spherocytosis (HS) and distal renal tubular acidosis (dRTA), although distinct entities, share the same protein i.e. the anion exchanger1 (AE1) protein. Despite this, their coexistence has been rarely reported. We hereby describe the largest family to date with coexistence of dRTA and HS and discuss the molecular basis for the co-inheritance of these conditions.

NAT PMID: 23942433CO

Sinha, R.;I. Salphale and I. Agarwal

A case of Liddle Syndrome.

Indian J Pediatr. 2013, 80(10): 878-880.

Pediatric Nephrology Division, Department of Pediatrics Unit II, Christian Medical College, Vellore, 632 004, South India.

Pediatric hypertension is usually secondary to an underlying identifiable cause, most often renal. Hypertension with low Plasma Renin Activity (PRA), although rare, is important as it is often familial and is associated with single gene disorders (monogenic). It hence carries greater genetic implications for the family. The authors' hereby report a case of low PRA hypertension which was diagnosed as Liddle Syndrome, an autosomal dominant form of hereditary hypertension. Early detection and appropriate treatment may help to improve the long term morbidity and mortality in children with this condition.

NAT PMID: 23307437CO

Sonbare, D. J.

Pulsion Diverticulum of the Oesophagus: More than just an Out Pouch.

Indian Journal of Surgery. 2013: 1-5.

Christian Medical College and Hospital, 4/2, New PG Quarters, Vellore, 632004, India

Oesophageal diverticulum is divided into two types based on the aetiology: the pulsion and the traction diverticula. Pulsion diverticulum occurs due to increased intraluminal pressure. This can be of three types based on the location along the oesophagus: the Zenker's diverticulum (ZD), the mid-oesophageal diverticulum (MD) and the epiphrenic diverticulum (ED). A PubMed search was conducted for the words 'pulsion', 'diverticulum' and 'oesophagus' for all studies published from January 1980 to March 2013 in the English language. A total of 31 studies were identified, and out of which, five were not included in the review. The pulsion diverticulum of the oesophagus is an uncommon disorder. Its aetiology is related to the motility disorders of the oesophagus. Patients usually present with chest-related symptoms or oesophageal symptoms, which are related to the underlying motility disorder. Evaluation includes barium studies, gastrointestinal endoscopy, CT scan and oesophageal manometry. Surgery is the treatment of choice for symptomatic and large diverticula, although the outcome in asymptomatic patients is unknown. The surgical options include

diverticulectomy or diverticulopexy with an adequate myotomy. Most patients with ZD are now treated by using endoscopic techniques, although no randomised trial has shown its superiority over the open technique. Minimally invasive surgery has also been used for patients with MD and ED. Although isolated case series has shown good improvement in symptoms and reduction in mortality with minimally invasive techniques in patients with ED, its role in thoracic oesophageal diverticulum is debated. © 2013 Association of Surgeons of India.

NAT **CO**

Sreekar, H.;S. Dawre;K. S. Petkar;R. B. Shetty;S. Lamba;S. Naik and A. K. Gupta

Diverse manifestations and management options in Klippel-Trenaunay syndrome: a single centre 10-year experience.

J Plast Surg Hand Surg. 2013, 47(4): 303-307.

Plastic and Reconstructive Surgery, Christian Medical College Vellore, India. drsreekarh@yahoo.com

Klippel-Trenaunay syndrome is a well-known conglomeration of capillary malformations, bony or soft tissue hypertrophy, and abnormal deep or superficial veins. Although it generally presents with grossly enlarged limbs, it can present with more serious features like haematuria, haematochezia, and seizures. This retrospective study included patients admitted with the diagnosis of Klippel-Trenaunay syndrome in this institute from 2001-2010. The patients' demographic data, clinical features, associated findings, and treatments given were tabulated. A total of 19 patients were included in the study. Two patients presented with haematochezia and had to undergo bowel resection. Five presented with bleeding and ulceration. Debulking surgery was done in three of them. Patients also presented with abdominal distension, jaundice, seizures, and haematuria. Although the common presentation of varicose veins was treated with sclerotherapy, the treatment was tailored to each patient. Klippel-Trenaunay syndrome is a multifaceted disorder which can manifest in a number of different ways. These features may be missed by an unwary plastic surgeon treating them only for the limb hypertrophy.

INTL PMID: 23710784 **CO**

Sudeep, K.;J. Abraham;L. Seshadri and M. S. Seshadri
Aromatase deficiency: An unusual cause for primary amenorrhea with virilization.

Journal of Association of Physicians of India. 2013, 61(5): 340-342.

Department of Endocrinology, Christian Medical College, Vellore-632 004, India

Department of Obstetrics and Gynecology, Christian Medical College, Vellore-632 004, India

The most common cause for menstrual abnormality and virilization in children and adolescents would be congenital adrenal hyperplasia. An elevated 17(OH) progesterone is invariably seen in this condition. Aromatase deficiency can also lead to a similar presentation but differs in several aspects. The age of onset of the clinical manifestations, the phenotype, biochemical abnormalities and karyotype help us to arrive at a definitive diagnosis. However sometimes the history is atypical, biochemical abnormalities may overlap between the different conditions and prior treatment may modify the clinical features. We report here a young adult with a late presentation of aromatase deficiency to highlight the differences between the two conditions. A 27 year old lady presented to us with history of primary amenorrhea and masculine voice. She lacked feminine secondary sexual characters, had eunuchoid body habitus and prominent clitoromegaly. Consanguinity in the parents, a neonatal sibling death and elevated basal 17(OH) progesterone in the patient suggested a possibility of congenital adrenal hyperplasia. But the eunuchoid body habitus raised FSH and lack of response to dexamethasone led to a diagnosis of aromatase deficiency. Variability in the degree of aromatase deficiency is known such that maternal virilization may not occur in pregnancy. Aromatase deficiency should be suspected when a patient presents with primary amenorrhea, absence of female secondary sexual characters, virilization and tall stature with eunuchoid body proportions, and biochemical features of ovarian failure. In our country one should be aware that late presentation and prior treatment may modify disease expression and contribute to the diagnostic challenge. © JAPI.

NAT **CO**

Sun, H. Y.;P. Munoz;J. Torre-Cisneros;J. M. Aguado;R. Lattes;M. Montejo;A. Garcia-Reyne;E. Bouza;M. Valerio;R. Lara;G. T. John;D. Bruno and N. Singh
Mycobacterium tuberculosis - Associated immune reconstitution syndrome in solid-organ transplant recipients.

Transplantation. 2013, 95(9): 1173-1181.

Department of Internal Medicine, National Taiwan University Hospital, College of Medicine, 7 Chung-Shan South Rd, Taipei 100, Taiwan

Clinical Microbiology and Infectious Diseases, Hospital General Universitario GregorioMarano N, Universidad Complutense, Madrid, Spain

Instituto Maimo Nides de Investigacion Biomedica de Co Rdoba, Hospital Universitario Reina Sofia, Universidad de Cordoba, Cordoba, Spain

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Department of Transplantation, Infectious Disease Section, Instituto de Nefrologia, Cabello, Buenos Aires, Argentina

Hospital Universitario Cruces, Bilbao, Spain

Christian Medical College Hospital, Vellore, India

Department of Internal Medicine, Hospital Universitario Fundacion Favaloro, Buenos Aires, Argentina

VA Pittsburgh Healthcare System, University of Pittsburgh, Pittsburgh, PA, United States

BACKGROUND: Incidence, characteristics, and risk factors for tuberculosis (TB)-associated immune reconstitution inflammatory syndrome (IRS) in solid-organ transplant (SOT) recipients are not known.

METHODS: Patients are composed of 64 consecutive SOT recipients with TB followed for 12 months. IRS was defined based on previously proposed criteria.

RESULTS: IRS developed in 14% (9/64) of the patients, a median of 47 days after the use of anti-TB therapy. Liver versus other types of organ transplant recipients (adjusted odds ratio [OR], 6.11; 95% confidence interval [CI], 1.08-34.86), prior cytomegalovirus infection (adjusted OR, 5.65; 95% CI, 0.93-34.47), and rifampin use (adjusted OR, 4.56; 95% CI, 0.74-27) were associated with a higher risk of IRS. The presence of more than one factor (liver transplantation, cytomegalovirus infection, and rifampin use) when compared with none of these factors conferred a 19-fold increase in the risk of IRS ($P=0.01$). Mortality at 1 year after diagnosis was 33.3% in patients with IRS and 17.2% in those without IRS ($P=0.31$).

CONCLUSIONS: IRS was documented in 14% of the SOT recipients with TB. We determined clinically identifiable factors that may be useful in assessing the risk of tuberculosis-associated posttransplantation IRS. Copyright © 2013 Lippincott Williams & Wilkins.

INTL **CO**

Thomas, K.;L. Mukkai Kesavan;B. Veeraraghavan;S. Jasmine;J. Jude;M. Shubankar;P. Kulkarni and M. Steinhoff
Invasive pneumococcal disease associated with high case fatality in India.

J Clin Epidemiol. 2013, 66(1): 36-43.

Department of Medicine, Christian Medical College, Vellore 632004, India. kurien123@gmail.com

OBJECTIVE: To study the seroepidemiology and antimicrobial resistance pattern of invasive pneumococcal disease (IPD) in older subjects who are admitted to hospitals in India.

STUDY DESIGN AND SETTING: Prospective surveillance of IPD in patients older than 18 years in seven large academic teaching hospitals in India from 1993 to 2008. All subjects who had Streptococcus pneumoniae isolated from normally sterile body fluids or were antigen positive in cerebrospinal fluid, ascitic fluid, and pleural fluid were identified as IPD cases in the study. Serotype/group (STG) and minimum inhibitory concentration for penicillin, chloramphenicol, co-trimoxazole (trimethoprim-sulfamethoxazole), erythromycin, and cefotaxime were determined.

RESULTS: A total of 1,037 adult subjects with suspected invasive bacterial infection were recruited in the study. S pneumoniae was identified from normally sterile body fluids in 449 (43.3%) subjects. Meningitis (34.3%) and pneumonia (33.9%) were the most common clinical conditions associated with IPD. The case fatality was 25-30% across all age groups. Penicillin resistance was low at 2.7% overall. Resistance to co-trimoxazole was noted to be high and increasing in the study period from 42.9% in 1993 to 85.2% in 2008 ($P = 0.001$). The most common STG was serotype 1, which accounted for 22.9% of all isolates. The 23-valent pneumococcal polysaccharide vaccine covered 83.3% of the STGs (49/54; 95% confidence interval: 79.7, 96.9) for patients older than 60 years.

CONCLUSION: IPD continues to be a problem in India and is associated with high case fatality in spite of treatment in the hospital setting. Penicillin resistance

is currently low in India. More than 80% of invasive STGs causing disease in the elderly in India are included in the formulation of polysaccharide pneumococcal vaccine.

INTL PMID: 23177893CO

Thomas, M.;J. Ponnaiya;M. Emmanuel and J. Richard
Type I reaction in leprosy—a histopathological analysis.
Indian J Lepr. 2013, 85(1): 1-4.

Department of Dermatology, Scheffelin Institute of Health Research and Leprosy Center, Karigiri, Vellore, Tamil Nadu, India. mary_thomas121@yahoo.com

Even though type 1 lepra reaction (TIR) is a commonly encountered clinical problem, its histology has not yet been clearly delineated. This study attempts to enumerate the most sensitive parameters for the histological diagnosis of TIR. Case records between March 2007 and September 2007 of patients with TIR were reviewed and the biopsies were evaluated by a pathologist blinded to the previous diagnoses. Twenty three patients were included in the study. The most sensitive parameters in our study were dermal edema, intra-granuloma edema and giant cell size. Though clinical findings should remain the mainstay of diagnosis of TIR, the above mentioned parameters should be evaluated in biopsies of leprosy to look for signs of reaction which might otherwise be missed.

NAT PMID: 24046908CO

Thomas, M.;J. Pratibha;M. Emmanuel and A. N. Neivito
Recurrent ulcers: a diagnostic challenge.
Indian J Dermatol. 2013, 58(4): 329.

Department of Dermatology, Schieffelin Institute of Health Research and Leprosy Centre, Karigiri, Vellore, Tamil Nadu, India. E-mail: mary_thomas121@yahoo.com.

NAT PMID: 23919035 PMCID: 3726912CO

Tikka, S. K.;N. Goyal;D. L. Tikka;V. K. Sinha;K. J. Mathew and S. Rai

Folie à deux mixed dissociative disorder - A case report.
Asian Journal of Psychiatry. 2013, 6(6): 629-630.

Department of Psychiatry, Central Institute of Psychiatry, Kanke, Ranchi 834006, Jharkhand, India

Department of Clinical Psychology, Central Institute of Psychiatry, Kanke, Ranchi 834006, Jharkhand, India

Department of Prosthetic and Orthotic Service, Christian Medical College, Vellore 632004, Tamil Nadu, India

Department of Psychiatry, Christian Medical College, Vellore 632004, Tamil Nadu, India

INTLCO

Turel, M. K. and V. Rajshekhar

Sphenoid sinus tuberculosis: A rare cause of visual dysfunction in an adolescent girl.

Neurology India. 2013, 61(2): 179-U226.

[Turel, Mazda K.; Rajshekhar, Vedantam] Christian Med Coll & Hosp, Dept Neurol Sci, Vellore 632004, Tamil Nadu, India.

Turel, MK (reprint author), Christian Med Coll & Hosp, Dept Neurol Sci, Vellore 632004, Tamil Nadu, India. rajshekhar@cmcvellore.ac.in

NAT WOS:000323517300021CO

Turel, M. K. and V. Rajshekhar

Primary spinal extra-osseous intradural mesenchymal chondrosarcoma in a young boy.

J Pediatr Neurosci. 2013, 8(2): 111-112.

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

Primary spinal intradural mesenchymal chondrosarcoma is rare. We report the case of a 6-year-old boy to emphasize on the importance of considering this entity as differential diagnosis even when the lesion is purely intradural with no bony involvement.

INTL PMID: 24082926 PMCID: 3783715CO

Turel, M. K.;G. Chacko and A. G. Chacko

Interhemispheric neurenteric cyst.

Neurol India. 2013, 61(5): 563-565.

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

NAT PMID: 24262482CO

Varghese, G. M.;A. Mathew;S. Kumar;O. C. Abraham;P. Trowbridge and E. Mathai

Differential diagnosis of scrub typhus meningitis from bacterial meningitis using clinical and laboratory features. *Neurol India*. 2013, 61(1): 17-20.

Department of Medicine and Infectious Diseases, Christian Medical College, Vellore, Tamil Nadu, India.

Background: Central nervous system (CNS) involvement in the form of meningitis or meningoencephalitis is common in scrub typhus. As specific laboratory methods remain inadequate or inaccessible in developing countries, prompt diagnosis is often difficult. Aim: To identify the clinical and laboratory parameters that may help in differentiating scrub typhus meningitis from bacterial meningitis.

Setting and Design: This is a cross-sectional analysis of adult patients admitted with scrub typhus and bacterial meningitis to a tertiary care teaching institute in South India.

Materials and Methods: A comparison of clinical and laboratory features of 25 patients admitted with meningitis to a university teaching hospital during a 15-month period was made. These patients had meningitis diagnosed based on abnormal cerebrospinal fluid (CSF) analysis with either positive IgM scrub typhus ELISA serology (n =16) or with CSF culture isolating bacteria known to cause bacterial meningitis (n =9). The clinical and laboratory features of the patients with scrub typhus meningitis and bacterial meningitis were compared.

Results: The mean age was similar in the scrub typhus and bacterial meningitis groups (44.0 +/- 18.5 years vs. 46.3 +/- 23.0 years). Features at admission predictive of a diagnosis of scrub typhus meningitis were duration of fever at presentation >5 days (8.4 +/- 3.5 days vs. 3.3 +/- 4.2 days, P < 0.001), CSF white cell count of a lesser magnitude (83.2 +/- 83.0 cells/cumm vs. 690.2 +/- 753.8 cells/cumm, P < 0.001), CSF lymphocyte proportion >50% (83.9 +/- 12.5% vs. 24.8 +/- 17.5% P < 0.001), and alanine aminotransferase (ALT) elevation more than 60 IU (112.5 +/- 80.6 IU vs. 35 +/- 21.4 IU, P =0.02).

Conclusion: This study suggests that clinical features, including the duration of fever and laboratory parameters such as CSF pleocytosis, CSF lymphocyte proportion >50%, and ALT values are helpful in differentiating scrub typhus from bacterial meningitis.

NAT PMID: 23466834 CO

Varghese, M. J.;T. Hussain;P. V. George;P. K. Pati and J. V. Jose

The Shadow Within: A Colossal Left Atrium. *Echocardiography*. 2013 Dec 5. doi: 10.1111/echo.12459. [Epub ahead of print]

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

INTL PMID: 24303813 CO

Varghese, S. S.;B. Sasidharan;S. Kandasamy;M. T. Manipadam and S. Backianathan

Alveolar Soft Part Sarcoma-A Histological Surprise in a Male Patient who was Suspected to have Breast Cancer. *J Clin Diagn Res*. 2013, 7(4): 749-751.

Assistant Professor, Department of Radiation Oncology, Unit 1, CMC , Vellore, Tamil nadu, India .

Alveolar Soft Part Sarcoma (ASPS) is a very rare type of soft tissue sarcoma. Its cell of origin is unclear. It usually presents in the second to fourth decade of life. The most common reported sites of ASPS are the lower extremities, the head and the neck. Because of the rarity of this disease, there is no standard treatment plan. Surgical excision with negative margins is considered as the treatment of choice. We are reporting a rare presentation of ASPS as a male breast lump.

INTL PMID: 23730668 PMCID: 3644466 CO

Varkki, S.;M. Tergestina;V. S. Bhonsle;P. D. Moses;J. Mathai and S. Korula

Isolated pulmonary Langerhans Cell Histiocytosis. *Indian J Pediatr*. 2013, 80(8): 700-703.

Department of Pediatrics, Unit 3, Christian Medical College, Vellore, Tamil Nadu 632004, India.

Isolated pulmonary involvement in Langerhans Cell Histiocytosis (LCH) is rare in childhood. The authors report a 6-y- old boy presenting with recurrent pneumothorax, whose CT thorax showed diffuse pulmonary cystic lucencies bilaterally. Biopsy of the lesions confirmed pulmonary LCH with Cd1a and S 100 positivity.

NAT PMID: 23001923 CO

Vij, M.;S. Jaiswal;V. Agrawal;A. Jaiswal and S. Behari
Nerve sheath myxoma (neurothekeoma) of cerebellopontine angle: case report of a rare tumor with brief review of literature.

Turk Neurosurg. 2013, 23(1): 113-116.

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Nerve sheath myxoma (neurothekeoma) are rare benign nerve sheath tumors, usually arising in the skin of the head and neck region and upper extremities in young females. To the best of author's knowledge only two cases of intracranial neurothekeoma have been published in the English literature. These tumors were located in the parasellar area and in middle cranial fossa. This is the first case report of cerebellopontine angle neurothekeoma and third case report of intracranial neurothekeoma. This patient, a 45-year-old female, presented to us with complaints of right side progressive hearing loss for 12 months and swaying during walking for 8 months. Histologically the tumor had lobular appearance with spindle or stellate cells embedded in abundant myxoid background. The tumor cells were diffusely positive for S100. The patient was symptom free at eight month follow up.

INTL PMID: 23344878CO

Yacob, M.;M. R. Jesudason and S. Nayak

Spontaneous liver rupture: A report of two cases.

J Emerg Trauma Shock. 2013, 6(1): 50-52.

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

Spontaneous bleeding due to a non traumatic liver rupture is a rare occurrence. However, it is associated with high morbidity and mortality. Usually the predisposing factors are like Hemolysis, elevated liver enzymes, and low platelet count (HELLP) syndrome in pregnant women and other liver diseases. It is generally diagnosed by imaging studies such as ultra sonogram or computerized tomogram (CT). Due to its rarity no standard treatment has been described. Here, we report two cases of spontaneous rupture of normal liver in two young males. They presented with severe shock and hemoperitoneum. The diagnosis was confirmed by CT. They were managed surgically. In case of hemoperitoneum, spontaneous liver rupture should be considered. An early aggressive resuscitation and appropriate intervention gives better outcome.

INTL PMID: 23493246 PMCID: 3589860CO

Yacob, M.;R. S. Raju;F. L. Vyas;P. Joseph and V. Sitaram
Management of colorectal cancer liver metastasis in a patient with immune thrombocytopaenia.

Ann R Coll Surg Engl. 2013, 95(2): e50-51.

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Immune thrombocytopaenia (ITP) was referred to previously as idiopathic thrombocytopaenic purpura and is usually of autoimmune or viral aetiology. Colorectal cancer liver metastasis with concomitant ITP is rare and only three cases have been reported in the English literature. Adverse effects of adjuvant chemotherapy may aggravate ITP. The sequencing of chemotherapy, operation for the primary and liver metastasis, and a decision on splenectomy is important. We present our experience in the management of a 52-year-old man who, having undergone anterior resection one year earlier for carcinoma of the rectum, presented with liver metastasis and ITP. He underwent splenectomy with hepatectomy prior to chemotherapy.

INTL PMID: 23484984CO

Alex, R.;M. Francis;H. R. Prashanth and A. Kundavaram
Occupational history: A neglected component of history taking.

Indian J Occup Environ Med. 2013, 17(1): 29-30.

Department of Medicine 4, Christian Medical College, Vellore, Tamil Nadu, India.

NAT PMID: 24082646 PMCID: 3777287 EPH

Alkindi, S. S.; S. AlZadjali; S. Daar; E. Sindhuvi; Y. Wali; A. V. Pathare; S. Venugopal; C. Lapoumeroulie; A. Srivastava and R. Krishnamoorthy

A stepwise alpha-thalassemia screening strategy in high-prevalence areas.

European Journal of Haematology. 2013, 91(2): 164-169.

[Alkindi, Salam S.; AlZadjali, Shoaib; Daar, Shahina; Wali, Yasser; Pathare, Anil V.] Sultan Qaboos Univ & Hosp, Muscat, Oman. [Sindhuvi, Eunice; Srivastava, Alok] Christian Med Coll & Hosp, Vellore, Tamil Nadu, India. [Venugopal, Suresh] Al Nahdha Hosp, Minist Hlth, Muscat, Oman. [Lapoumeroulie, Claudine; Krishnamoorthy, Rajagopal] INSERM, UMR S 665, F-75739 Paris 15, France. [Lapoumeroulie, Claudine; Krishnamoorthy, Rajagopal] Lab Excellence GR EX, Paris, France.

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Introduction: Coinheritance of alpha-thalassemia influences the clinical and hematological phenotypes of beta-hemoglobinopathies (beta-thalassemia and sickle cell disease) and when present together in significant frequency within a population, a spectrum of clinical forms is observed. Precise molecular characterization of alpha-thalassemia is important in understanding their disease-modifying role in beta-hemoglobinopathies and for diagnostic purposes.

Patients and methods: Because currently used approaches are labor/cost-intensive, time-consuming, error alpha-prone in certain genotype combinations and not applicable for large epidemiological screening, we developed a systematic stepwise strategy to overcome these difficulties. We successfully applied this to characterize the alpha-globin gene status in 150 Omani cord blood samples with Hb Barts and 32 patients with HbH disease.

Results: We observed a good correlation between alpha-globin genotypes and level of Hb Bart's with the Hb Bart's levels significantly higher in both deletional and non-deletional alpha-globin genotypes. The most common alpha-globin genotype in HbH cases was alpha(TSaudia)alpha(TSaudia)alpha (n=16; 50%) followed by -alpha-(3.7)/-(MED) (n=10; 31%). This approach detects also the alpha-globin gene triplication as exemplified by the study of a family where the beta-globin gene defect failed to explain the beta-thalassemia intermedia phenotype.

Conclusion: Molecular characterization of alpha-thalassemia is complex due to high sequence homology between the duplicated alpha-globin genes and to the existence of a variety of gene rearrangements (small and large deletions of various sizes) and punctual substitutions (non-deletional alleles). The novelty of our strategy resides, not in the individual technical steps per se but in the reasoned sequential order of their use taking into consideration the hematological phenotype as well.

INTL WOS:000321628200010 EPH

Ashwin, M.; P. Rakesh; R. A. Pricilla; K. Manjunath; K. Jacob and J. Prasad

Determinants of quality of life among people with epilepsy attending a secondary care rural hospital in south India.

J Neurosci Rural Pract. 2013, 4(Suppl 1): S62-66.

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

CONTEXT: Epilepsy is associated with profound physical, psychological, and social consequences. AIMS: To assess the quality of life (QOL) among people with epilepsy attending the outpatient department of a secondary care hospital and to determine the various social and demographic factors affecting it.

MATERIALS AND METHODS: The QOL of 100 people with epilepsy attending the outpatient department of a community-based secondary care hospital was assessed using the WHOQOL-BREF (WHOQOL: World Health Organization QOL) questionnaire. Univariate analysis and logistic regression was done to determine the factors associated with poor QOL.

RESULTS: The QOL scores for all the domains ranged between 15.7 and 74.55 with a mean score of 51.49 [standard deviation (SD) 12.3]. The mean scores in the physical, psychological, social, and environmental domains were 55.7, 37.92, 57.75, and 50.56, respectively. Age more than 30 years [odds ratio (OR): 4.33, 95% confidence interval (CI): 1.73-10.82], female gender (OR: 2.90, 95% CI: 1.16-7.28), and currently married (OR: 3.82, 95% CI: 1.21-12.11) were the factors significantly associated with lower QOL scores.

CONCLUSIONS: The QOL among people with epilepsy was lower in the psychological domain. Age more than 30 years, female gender, and being married were identified as the factors associated with poor QOL scores among people with seizure disorders.

INTL PMID: 24174803 PMCID: 3808065 EPH

Brocklehurst, P. and C. T. C. Grp

The CORONIS Trial: International study of caesarean section surgical techniques: a randomised fractional factorial randomised trial Brocklehurst P on behalf of The CORONIS Trial Collaborative Group(1-10).

Bjog-an International Journal of Obstetrics and Gynaecology. 2013, **120**: 3-3.

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INTL WOS:000320781600005 EPH

Charles, B.;L. Jeyaseelan;A. E. Sam;A. Kumar Pandian;M. Thenmozhi and V. Jeyaseelan

Trends in risk behaviors among female sex workers in south India: Priorities for sustaining the reversal of HIV epidemic.

AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV. 2013, **25(9)**: 1129-1137.

AIDS Prevention and Control Project, Voluntary Health Services, Chennai, India

Department of Biostatistics, Christian Medical College Hospital, Vellore, India

United States Agency for International Development, New Delhi, India

HIV epidemic in India is predominantly concentrated in subgroups of population, such as female sex workers (FSWs) and their clients, whose behavior exposes them to a higher risk of acquiring HIV infection. This paper aims to present the changing patterns of socio-demographic characteristics, behaviors, reported sexually transmitted infections (STIs), and associated factors among FSWs over 11 years. Multistage cluster sampling with probability-proportional- to-size (PPS) method was used in the surveys. A sample of 400 FSWs was studied every year. The mean age and literacy at the baseline level increased significantly over the years. House-based sex increased by 40% from 43.3% in 1997 to 83% in 2008 ($p<0.001$). Condom use at last sex with one-time

clients; consistent condom use (CCU) with one-time and regular clients indicated increasing trends. FSWs reported low levels of condom use at last sex (14.5% in 1997 to 5% in 2008; $p<0.001$) and CCU (12.6% in 2004 to 3.6% in 2008; $p<0.01$) with regular partners. FSWs who used condom with one-time clients at last sex reported significantly less STI symptoms. A two-third reduction in genital ulcers was found from 13.1% in 1997 to 4.5% in 2008 ($p<0.001$). Nonliterate and hotel-based sex workers were 1.6 (1.0-2.5; 95% CI) and 2.2(1.3-3.7; 95% CI) times more likely to have reported STI symptoms. The percentage of FSWs who underwent HIV testing increased ($p<0.001$); similarly, a 20% increase was found in FSWs who availed counseling services from 65.2% in 1997 to 85.4% in 2008 ($p<0.001$). Poor, illiterate, and marginalized were more likely to get involved in risky behaviors which suggest the need for structural interventions as part of HIV prevention strategy. © 2013 © 2013 US Government.

INTL EPH

Charles, H. S.

Validation of the routine assessment of patient progress (RAPP) in patients with psychosis in South India.

International Journal of Mental Health Nursing. 2013, **22**: 3-3.

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INTL WOS:000324999600009 EPH

Charles, L.

Life skills of patients with schizophrenia in South India. International Journal of Mental Health Nursing. 2013, **22**: 3-3.

[Charles, Lovely] Christian Med Coll & Hosp, Vellore 632004, Tamil Nadu, India.

INTL WOS:000324999600010 EPH

Charles, L.

Psychological wellbeing of caregivers of people with a diagnosis of acute mental illness in South India.

International Journal of Mental Health Nursing. 2013, **22**: 3-3.

[Charles, Lovely] Christian Med Coll & Hosp, Vellore 632004, Tamil Nadu, India.

INTL WOS:000324999600011 EPH

Chaturvedi, S.; T. S. Vijayakumar and I. Agarwal
A Study on Fibroblast Growth Factor 23 in Healthy Indian Children: An Interim Report.

Pediatric Nephrology. 2013, 28(8): 1497-1497.

[Chaturvedi, Swasti; Vijayakumar, Theophilus S.; Agarwal, Indira] Christian Med Coll & Hosp, Vellore, Tamil Nadu, India.

INTL WOS:000321387202257 EPH

Dalus, D.; A. J. Mathew and S. S. Pillai

FORMIC ACID POISONING IN A TERTIARY CARE CENTER IN SOUTH INDIA: A 2-YEAR RETROSPECTIVE ANALYSIS OF CLINICAL PROFILE AND PREDICTORS OF MORTALITY.

Journal of Emergency Medicine. 2013, 44(2): 373-380.

[Dalus, Dae; Mathew, Ashish Jacob; Pillai, Saran Somarajan] Med Coll Hosp Trivandrum, Dept Internal Med, Trivandrum, Kerala, India.

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Background: Formic acid (FA), a common industrial compound, is used in the coagulation of rubber latex in Kerala, a state in southwestern India. Easy accessibility to FA in this region makes it available to be used for deliberate self-harm. However, the literature on intentional poisoning with FA is limited.

Study Objectives: To determine the patterns of presentation of patients with intentional ingestion of FA and to find the predictors of mortality. A secondary objective was to find the prevalence and predictors of long-term sequelae related to the event.

Methods: We performed a 2-year chart review of patients with acute intentional ingestion of FA. Symptoms, signs, outcomes and complications were recorded, and patients who survived the attempt were followed-up by telephone or personal interview to identify any complications after their discharge from the hospital.

Results: A total of 302 patients with acute formic acid ingestion were identified during the study period. The mortality rate was 35.4% (n = 107). Bowel perforation (n = 39), shock (n = 73), and tracheoesophageal fistula (n = 4) were associated with 100% mortality. Quantity of FA consumed (p < 0.001), consuming undiluted FA (p < 0.001), presenting symptoms of hypotension (p < 0.001), respiratory distress (p < 0.001), severe degree of burns (p = 0.020), hematemesis (p = 0.024), complications like metabolic acidosis (p < 0.001) and

acute respiratory distress syndrome (p < 0.001) were found to have significant association with mortality. The prevalence of esophageal stricture (n = 98) was 50.2% among survivors and was the most common long-term sequela among the survivors. Stricture was significantly associated with hematemesis (p < 0.001) and melena (p < 0.001).

Conclusion: This study highlights the magnitude and ill-effects of self-harm caused by a strong corrosive, readily available due to very few restrictions in its distribution. Easy availability of FA needs to be curtailed by enforcing statutory limitations in this part of the world. Patients with hematemesis or melena after FA ingestion may be referred for early dilatation therapy in a setting where emergency endoscopic evaluation of all injured patients is not practical. (c) 2013 Elsevier Inc.

INTL WOS:000314665400056 EPH

Elisson, C.; V. Molander; V. Balaji; E. Backhaus; J. John; R. Vargheese; R. Jayaraman and R. Andersson

Invasive pneumococcal infections in Vellore, India: clinical characteristics and distribution of serotypes.

BMC Infect Dis. 2013 Nov 9;13:532. doi: 10.1186/1471-2334-13-532.

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BACKGROUND: Streptococcus pneumoniae infection is a serious problem worldwide and the case fatality rate remains high. The aim of this study was to analyze the distribution of pneumococcal serotypes causing invasive pneumococcal disease (IPD), to survey the potential coverage of present and future vaccines, and to investigate differences between serotypes and groups of serotypes with regard to manifestation, case fatality rate, age, and other risk factors.

METHODS: Isolates from 244 consecutive patients with IPD were collected at the Christian Medical College, Vellore, India between January 2007 and June 2011, and clinical data were obtained retrospectively. Clinical characteristics were analyzed both for individual

serotypes and for those grouped as “invasive”, “pediatric”, or “vaccine” serotypes.

RESULTS: The serotype coverage for the pneumococcal conjugated vaccines (PCV) PCV7, PCV10, PCV13, PCV15, and pneumococcal polysaccharide vaccine (PPV) PPV23 was 29%, 53%, 64%, 66%, and 73%, respectively. The proportion of IPD caused by vaccine types was lower than pre-vaccination studies from other parts of the world. In adults, serotype 1 was mainly isolated from previously healthy patients without risk factors for IPD. This serotype caused more pneumonia and less meningitis than other serotypes, as was also noted for the “invasive” serotypes (1, 5, and 7 F).

CONCLUSIONS: The most common pneumococcal serotypes in this study behaved in similar ways to those in countries where the PCV has been introduced. Also, the most common serotypes in this study are included in the new PCVs. Therefore, a national program of childhood immunization with PCV10/13 in India is likely to be successful.

INTL PMID: 24206667 PMCID: 3827497 EPH

Emerson, L. P.;A. Job and V. Abraham

A model for provision of ENT health care service at primary and secondary hospital level in a developing country.

Biomed Res Int. 2013, 2013: 562643.

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ENT problems are the most common reason for a visit to a doctor in both rural and urban communities. In many developing countries, there is a lack of ENT specialists and overburdened hospital facilities. To date, there is no comprehensive study that has evaluated the spectrum of ENT disorders in a rural community.

METHODS: A prospective study was done for a period of three years to profile the cases presenting to the outpatient clinic in a secondary care hospital and in the camps conducted in tribal areas in Vellore District of Tamil Nadu, India. Trained community volunteers were used to identify ENT conditions and refer patients.

RESULTS: A total of 2600 patients were evaluated and treated. Otological symptoms were the most commonly reported with allergic rhinitis being the

second most commonly reported. Presbycusis was the most common disability reported in the rural community. The other symptoms presented are largely related to hygiene and nutrition.

CONCLUSION: Using trained community workers to spread the message of safe ENT practices, rehabilitation of hearing loss through provision of hearing aids, and the evaluation and surgical management by ENT specialist helped the rural community to access the service.

INTL PMID: 24078919 PMCID: 3776560
WOS:000324407800001 EPH

Ernest, S.;G. Nagarajan and K. Jacob

Assessment of need of patients with schizophrenia: A study in Vellore, India.

Int J Soc Psychiatry. 2013, 59(8): 752-756.

1Department of Occupational Therapy, Christian Medical College, Vellore, India.

BACKGROUND: and aims: There is a dearth of studies investigating the prevalence and factors associated with unmet needs in people with schizophrenia from low- and middle-income countries. We aimed to study prevalence and risk factors for unmet need.

METHOD: A case-control study design was employed. One hundred and one (101) consecutive patients attending a psychiatric hospital were assessed using Camberwell Assessment of Need Short version (CANSAS) and Positive and Negative Syndrome Scale (PANSS). Multivariate analysis was employed to adjust for confounders.

RESULTS: The majority of patients had many unmet needs. These unmet needs were significantly associated with lower education, poverty and persistent psychopathology on multivariate analysis.

CONCLUSION: Unmet needs are associated with poverty, lower education and persistent psychopathology. There is a need to manage unmet needs, in addition to addressing psychopathology and poverty.

INTL PMID: 22965297 EPH

Gopinath, K. G.;A. Chrispal;H. Boorugu;S. Chandy;J. J. Prakash;A. M. Abraham;O. Abraham and K. Thomas
Clinico-epidemiological profile of seven adults with spotted fever from a tertiary care hospital in South India.
Trop Doct. 2013 Dec 11. [Epub ahead of print]

Associate Professor of Geriatrics, Department of Geriatrics and Internal Medicine Unit 3, Christian Medical College, Vellore, India.

Spotted fever (SF), a tick-borne rickettsial infection, is being increasingly reported from mainly northern Indian states. A lack of awareness and confirmatory laboratory tests underestimate the incidence of this infection which, in India, is predominantly seen during the rainy season. Many patients diagnosed with viral exanthematous illnesses may be suffering from SF, which is treatable if detected early. There is very little data on SF in adults in southern India. We present seven patients with SF treated between January 2007 and January 2008 in a tertiary care hospital in South India. All presented during the rainy season, with rash (100%) and generalized oedema (71%) being the most common features. There was one death due to type I respiratory failure. Renal failure, shock, aseptic meningitis and hepatitis were other significant abnormalities detected in these patients. Clinicians need to be aware of SF and suspect it in appropriate patients.

INTL PMID: 24334402 **EPH**

Jesudas, C. D. and B. Thangakunam

Tuberculosis risk in health care workers.

Indian J Chest Dis Allied Sci. 2013, 55(3): 149-154.

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Risk to health care workers (HCW) is of paramount importance in the global fight against tuberculosis (TB). There is mounting evidence that they are at increased risk of contracting TB infection as well as developing the disease. This occupational risk is at alarming proportions in the low- and middle-income countries (LMIC), because of increased exposure and lack of preventive measures. Although tuberculin skin test has been used for a long time to detect latent TB infection (LTBI), it has significant drawbacks. Interferon-gamma release assays arrived with a lot of promise, but the expected benefit of more specific diagnosis has not yet been proved. The treatment of LTBI is an area, which

is not well studied in LMIC. Effective environmental and personal protective measures along with education to the patients and the HCW needs to be carried out expeditiously, to reduce the occupational risk of TB.

NAT PMID: 24380222 **EPH**

John, T. J.

Polio elimination: India's success story.

Current Science. 2013, 105(9): 1199-1200.

Christian Medical College, Vellore 632 004, India

INTL **EPH**

Johnson, S.;M. Sathyaseelan;H. Charles;V. Jeyaseelan and K. S. Jacob

Predictors of insight in first-episode schizophrenia: A 5-year cohort study from India.

Int J Soc Psychiatry. 2013.

Department of Psychiatric Nursing College of Nursing, Christian Medical College, Vellore, India.

BACKGROUND: and aims: There is a dearth of data on the predictors of insight in schizophrenia. This study attempted to assess the predictors of insight in a cohort of first-episode schizophrenia followed up over 5 years.

METHODS: Patients diagnosed to have Diagnostic and statistical manual of mental disorders (4th ed.; DSM-IV) schizophrenia (n = 131) were assessed prospectively for insight, psychopathology and explanatory models of illness over a 5-year period using standard instruments. Multiple linear regression and generalized estimating equations (GEE) were employed to assess predictors of insight.

RESULTS: We could follow up 95 (72.5%) patients, 5 years after recruitment. A total of 65 of these patients interviewed at 60 months (68.4%) achieved remission. Cross-sectional evaluations suggest a relationship between insight, psychosis rating and explanatory models of illness with good insight and medical models associated with good outcome. However, baseline and early illness data do not predict insight scores at 5 years. Serial longitudinal assessment of insight is negatively associated with Brief Psychiatric Rating Scale (BPRS) scores and positively associated with the number of nonmedical explanatory models of illness held by patients.

CONCLUSION: These findings argue that insight and explanatory models of illness are secondary to psychopathology, course and outcome. They are

dependent on the trajectory of the person's illness, are not independent of the condition and call for multifaceted understanding of the issues.

INTL PMID: 24097842 EPH

Joseph, H.;R. Nayak;M. Johnson;S. Christopher and S. Kumar

Quality of life of children with juvenile idiopathic arthritis and its relationship with parental stress.

Indian Journal of Rheumatology. 2013, 8(2): 68-72.

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Department of Biostatistics, Christian Medical College, Vellore 632004, India

Department of Pediatrics Unit II, Christian Medical College, Vellore 632004, India

Objective To determine the quality of life and parental stress in children with juvenile idiopathic arthritis (JIA). **Methods** Patients with juvenile idiopathic arthritis (JIA) and their parents were interviewed by a trained nurse in the clinic. Demographic data of parent's education, income, children disease subtype, medications and disease severity were collected. Quality of life was assessed by the Juvenile Arthritis Quality of Life Questionnaire (JAQQ) and parental stress was assessed by Pediatric Inventory for Parents (PIP). **Results** 69 Consecutive children with JIA were recruited. Those children with Polyarticular JIA subtype and with deformity as JIA disease severity grade had poor QOL and those parents of children with Polyarticular subtype and with deformity had high parental stress. There was negative correlation between the QOL and parental stress ($r = -0.55$; $p = 0.003$). **Conclusion** Quality of life in children with JIA depends on disease subtype and outcome. As the child's QOL decreases parental stress increases. Clinicians should adopt effective techniques to help parents understand their children's medical condition and support them. Copyright © 2013, Indian Rheumatology Association. All rights reserved.

NAT EPH

Kaliappan, S. P.;S. George;M. R. Francis;D. Kattula;R. Sarkar;S. Minz;V. R. Mohan;K. George;S. Roy;S. S. R. Ajjampur;J. Muliyl and G. Kang

Prevalence and clustering of soil-transmitted helminth infections in a tribal area in southern India.

Tropical Medicine and International Health. 2013, 18(12): 1452-1462.

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

Department of Gastrointestinal Sciences, Christian Medical College, Vellore, India

Objectives: To estimate the prevalence, spatial patterns and clustering in the distribution of soil-transmitted helminth (STH) infections, and factors associated with hookworm infections in a tribal population in Tamil Nadu, India.

Methods: Cross-sectional study with one-stage cluster sampling of 22 clusters. Demographic and risk factor data and stool samples for microscopic ova/cysts examination were collected from 1237 participants. Geographical information systems mapping assessed spatial patterns of infection.

Results: The overall prevalence of STH was 39% (95% CI 36%-42%), with hookworm 38% (95% CI 35-41%) and *Ascaris lumbricoides* 1.5% (95% CI 0.8-2.2%). No *Trichuris trichiura* infection was detected. People involved in farming had higher odds of hookworm infection (1.68, 95% CI 1.31-2.17, $P < 0.001$). In the multiple logistic regression, adults (2.31, 95% CI 1.80-2.96, $P < 0.001$), people with pet cats (1.55, 95% CI 1.10-2.18, $P = 0.011$) and people who did not wash their hands with soap after defecation (1.84, 95% CI 1.27-2.67, $P = 0.001$) had higher odds of hookworm infection, but gender and poor usage of foot wear did not significantly increase risk. Cluster analysis, based on design effect calculation, did not show any clustering of cases among the study population; however, spatial scan statistic detected a significant cluster for hookworm infections in one village.

Conclusion: Multiple approaches including health education, improving the existing sanitary practices and regular preventive chemotherapy are needed to control the burden of STH in similar endemic areas. © 2013 John Wiley & Sons Ltd.

INTL EPH

Khan, F. K.; A. Balraj and A. Lepcha

Normative Data for Vestibular Evoked Myogenic Potential in Different Age Groups Among a Heterogeneous Indian Population.

Indian Journal of Otolaryngology and Head and Neck Surgery. 2013; 1-6.

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Audiovestibular Unit, Christian Medical College, Vellore, India

To establish normative data of vestibular evoked myogenic potential in different age groups among a heterogeneous Indian population. Prospective study design using a sample of convenience. Eighty five normal controls ranging between the ages 7 and 71 years were asked to provide a written signed consent for the study. Demographic characteristics of the patients were summarized using descriptive statistical methods using SPSS-17 analysing software. The outcome variable (VEMP recording) was expressed in percentiles as function of age. In all patients the stimulus which gave the best response was 95 dB (97.7 %) and 100 dB (95 %). The mean of wave latencies (p1 & n1) for 95-VEMP were, 11.2 ± 3.2 and 17.3 ± 4.7 ms on the right and 11.0 ± 2.8 and 17.0 ± 4.2 ms on the left respectively. The amplitude was 45.1 ± 54 mV on right and 46.9 ± 61.6 mV on the left. The mean of latency difference was 0.87 ms. The VEMP is a relatively simple test. The VEMP response rate was maximum in the younger age group; the optimum intensity was 95 dB. The asymmetry ratio interpretation should be done according to the age specific values. © 2013 Association of Otolaryngologists of India.

NAT **EPH**

Lalitha, M. K.; T. David and K. Thomas

Nasopharyngeal swabs of school children, useful in rapid assessment of community antimicrobial resistance patterns in Streptococcus pneumoniae and Haemophilus influenzae.

J Clin Epidemiol. 2013, 66(1): 44-51.

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OBJECTIVES: The present study evaluates the feasibility of rapid surveillance of community antimicrobial resistance (AMR) patterns of Streptococcus pneumoniae and Haemophilus influenzae in India using nasopharyngeal swabs (NPSs) of school children. It

compares the AMR data obtained with that of invasive and nasopharyngeal (NP) isolates studied previously. No one has done such surveillance since our study so we decided to publish and more clearly demonstrate the feasibility of the methodology we did.

STUDY DESIGN AND SETTING: This community-based, cross-sectional, cluster sample study had seven centers; each had two sites distant to them. Two hundred sixty school children per center were enrolled. NP swabbing was performed and isolates identified as S. pneumoniae and H. influenzae at each center were sent to reference laboratories.

RESULTS: From January to December 2004, 1,988 NP swabs were processed; 776 S. pneumoniae and 64 H. influenzae were isolated. The AMR patterns for S. pneumoniae to co-trimoxazole varied, with sensitivity as low as 6% in Mumbai, 29% in Chennai and Vellore, and 100% in Delhi and Lucknow. For H. influenzae, sensitivity rates to co-trimoxazole ranged from 22% to 62%. The AMR patterns for both bacteria in the present study with data from invasive and NP isolates studied earlier were similar.

CONCLUSION: The study demonstrates that it is practical and feasible to rapidly assess the AMR patterns of both S. pneumoniae and H. influenzae in NPSs of school children in different geographic locations all over India.

INTL PMID: 22542022 **EPH**

Lamba, S. and A. K. Gupta

A novel technique for piercing of ear lobule suited to Indian subcontinent.

Indian Journal of Plastic Surgery. 2013, 46(3): 594.

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NAT PMID:24459360 **EPH**

Mathew, M. A.;A. Paulose;S. Chitralekha;M. K. Nair;G. Kang and P. Kilgore

Prevalence of Rotavirus Diarrhea among Hospitalized Children Less than 5 Years in Kerala, South India.

Indian Pediatr. 2013 Sep 5. pii: S097475591300111. [Epub ahead of print]

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OBJECTIVES: To estimate the prevalence of rotavirus diarrhea among hospitalized children less than 5 years of age in Kerala State and to determine the circulating strains of rotavirus in Kerala. **DESIGN:** Prospective, multicenter, cross sectional study.

SETTING: Eight representative hospitals in Kunnathunadu Thaluk, Ernakulam district, Kerala.

PARTICIPANTS: 1807 children in the age group under 5 years.

METHODS: Hospitalized children <5 years of age admitted with acute diarrhea were examined and standardized case report form was used to collect demographic, clinical and health outcome. Stool specimens were collected and ELISA testing was done. ELISA rotavirus positive samples were tested by reverse transcription PCR for G and P typing (CMC Vellore).

RESULTS: Among the 1827 enrolled children, a total of 35.9% (648) were positive for rotavirus by the Rotaclone ELISA test. The prevalence of rotavirus diarrhea in infants less than 6 months of age was 24.7%; 6- 11 months 31.9%; 12- 23 months 41.9%; 24- 35 months 46.9%; and 33.3% in 36- 59 months. Rotavirus infections were most common during the dry months from January through May. G1P[8] (49.7%) was the most common strain identified followed by G9P[8] (26.4%), G2P[4] (5.5%), G9P[4] (2.6%) and G12P[6] (1.3%).

CONCLUSIONS: The prevalence of rotavirus diarrhea among hospitalized children less than 5 years is high in Ernakulam district, Kerala State.

NAT PMID: 24277960 **EPH**

Mathew, S. E. and V. Madhuri

Clinical tibiofemoral angle in south Indian children.

Bone Joint Res. 2013, 2(8): 155-161.

Christian Medical College, Paediatric Orthopaedic Unit, Vellore 632004, Tamil Nadu, India.

OBJECTIVES: The development of tibiofemoral angle in children has shown ethnic variations. However this data is unavailable for our population.

METHODS: We measured the tibiofemoral angle (TFA) and intercondylar and intermalleolar distances in 360 children aged between two and 18 years, dividing them into six interrupted age group intervals: two to three years; five to six years; eight to nine years; 11 to 12 years; 14 to 15 years; and 17 to 18 years. Each age group comprised 30 boys and 30 girls. Other variables recorded included standing height, sitting height, weight, thigh length, leg length and length of the lower limb.

RESULTS: Children aged two to three years had a valgus angulation with a mean TFA of 1.8 degrees (sd 0.65) in boys and 2.45 degrees (sd 0.87) in girls. Peak valgus was seen in the five- to six-year age group, with mean TFAs of 6.7 degrees (sd 1.3) and 7.25 degrees (sd 0.64) for boys and girls, respectively. From this age the values gradually declined to a mean of 3.18 degrees (sd 1.74) and 4.43 degrees (sd 0.68) for boys and girls, respectively, at 17 to 18 years. Girls showed a higher valgus angulation than boys at all age groups.

CONCLUSION: This study defines the normal range of the TFA in south Indian boys and girls using an easy and reliable technique of measurement with a standardised custom-made goniometer. Cite this article: Bone Joint Res 2013;2:155-61.

INTL PMID: 23946543 PMCID: 3746208 EPH

Menon, V. K.;R. Sarkar;P. D. Moses;l. Agarwal;A. Simon and G. Kang

Norovirus genogroup II gastroenteritis in hospitalized children in South India.

Am J Trop Med Hyg. 2013, 89(5): 1019-1022.

Department of Gastrointestinal Sciences, Christian Medical College, Vellore, India; Departments of Child Health Units I, II and III, Christian Medical College, Vellore, India.

The distribution of norovirus (NoV) genogroup II in children < 5 years of age admitted to a south Indian hospital with diarrhea was investigated. Viral RNA

extracted from 282 stool samples were screened for NoV GII and positive amplicons sequenced. Twenty-eight (9.9%) had NoV GII infection with a median age of 6 months, with more severe episodes of diarrhea among infected (median Vesikari score 13, interquartile range [IQR] 10-15) than children without infection (median score 10, IQR 8-13, $P = 0.002$). The study documents NoV GII infections as an important cause of gastroenteritis and the genetic diversity of circulating strains.

INTL PMID: 24062476 PMCID: 3820314 EPH

Nair, M. K. C.; M. L. Leena; B. George; P. Menon; P. K. Jameela and P. S. S. Russell

ARSH 7: Community Adolescent Health Care and Education: Experience of an Innovative Approach.

Indian J Pediatr. 2013 Nov;80 Suppl 2:S229-33. doi: 10.1007/s12098-013-1148-y. Epub 2013 Jul 30.

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Objective The main objective of the project was to create a community adolescent health care and education initiative with an innovative approach of educating all community stakeholders involved in promoting adolescent health. **Methods** Step 1: Conceptualization and strategy planning for combined training; Step II: Preparation of teaching module, flip charts and pamphlets in local language; Step III: Hands on training of community trainers; Step IV: Sensitization of the stakeholder leadership to ensure the cooperation of all stakeholders; Step V: Formation of Teen clubs; Step VI: The combined health education programs at community outlets; Step VII: Detection of adolescent health issues by ASHA and anganwadi workers; Step VIII: Setting up of Saturday adolescent clinics at CHCs as a community referral facility. **Results** Under 1,060 programs, 34,851 community stakeholders could be trained together including 15,777 mothers, 14,565 adolescents, 2,236 ASHA workers, 2,021 anganwadi workers, and 252 community leaders. The concept of

combined training of community stakeholders was found to be feasible and acceptable to the participants. **Conclusions** The experience of the CDC-NRHM-AHDP project has shown that ASHA workers and anganwadi workers could be important link persons between adolescents and the health providers.

NAT PMID:23896938 WOS:000326607300019 EPH

Nair, M. K. C.; M. L. Leena; B. George; Y. Thankachi and P. S. S. Russell

ARSH 2: Reproductive and Sexual Health Knowledge, Attitude and Practices: Comparison Among Boys and Girls (10-24 y).

Indian J Pediatr. 2013 Nov;80 Suppl 2:S199-202. doi: 10.1007/s12098-013-1139-z. Epub 2013 Aug 1.

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Objective To compare the knowledge, attitude and practice of boys and girls on reproductive sexual health and their perspective on the needs of adolescents on this aspect. **Methods** This comparative study was conducted among boys and girls between 10 and 24 y in three districts of Kerala; through a cross sectional community survey using a pretested structured schedule with additional sexuality related questions for 15-24 y age group. **Results** Higher percentage of boys knew about condoms (95.1 %, $p 0.001$) whereas higher percentage of girls (56.5 %, $p 0.001$) knew about copper-T. Girls had a better knowledge on legal age of marriage (91 %, $p 0.001$), that both the partners are equally responsible for the problem of infertility (89.7 %, $p 0.009$) and that the gender of the baby is determined by male sperm (60.4 %, $p 0.001$). Above 90 % of boys and girls demanded adolescent care services and facilities for counseling. **Conclusions** This comparative study on knowledge, attitude and practice of boys and girls between 10 and 24 y has shown that greater proportion of girls had correct knowledge on the legal age of marriage, ideal age of pregnancy, preferred an arranged marriage and felt the need for premarital counseling.

NAT PMID:23904064 WOS:000326607300014 EPH

Nair, M. K. C.; M. L. Leena; B. George; Y. Thankachi and P. S. S. Russell

ARSH 5: Reproductive Health Needs Assessment of Adolescents and Young People (15-24 y): A Qualitative Study on 'Perceptions of Community Stakeholders'.

Indian J Pediatr. 2013 Nov;80 Suppl 2:S214-21. doi: 10.1007/s12098-013-1141-5. Epub 2013 Jul 11.

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Objective To explore the perceived reproductive health problems, health seeking behaviors, knowledge about available services and barriers to reach services among adolescents in order to improve reproductive health services for adolescents. **Methods** The study was conducted in three districts of Kerala and need assessment was done qualitatively using focus group discussions (FGDs), five each from all the three districts among junior public health nurses (JPHNs), anganwadi workers (AWWs), non-government organizations (NGOs), community leaders and adolescents. **Results** Majority of community stakeholders expressed that adolescents get knowledge regarding personal hygiene from their family itself and that they have poor knowledge about genital hygiene. Pain and associated problems are the most important difficulties faced by adolescent girls during menstrual periods. Most of the adolescents believed that excessive masturbation is a very dangerous practice. Most of the community stakeholders pointed out that though our adolescents know about HIV, they have very poor knowledge about other STIs and that parental ignorance increases vulnerability for sexual abuse among adolescents. They also suggested family life education sessions at schools and colleges for younger ones and premarital counseling for older ones, apart from counseling services and adolescent clinics. The important barriers in the utilization of services for adolescents are lack of awareness of parents, stigma to utilize services, economic factors, facility available at faraway places, and non-availability of services. **Conclusions** The need for adolescent friendly health services and premarital counseling services in the community attached to health facilities, has been highlighted.

NAT PMID:23842987 WOS:000326607300017 EPH

Nair, M. K. C.; M. L. Leena; B. George; Y. Thankachi and P. S. S. Russell

ARSH 6: Reproductive Health Needs Assessment of Adolescents and Young People (15-24 y): A Qualitative Study on 'Perceptions of Program Managers and Health Providers'.

Indian J Pediatr. 2013 Nov;80 Suppl 2:S222-8. doi: 10.1007/s12098-013-1149-x. Epub 2013 Jul 30.

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Objectives To understand the perceptions of program managers and service providers using in depth interview technique, a well-accepted qualitative research that can also offer semi quantitative input. **Methods** Need assessment was done qualitatively using in-depth interviews, among program managers of health care system including District Medical Officers and RCH Officers and program service providers, both in rural and urban areas. **Results** In total 34 in-depth interviews were conducted. Nearly half (2+) of the program managers and service providers of adolescent programs opined that the important problems faced by adolescents were issues related to sexuality, psychosocial conflict, identity crisis, adjustment problems and scholastic problems. Approximately half of them thought that improper parenting, negative attitude of parents, separated parents, ignorance of parents, family background, nuclear family setup etc. are the most important factors, which influence adolescent problems and that friends and media are their major source of reproductive sexual health information. Nearly half of them pointed out that pain and psychological disturbances like anxiety, tension and anger were the important menstrual problems faced by adolescents. Again nearly half of them, felt that FLE (Family Life Education) should be given at school and ARSH services at PHCs, but there was little consensus on provision of contraceptive service and abortion services to adolescents. **Conclusion** All the service providers and program managers are ready to cooperate but they had varied opinions about who

should impart adolescent reproductive sexual health education and how the program should be done.

NAT PMID:23896939 WOS:000326607300018 EPH

Nair, M. K. C.;M. L. Leena;P. Menon;B. George;M. S. Indira and P. S. S. Russell

ARSH 8: Family Life Education and Counseling: A School Based Model.

Indian J Pediatr. 2013 Nov;80 Suppl 2:S234-9. doi: 10.1007/s12098-013-1132-6. Epub 2013 Jul 27.

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Child and Adolescent Psychiatry Unit, Christian Medical College, Vellore, India

Objectives: To understand the problems of school going adolescents in selected schools in the first phase and to provide class based family life education in the second phase.

Methods: Step 1: Identification of the study sample, Step 2: Each adolescent was individually administered TSQ-T by trained project staff, Step 3: 'Family life education' sessions were held for the whole class together, Step 4: Queries were collected on a slip of paper without writing their names, Step 5: Those needing medical attention was seen by a medical doctor and psychologist Step 6: Preparation of a guide book named "101 questions", Step 7: Upscaling the project as a service component to Government schools.

Results: 4.6 % of school going boys and 2.5 % of girls were underweight and 4.4 % of boys and 7.8 % of girls were obese. Less than 5 % of adolescents had symptoms suggestive of various mental health disorders, 2.6-8.3 % for attention deficit hyperactivity disorder (ADHD), 3 % for eliminating disorder, 0.9-2.2 % for conduct disorder, 0.9-3.3 % for anxiety disorders, 1.7-4.4 % for depression and 0.8-1.1 % for psychosis. Adolescent school going girls had a mean age of menarche at 12.7 y and 46 % of girls did not receive any prior information about menarche.

Conclusions: Screening of adolescents using TSQ-T developed at CDC, Kerala and used extensively in community projects, was found to be useful in identifying adolescents with nutrition and lifestyle issues, scholastic problems, mental health problems and reproductive health problems. © 2013 Dr. K C Chaudhuri Foundation.

NAT PMID:23893320 WOS:000326607300020 EPH

Nair, M. K. C.;P. S. S. Russell and R. Sadanandan

ADad 11: Needs and Service Provisions for Anxiety Disorders Among Adolescents in a Rural Community Population in India.

Indian Journal of Pediatrics. 2013, 80: S186-S191.

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Objective Despite the need to have adolescent-centric policies and mental health services, India is yet far from having one. The authors aimed at generating opinions on the need to have adolescent focused policies and clinical services using the data on Anxiety Disorders they collected from the community. **Methods** This qualitative study used Focus Group Discussions (FGD) to generate opinions on the various needs to enhance better mental health services and policies for adolescents in India. A Modified Delphi technique was used with experts in mental health to prioritize these needs. Experts gave their plans on how to approach the needs during the in-depth interviews. **Results** The mental health professionals viewed scaled-up mental health services to include adolescent mental health services; improve the consumer opinion about public sector health providers; strengthening the government hospitals; capacity building among the health sector and non-health sector; research in service delivery models and policy changes as the needs. The parents felt the need to address the stigma associated with their children's mental illness, minimize the barriers in approaching mental health services and involve non-medical agencies in mental health care. These needs were prioritized and solutions to these problems were discussed. **Conclusions** India-centric and adolescent specific mental health policies and services need to be developed as well as integrated into the existing health system in India.

NAT WOS:000326607300012 EPH

Nair, M. K. C.;P. S. S. Russell;R. Krishnan;S. Russell;V. S. Subramaniam;S. Nazeema;N. Chembagam and B. George
ADad 4: The Symptomatology and Clinical Presentation of Anxiety Disorders Among Adolescents in a Rural Community Population in India.

Indian Journal of Pediatrics. 2013, 80: S149-S154.

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Objectives Anxiety Disorders (AD) in children and adolescents present with unique clinical features and exhibit phenotypic diversity. The symptom presentation varies with regard to age of onset, developmental factors and gender. This study documents the clinical presentation of AD among adolescents in India, and explores the symptom clusters among the different age groups as well as gender. **Methods** Five hundred adolescents aged between 11 and 19 y from Pattanakad ICDS block, of Allapuzha district in Kerala were recruited and assessed using the self-rated Screen for Child Anxiety Related Emotional Disorders (SCARED) questionnaire to identify symptom clusters of anxiety and this was followed by confirmation of the diagnosis using DSM-IV TR within a week. Anxiety symptom clusters and severity (obtained from continuous SCARED scores) were compared between early, middle and late adolescence subgroups as well as between sexes. **Results** The most predominant anxiety symptoms across the subtypes were the anxious mood, which was noted in 12.60% followed by cognitive symptoms in 9.94 % of the cases and finally physical symptoms in 9.22 % of the study sample. The symptom clusters varied among the subtypes with anxious mood being commoner in Panic Disorder (PD), cognitive symptoms in Generalised Anxiety Disorder (GAD) and physical symptoms were prominent among Separation Anxiety (SeAD) and Social Anxiety Disorders (SoAD). The severity of anxiety disorder in general and its various subtypes were mostly of mild intensity although significant proportion had a severe form of the

disease(s). The severity of the AD among girls was statistically significantly higher than boys ($P = 0.02$). There was no significant difference on symptom frequency or anxiety severity with regard to age. **Conclusions** Understanding of age appropriate presentation of anxiety symptoms may help in streamlining the treatment guidelines and yield a better estimate of the disease process.

NAT . . . WOS:000326607300005 EPH

Rajkumar, A. P.;E. M. Brinda;A. S. Duba;P. Thangadurai and K. S. Jacob

National suicide rates and mental health system indicators: An ecological study of 191 countries.

International Journal of Law and Psychiatry. 2013, 36(5-6): 339-342.

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Purpose: The relative contributions of psychiatric morbidity and psychosocial stress to suicide, and the efficacy of mental health systems in reducing population suicide rates, are currently unclear. This study, therefore, aimed to investigate whether national suicide rates are associated with their corresponding mental health system indicators.

Methods: Relevant data were retrieved from the following sources: the World Health Organization, the United Nations Statistics Division and the Central Intelligence Agency World Fact book. Suicide rates of 191 countries were compared with their mental health system indicators using an ecological study design and multivariate non-parametric robust regression models.

Results: Significant positive correlations between suicide rates and mental health system indicators ($p < 0.001$) were documented. After adjusting for the effects of major macroeconomic indices using multivariate analyses, numbers of psychiatrists ($p = 0.006$) and mental health beds ($p < 0.001$) were significantly positively associated with population suicide rates.

Conclusions: Countries with better psychiatric services experience higher suicide rates. Although these

associations should be interpreted with caution, as the issues are complex, we suggest that population-based public health strategies may have greater impact on national suicide rates than curative mental health services for individuals. © 2013 Elsevier Ltd.

INTL EPH

Sarkar, R.;S. S. Ajampur;A. D. Prabakaran;J. C. Geetha;T. V. Sowmyanarayanan;A. Kane;J. Duara;J. Muliyl;V. Balraj;E. N. Naumova;H. Ward and G. Kang
Cryptosporidiosis among children in an endemic semiurban community in southern India: does a protected drinking water source decrease infection?
Clin Infect Dis. 2013, 57(3): 398-406.

Department of Gastrointestinal Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

BACKGROUND: A quasi-experimental study was conducted to determine whether or not a protected water supply (bottled drinking water) could prevent or delay cryptosporidial infections among children residing in an endemic community.

METHODS: A total of 176 children residing in a semiurban slum area in southern India were enrolled preweaning and received either bottled (n = 90) or municipal (n = 86) drinking water based on residence in specific streets. Weekly surveillance visits were conducted until children reached their second birthday. Stool samples were collected every month and during diarrheal episodes, and were tested for the presence of *Cryptosporidium* species by polymerase chain reaction. Differences in the incidence of cryptosporidiosis between bottled and municipal water groups were compared using Poisson survival models, and a propensity score model was developed to adjust for the effect of potential confounders.

RESULTS: A total of 186 episodes of cryptosporidiosis, mostly asymptomatic, were observed in 118 (67%) children during the follow-up period at a rate of 0.59 episodes per child-year. Diarrhea associated with *Cryptosporidium* species tended to be longer in duration and more severe. Stunting at 6 months was associated with a higher risk of cryptosporidiosis (rate ratio [RR] = 1.40; 95% confidence interval [CI], 1.03-1.91). A higher gastrointestinal disease burden was also seen in children with cryptosporidiosis. Drinking bottled water was not associated with a reduced risk of cryptosporidiosis (adjusted RR = 0.86; 95% CI, .60-1.23).

CONCLUSIONS: This study documented a high burden of cryptosporidiosis among children in an endemic Indian slum community. The lack of association between drinking bottled water and cryptosporidiosis suggests possible spread from asymptotically infected individuals involving multiple transmission pathways.

INTL PMID: 23709650 PMCID: 3703109 EPH

Sen, I.;E. Stephen and S. Agarwal
Clinical profile of aortoiliac occlusive disease and outcomes of aortobifemoral bypass in India.
J Vasc Surg. 2013, 57(2 Suppl): 20S-25S.

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OBJECTIVE: Aortoiliac arterial occlusive (AIOD) disease is common in India. The clinical presentation and etiology are different than in the West. Intervention is frequently required for advanced lower extremity ischemia, but the results have not been systemically evaluated. We studied the clinical profile and midterm results of patients undergoing aortobifemoral bypass for AIOD at a tertiary care center in south India.

METHODS: Clinical data of patients undergoing aortobifemoral bypass for AIOD over a 6-year period from January 1, 2005 to December 31, 2010 were retrospectively analyzed. Clinical presentation and factors affecting outcome were evaluated. Graft patency and mortality were included as study end points.

RESULTS: Ninety-nine patients (mean age, 52 years) with AIOD who underwent aortobifemoral bypass were included. Etiology included atherosclerosis in 79 patients, thromboangiitis obliterans in 15, Takayasu's arteritis in two, and hematological conditions in 3. Smoking (82%), hypertension (40%), and diabetes (30%) were the most common risk factors; ischemic heart disease (4%), obesity (2%), and dyslipidemia (3%) were rare. Eighty-one percent of patients presented with critical limb ischemia. Mean duration of symptoms was 22 months (range, 4 months to 9 years). Concomitant infrainguinal arterial occlusive disease was identified in 81%, but intervened upon in only 2%. In-hospital mortality was 3%. Causes of death included myocardial infarction in two and colon ischemia in one. Major morbidity included nonfatal myocardial infarction (3%), pneumonia/atelectasis (5%), and renal dysfunction (2%). Groin wound complications occurred in 20%,

seroma/lymph leak in 13%, infection in 7%, and anastomotic hemorrhage in 2%. Multidrug-resistant and polymicrobial infections were common. Early graft thrombosis (30 days) occurred in 15 patients; 8 of 11 reintervened grafts were salvaged. Four more grafts thrombosed during a mean follow-up of 2 years (range, 0-5 years) and two became infected. Overall study major limb loss rate was 10% (primary, 2%; secondary, 8%). Delayed presentation and smoking were more common in patients developing complications. There was no significant difference in overall complication rates between patients with thromboangiitis obliterans and atherosclerosis ($P = .66$).

CONCLUSIONS: Despite earlier age at presentation, atherosclerosis remains the predominant etiology of aortoiliac arterial occlusive disease in Indian patients. Results of open revascularization are comparable to those in the Western literature. Thromboangiitis obliterans is the underlying pathology in a minority of patients with no significant difference in operative outcome. Patients frequently present late with critical limb ischemia, but this does not affect outcome.

INTL PMID: 23336851 **EPH**

Shah, B.;M. Sharma;R. Kumar;K. N. Brahmadathan;V. J. Abraham and R. Tandon

Rheumatic Heart Disease: Progress and Challenges in India.

Indian Journal of Pediatrics. 2013, 80: S77-S86.

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Rheumatic heart disease, a neglected disease, continues to be a burden in India and other developing countries. It is a result of an autoimmune sequelae in response to group A beta hemolytic streptococcus (GAS) infection of the pharynx. Acute rheumatic fever (RF), a multisystem inflammatory disease, is followed by rheumatic heart disease (RHD) and has

manifestations of joints, skin and central nervous system involvement. A review of epidemiological studies indicates unchanged GAS pharyngitis and carrier rates in India. The apparent decline in RHD rates in India as indicated by the epidemiological studies has to be taken with caution as methodological differences exist among studies. Use of echocardiography increases case detection rates of RHD in population surveys. However, the significance of echo based diagnosis of carditis needs further evaluation to establish the significance. Research in this area through prospective follow up studies will have to be undertaken by the developing countries as the interest of developed countries in the disease has waned due the declined burden in their populations. Prevention of RHD is possible through treatment of GAS pharyngitis (primary prophylaxis) and continued antibiotic treatment for number of years in patients with history of RF to prevent recurrences (secondary prophylaxis). The cost effectiveness and practicality of secondary prophylaxis is well documented. The challenge to any secondary prophylaxis program for prevention of RF in India will be the availability of benzathine penicillin G and dissipation of fears of allergic reactions to penicillin among practitioners, general public and policy makers. The authors review here the progress and challenges in epidemiology, diagnosis and primary and secondary prevention of RF and RHD.

NAT WOS:000326607100010 **EPH**

Tharyan, P.;A. T. George;R. Kirubakaran and J. P. Barnabas
Reporting of methods was better in the Clinical Trials Registry-India than in Indian journal publications.

J Clin Epidemiol. 2013, 66(1): 10-22.

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OBJECTIVE: We sought to evaluate if editorial policies and the reporting quality of randomized controlled trials (RCTs) had improved since our 2004-05 survey of 151 RCTs in 65 Indian journals, and to compare reporting quality of protocols in the Clinical Trials Registry-India (CTRI).

STUDY DESIGN AND SETTING: An observational study of endorsement of Consolidated Standards for the

Reporting of Trials (CONSORT) and International Committee of Medical Journal Editors (ICMJE) requirements in the instructions to authors in Indian journals, and compliance with selected requirements in all RCTs published during 2007-08 vs. our previous survey and between all RCT protocols in the CTRI on August 31, 2010 and published RCTs from both surveys.

RESULTS: Journal policies endorsing the CONSORT statement (22/67, 33%) and ICMJE requirements (35/67, 52%) remained suboptimal, and only 4 of 13 CONSORT items were reported in more than 50% of the 145 RCTs assessed. Reporting of ethical issues had improved significantly, and that of methods addressing internal validity had not improved. Adequate methods were reported significantly more frequently in 768 protocols in the CTRI, than in the 296 published trials.

CONCLUSION: The CTRI template facilitates the reporting of valid methods in registered trial protocols. The suboptimal compliance with CONSORT and ICMJE requirements in RCTs published in Indian journals reduces credibility in the reliability of their results.

INTL PMID: 22459428 EPH

Thomas, K.

Introduction: challenges to clinical epidemiology in India. *J Clin Epidemiol.* 2013, 66(1): 4-5.

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INTL PMID: 23177890 EPH

Varghese, G. M.;J. Janardhanan;P. Trowbridge;J. V. Peter;J. A. Prakash;S. Sathyendra;K. Thomas;T. S. David;M. L. Kavitha;O. C. Abraham and D. Mathai

Scrub typhus in South India: clinical and laboratory manifestations, genetic variability, and outcome.

Int J Infect Dis. 2013, 17(11): e981-987.

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OBJECTIVES: This study sought to document the clinical and laboratory manifestations, genetic variability, and outcomes of scrub typhus, an often severe infection caused by *Orientia tsutsugamushi*, in South India.

METHODS: Patients admitted to a large teaching hospital with IgM ELISA-confirmed scrub typhus were evaluated. Clinical examination with a thorough search for an eschar, laboratory testing, chest X-ray, and

outcome were documented and analyzed. Additionally, a 410-bp region of the 56-kDa type-specific antigen gene of *O. tsutsugamushi* was sequenced and compared with isolates from other regions of Asia.

RESULTS: Most of the 154 patients evaluated presented with fever and non-specific symptoms. An eschar was found in 86 (55%) patients. Mild hepatic involvement was seen in most, with other organ involvement including respiratory, cardiovascular, and renal. Multi-organ dysfunction was noted in 59 (38.3%), and the fatality rate was 7.8%. Hypotension requiring vasoactive agents was found to be an independent predictor of mortality ($p < 0.001$). The phylogeny of 26 samples showed 17 (65%) clustering with the Kato-like group and eight (31%) with the Karp-like group.

CONCLUSIONS: The presentation of scrub typhus can be variable, often non-specific, but with potentially severe multi-organ dysfunction. Prompt recognition is key to specific treatment and good outcomes. Further study of the circulating strains is essential for the development of a successful vaccine and sensitive point-of-care testing.

INTL PMID: 23891643 EPH

Varghese, G. M.;J. Janardhanan;R. Ralph and O. C. Abraham

The Twin Epidemics of Tuberculosis and HIV.

Curr Infect Dis Rep. 2013, 15(1): 77-84.

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The deadly combination of tuberculosis (TB) and human immunodeficiency virus (HIV) currently ravaging the world, taking a toll of about 0.35 million people every year, is one of the major public health crises of the decade. Throughout the course of HIV infection, the risk of acquisition, reactivation, and reinfection of TB keeps increasing substantially as the immune deficiency progresses. TB coinfecting patients inadvertently facilitate HIV infection by release of the proinflammatory cytokines and overexpression of coreceptors CXCR4 and CCR5; thereby, the progression of each is facilitated. The difficulties in diagnosing active tuberculosis in HIV-infected individuals poses a great challenge that is further complicated by the challenges in identification of latent TB infection, creating a setback to preventive therapy. Furthermore, prescribing antituberculous therapy and antiretroviral

therapy together poses several management challenges, including drug interactions, added toxicities, and TB immune reconstitution inflammatory syndrome. The current approach to diagnosis, prevention, and treatment strategies in TB and HIV coinfecting individuals, along with epidemiology and overview of pathogenetic interplay of both microbes, is reviewed here.

INTL PMID: 23296510 **EPH**

Vijayakumar, L.; L. Jeyaseelan; S. Kumar; R. Mohanraj; S. Devika and S. Manikandan

A central storage facility to reduce pesticide suicides - A feasibility study from India.

BMC Public Health. 2013 Sep 16;13:850. doi: 10.1186/1471-2458-13-850.

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Background: Pesticide suicides are considered the single most important means of suicide worldwide. Centralized pesticide storage facilities have the possible advantage of delaying access to pesticides thereby reducing suicides. We undertook this study to examine the feasibility and acceptability of a centralized pesticide storage facility as a preventive intervention strategy in reducing pesticide suicides. **Methods.** A community randomized controlled feasibility study using a mixed methods approach involving a household survey; focus group discussions (FGDs) and surveillance were undertaken. The study was carried out in a district in southern India. Eight villages that engaged in floriculture were identified. Using the lottery method two were randomized to be the intervention sites and two villages constituted the control site. Two centralized storage facilities were constructed with local involvement and lockable storage boxes were constructed. The household survey conducted at baseline and one and a half years later documented information on sociodemographic data, pesticide usage, storage and suicides.

Results: At baseline 4446 individuals (1097 households) in the intervention and 3307 individuals (782 households) in the control sites were recruited while at follow up there were 4308 individuals (1063 households) in the intervention and 2673 individuals (632 households) in the control sites. There were differences in baseline characteristics and imbalances in the prevalence of suicides between intervention and control sites as this was a small feasibility study. The results from the FGDs revealed that most participants found the storage facility to be both useful and acceptable. In addition to protecting against wastage, they felt that it had also helped prevent pesticide suicides as the pesticides stored here were not as easily and readily accessible. The primary analyses were done on an Intention to Treat basis. Following the intervention, the differences between sites in changes in combined, completed and attempted suicide rates per 100,000 person-years were 295 (95% CI: 154.7, 434.8; $p < 0.001$) for pesticide suicide and 339 (95% CI: 165.3, 513.2, $p < 0.001$) for suicide of all methods.

Conclusions: Suicide by pesticides poisoning is a major public health problem and needs innovative interventions to address it. This study, the first of its kind in the world, examined the feasibility of a central storage facility as a means of limiting access to pesticides and, has provided preliminary results on its usefulness. These results need to be interpreted with caution in view of the imbalances between sites. The facility was found to be acceptable, thereby underscoring the need for larger studies for a longer duration. Trial registration. ISRCTN: ISRCTN04912407. © 2013 Vijayakumar et al.; licensee BioMed Central Ltd.

INTL PMID: 24041373 . **PMCID: PMC3847561** . **EPH**

Viswanathan, S.;M. Rao;A. Keating and A. Srivastava
Overcoming challenges to initiating cell therapy clinical trials in rapidly developing countries: India as a model. *Stem Cells Transl Med.* 2013 Aug;2(8):607-13. doi: 10.5966/sctm.2013-0019. Epub 2013 Jul 8.

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Increasingly, a number of rapidly developing countries, including India, China, Brazil, and others, are becoming global hot spots for the development of regenerative medicine applications, including stem cell-based therapies. Identifying and overcoming regulatory and translational research challenges and promoting scientific and ethical clinical trials with cells will help curb the growth of stem cell tourism for unproven therapies. It will also enable academic investigators, local regulators, and national and international biotechnology and biopharmaceutical companies to accelerate stem cell-based clinical research that could lead to effective innovative treatments in these regions. Using India as a model system and obtaining input from regulators, clinicians, academics, and industry representatives across the stem cell field in India, we reviewed the role of key agencies and processes involved in this field. We have identified areas that need attention and here provide solutions from other established and functioning models in the world to streamline and unify the regulatory and ethics approval processes for cell-based therapies. We also make recommendations to check the growth and functioning of clinics offering unproven treatments. Addressing these issues will remove considerable hurdles to both local and international investigators, accelerate the pace of research and development, and create a quality environment for reliable products to emerge. By doing so, these countries would have taken one important step to move to the forefront of stem cell-based therapeutics. © AlphaMed Press 2013.

INTL PMID:23836804 PMCID:PMC3726140 EPH

Asokan, G. V.;Z. Fedorowicz;P. Tharyan and A. Vanitha
One Health: perspectives on ethical issues and evidence from animal experiments response.

Eastern Mediterranean Health Journal. 2013, 19(6): 581-581.

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INTL WOS:000322800800013 MISC

Chacko, A. G.;M. Joseph;M. K. Turel;K. Prabhu;R. T. Daniel and K. S. Jacob

Answer to the letter to the editor of J.M. Duarte Clemente et al. concerning "multilevel oblique corpectomy for cervical spondylotic myelopathy preserves segmental motion" by AG Chacko, M Joseph, MK Turel, K Prabhu, RT Daniel, KS Jacob (2012) *Eur Spine J.* 2012;21(7):1360-1367. *Eur Spine J.* 2013, 22(9): 2122.

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INTL PMID:23880869 PMCID: 3777055 MISC

Chase, D.;A. Devi and B. John

Response to "Anatomic twist to a straightforward Ablation".

Indian Pacing and Electrophysiology Journal. 2013, 13(6): 235-236.

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NAT PMID:23880869 PMCID: 3777055 MISC

Chellappan, S.;P. Ezhilarasu;A. Gnanadurai;R. George and S. Christopher

Can Symptom Relief Be Provided in the Home to Palliative Care Cancer Patients by the Primary Caregivers?: An Indian Study.

Cancer Nurs. 2013 Nov 6. [Epub ahead of print]

Author Affiliation: Christian Medical College, Vellore, Tamil Nadu, India.

BACKGROUND: A large proportion of cancer deaths occur in the developing world, with limited resources for palliative care. Many patients dying at home experience difficult symptoms.

OBJECTIVE: The objective of this study was to assess the feasibility of a structured training program on symptom management along with an acute symptom management kit for primary caregivers of cancer patients receiving home care.

METHODS: Descriptive design was used. Thirty primary caregivers of cancer patients attending the palliative care clinic in Vellore, South India, were provided training on the administration of drugs for acute symptoms. A plastic box with partitions for drugs specific to symptom was provided. On follow-up visits, the usage of the kit, drugs used, and routes of administration were noted. A structured questionnaire with a 4-point scale was used to assess primary caregiver views and satisfaction.

RESULTS: Of primary caregivers, 96.7% used a kit. The common medications used were morphine, metoclopramide, dexamethasone, and benzodiazepines. Seventy-three percent of primary caregivers administered subcutaneous injections at home. Hospital visits for acute symptoms reduced by 80%; 90% were satisfied with the training received; 73% stated it was not a burden to treat the patient at home.

CONCLUSION: The training program and acute symptom management kit were favorably received and appropriately used by caregivers of diverse backgrounds. Rural backgrounds and illiteracy were not barriers to acceptance. **IMPLICATION FOR PRACTICE:** Healthcare professionals should train caregivers during hospital visits, empowering them to manage acute symptoms and provide simple nursing care. This is doubly important in countries where resources are limited and palliative care facilities scarce.

INTL PMID: 24172754

MISC

Christdas, J.;J. Sivakumar;J. David;H. D. Daniel;S. Raghuraman and P. Abraham

Genotypes of hepatitis C virus in the Indian sub-continent: a decade-long experience from a tertiary care hospital in South India.

Indian J Med Microbiol. 2013, 31(4): 349-353.

Department of Clinical Virology, Christian Medical College, Vellore, Tamil Nadu, India.

BACKGROUND: Hepatitis C virus (HCV) is a leading cause of chronic liver disease (CLD) that can progress to cirrhosis and hepatocellular carcinoma. Genotypes of HCV can vary in pathogenicity and can impact on treatment outcome.

OBJECTIVES: To study the different genotypes among patients with HCV related CLD attending a tertiary care hospital in south India during 2002-2012.

STUDY DESIGN: Study subjects were those referred to clinical virology from the liver clinic. Genotyping was performed using the genotype specific core primers in nested polymerase chain reaction (PCR), 5' non-coding regions based PCR- restriction fragment length polymorphism and NS5B sequencing methods. With the latter method, obtained sequences were compared with published GenBank sequences to determine the genotype.

RESULTS: Of the 451 samples tested, HCV genotype 3 was found to be the most predominant (63.85%). Other genotypes detected were genotype 1 (25.72%), genotype 2 (0.002%), genotype 4 (7.5%) and genotype 6 (2.7%). Genotype 3 was the common genotype in patients from Eastern India while genotype 1 and 4 were mainly seen in South Indian patients. Genotype 6 was seen exclusively in patients from North-Eastern India. Two other patients were infected with recombinants of genotype 1 and 2.

CONCLUSIONS: In this study spanning a decade, HCV genotype 3 and genotype 1 were found to be the predominant genotypes in the Indian sub-continent. Genotype 4 and genotype 6 appeared to show some geographic restriction. A continued monitoring of HCV genotypes is essential for the optimum management of these chronically infected patients. In addition, knowledge of circulating genotypes could impact on future vaccine formulations.

NAT PMID: 24064640

MISC

Devanandan, S.

Beware! defects in pipeline supplies can occur: Be aware of this possibility after engineering work in related areas of the hospital.

Indian J Anaesth. 2013, 57(4): 426-427.

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NAT PMID: 24163471 PMCID: 3800349 MISC

Devleesschauwer, B.;A. Aryal;J. Tharmalingam;D. D. Joshi;S. Rijal;N. Speybroeck;S. Gabriel;B. Victor and P. Dorny

Complexities in using sentinel pigs to study Taenia solium transmission dynamics under field conditions.

Veterinary Parasitology. 2013, 193(1-3): 172-178.

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The transmission dynamics of the pork tapeworm, *Taenia solium*, remain a matter of research and debate. In a longitudinal field study performed in southeastern Nepal, 18 sentinel pigs were serologically monitored to study the field kinetics of *Taenia* antigens and anti-*T. solium* antibodies. At the end of the twelve months' study period, necropsy was performed and suspected lesions were subjected to molecular identification of the *Taenia* species. The study generated new hypotheses on the transmission dynamics of *Taenia* spp. and exposed crucial complexities in the use of sentinel pigs in longitudinal field studies. Sentinel pigs can be useful epidemiological tools, but their use should be thoroughly planned before initiating a study and carefully monitored throughout the course of the study. Important aspects to be considered are those affecting the pig's susceptibility to infection, such as passive immunity, age, hormonal levels, and infection with

competing *Taenia* species. In addition, serological test results should be interpreted considering possible cross-reactions and with proper understanding of the significance of a positive test result. (C) 2012 Elsevier B.V. All rights reserved.

INTL WOS:000316646100023 MISC

Foran, J. M.;S. Z. Pavletic;B. R. Logan;M. A. Agovi-Johnson;W. S. Pérez;B. J. Bolwell;M. Bornhäuser;C. N. Bredeson;M. S. Cairo;B. M. Camitta;E. A. Copelan;J. Dehn;R. P. Gale;B. George;V. Gupta;G. A. Hale;H. M. Lazarus;M. R. Litzow;D. Maharaj;D. I. Marks;R. Martino;R. T. Maziarz;J. M. Rowe;P. A. Rowlings;B. N. Savani;M. L. Savoie;J. Szer;E. K. Waller;P. H. Wiernik and D. J. Weisdorf
Unrelated Donor Allogeneic Transplantation after Failure of Autologous Transplantation for Acute Myelogenous Leukemia: A Study from the Center for International Blood and Marrow Transplantation Research.

Biology of Blood and Marrow Transplantation. 2013, 19(7): 1102-1108.

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The survival of patients with relapsed acute myelogenous leukemia (AML) after autologous hematopoietic stem cell transplantation (auto-HCT) is very poor. We studied the outcomes of 302 patients who underwent secondary allogeneic hematopoietic cell transplantation (allo-HCT) from an unrelated donor (URD) using either myeloablative (n= 242) or reduced-intensity conditioning (RIC; n= 60) regimens reported to the Center for International Blood and Marrow Transplantation Research. After a median follow-up of 58 months (range, 2 to 160 months), the probability of treatment-related mortality was 44% (95% confidence interval [CI], 38%-50%) at 1-year. The 5-year incidence of relapse was 32% (95% CI, 27%-38%), and that of overall survival was 22% (95% CI, 18%-27%). Multivariate analysis revealed a significantly better overall survival with RIC regimens (hazard ratio [HR], 0.51; 95% CI, 0.35-0.75; $P < .001$), with Karnofsky Performance Status score $\geq 90\%$ (HR, 0.62; 95% CI, 0.47-0.82; $P = .001$) and in cytomegalovirus-negative recipients (HR, 0.64; 95% CI, 0.44-0.94; $P = .022$). A longer interval (>18 months) from auto-HCT to URD allo-HCT was associated with significantly lower risk of relapse (HR, 0.19; 95% CI, 0.09-0.38; $P < .001$) and improved leukemia-free survival (HR, 0.53; 95% CI, 0.34-0.84; $P = .006$). URD allo-HCT after auto-HCT relapse resulted in 20% long-term leukemia-free

survival, with the best results seen in patients with a longer interval to secondary URD transplantation, with a Karnofsky Performance Status score $\geq 90\%$, in complete remission, and using an RIC regimen. Further efforts to reduce treatment-related mortality and relapse are still needed. © 2013 American Society for Blood and Marrow Transplantation.

INTL MISC

Francis, M. R.; S. Roy; R. Sarkar; V. Balraj and G. Kang
Evaluation of a commercially available polyvinylidene fluoride membrane filtration system for water decontamination.

Indian Journal of Medical Microbiology. 2013, 31(1): 97-U144.

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NAT WOS:000317055000028 MISC

Gadalla, S. M.; C. Sales-Bonfim; J. Carreras; B. P. Alter; J. H. Antin; M. Ayas; P. Bodhi; J. Davis; S. M. Davies; E. Deconinck; H. J. Deeg; R. E. Duerst; A. Fasth; A. Ghavamzadeh; N. Giri; F. D. Goldman; E. A. Kolb; R. Krance; J. Kurtzberg; W. H. Leung; A. Srivastava; R. Or; C. M. Richman; P. S. Rosenberg; J. S. D. Toledo Codina; S. Shenoy; G. Socié; J. Tolar; K. M. Williams; M. Eapen and S. A. Savage

Outcomes of Allogeneic Hematopoietic cell transplantation in patients with Dyskeratosis Congenita. Biology of Blood and Marrow Transplantation. 2013, 19(8): 1238-1243.

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We describe outcomes after allogeneic transplantation in 34 patients with dyskeratosis congenita who underwent transplantation between 1981 and 2009. The median age at transplantation was 13 years (range, 2 to 35). Approximately 50% of transplantations were from related donors. Bone marrow was the predominant source of stem cells (24 of 34). The day-28 probability of neutrophil recovery was 73% and the day-100 platelet recovery was 72%. The day-100 probability of grade II to IV acute GVHD and the 3-year probability of chronic graft-versus-host disease were 24% and 37%, respectively. The 10-year probability of survival was 30%; 14 patients were alive at last follow-up. Ten deaths occurred within 4 months from transplantation because of graft failure (n= 6) or other transplantation-related complications; 9 of these patients had undergone transplantation from mismatched related or from unrelated donors. Another 10 deaths occurred after 4 months; 6 of them occurred more than 5 years after transplantation, and 4 of these were attributed to pulmonary failure. Transplantation regimen intensity and transplantations from mismatched related or unrelated donors were associated with early mortality. Transplantation of grafts from HLA-matched siblings with cyclophosphamide-containing nonradiation regimens was associated with early low toxicity. Late mortality was attributed mainly to pulmonary complications and likely related to the underlying disease. © 2013 American Society for Blood and Marrow Transplantation.

INTL

MISC

Germer, J. J.;P. Abraham;J. N. Mandrekar and J. D. C. Yao
Evaluation of the Abbott HBV RUO Sequencing Assay
Combined with Laboratory-Modified Interpretive
Software.

Journal of Clinical Microbiology. 2013, 51(1): 95-100.

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The Abbott HBV RUO Sequencing assay (Abbott
Molecular Inc., Des Plaines, IL), which combines
automated sample processing, real-time PCR, and
bidirectional DNA sequencing, was evaluated for
detection of nucleos(t)ide analogue (NA) resistance-
associated mutations located in the hepatitis B virus
(HBV) polymerase (Pol) gene. Interpretive software
from the assay manufacturer was modified to allow
interrogation of the overlapping HBV surface (S) gene
sequence for HBV genotype determination and
detection of immune escape mutations. Analytical
sensitivity (detection and sequencing) of the assay
was determined to be 103.9 IU/ml (95% confidence
interval [CI], 80.0 to 173.3) for HBV genotype A. Testing
of commercially available HBV genotype panels
consisting of 23 individual members yielded complete
agreement between expected results and results
obtained from the laboratory-developed HBV genotype
library. Excellent specificity was observed among
clinical specimens with serologic or molecular markers
for various unrelated blood-borne viruses (n = 6) and
sera obtained from healthy, HBV-negative blood donors
(n = 20). Retrospectively selected clinical specimens
tested by a commercial reference laboratory HBV
sequencing assay (n = 54) or the Trugene HBV
Genotyping kit (n = 7) and the Abbott HBV RUO
Sequencing assay showed minor differences in
detection and reporting of NA resistance-associated
mutations in 7 of 61 (11.5%) specimens but complete
agreement of genotype results. The Abbott HBV RUO
Sequencing assay provided a convenient and efficient
assay workflow suitable for routine clinical laboratory
use, with the flexibility to be modified for customized
detection of NA resistance-associated mutations, HBV
genotype determination, and detection of immune
escape mutations from a single contiguous HBV
sequence.

INTL WOS:000314105100016 MISC

Gupta, S.;S. Dawre;S. Lamba and A. K. Gupta

Is there a need to modify the mouth gag for palatoplasty?
J Craniofac Surg. 2013, 24(5): 1866.

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INTL PMID: 24036808 MISC

Hubbard, A. R.;J. Dodt;T. Lee;K. Mertens;R. Seitz;A.
Srivastava and M. Weinstein

Recommendations on the potency labelling of factor VIII
and factor IX concentrates.

Journal of Thrombosis and Haemostasis. 2013, 11(5): 988-
989.

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Drug Administration, Rockville, MD, United States

Sanquin Blood Supply Foundation, Amsterdam,
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INTL MISC

Jacob, K. S.

DSM-5 and culture: The need to move towards a shared
model of care within a more equal patient-physician
partnership.

Asian Journal of Psychiatry - 20 December 2013 (10.1016/
j.ajp.2013.11.012)

Christian Medical College, Vellore 632002, India

The universal models employed by psychiatry de-
emphasise the role of context and culture. Despite
highlighting the impact of culture on psychiatric
diagnosis and management in the Diagnostic and
Statistical Manual of Mental Disorders-5, most of the
changes suggested remain in the introduction and
appendices of the manual. Nevertheless, clinical and
biological heterogeneity within phenomenological
categories mandates the need to individualise care.
However, social and cultural context, patient beliefs
about causation, impact, treatment and outcome
expectations are never systematically elicited, as they
were not essential to diagnosis and classification.
Patient experience and narratives are trivialised and
the biomedical model is considered universal and

transcendental. The need to elicit patient perspectives, evaluate local reality, assess culture, educate patients about possible interventions, and negotiate a shared plan of management between patient and clinician is cardinal for success. The biopsychosocial model, which operates within a paternalistic physician-patient relationship, needs to move towards a shared approach, within a more equal patient-clinician partnership. © 2013 Elsevier B.V. All rights reserved.

INTL MISC

Jacob, K. S.

Employing psychotherapy across cultures and contexts.

Indian J Psychol Med. 2013, 35(4): 323-325.

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NAT PMID: 24379488 PMCID: 3868079 MISC

Jacob, K. S.;R. A. Kallivayalil;A. K. Mallik;N. Gupta;J. K. Trivedi;B. N. Gangadhar;K. Praveenlal;V. Vahia and T. S. Rao

Reply to Indian contribution to the cultural formulation interview and the DSM-5: Missing details from the position paper.

Indian J Psychiatry. 2013, 55(3): 308-309.

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

NAT PMID: 24082261 PMCID: 3777362 MISC

Janardhanan, J.;S. Joseph Martin;E. Astrup;R. Veeramanikandan;P. Aukrust;O. C. Abraham and G. M. Varghese

Single-nucleotide polymorphisms in Toll-like receptor (TLR)-2, TLR4 and heat shock protein 70 genes and susceptibility to scrub typhus.

J Hum Genet. 2013, 58(11): 707-710.

Medicine Unit I and Infectious Diseases, Christian Medical College, Vellore, India.

Scrub typhus is a highly prevalent bacterial infection in India and South Asia that is caused by *Orientia tsutsugamushi*. The innate immune response to infections is modulated by Toll-like receptors (TLRs) and heat shock proteins (HSPs). This study was done to assess the prevalence and possible association of TLR and HSP polymorphisms in scrub typhus. TLR4 Asp299Gly, TLR4 Thr399Ile, TLR2 Arg753Gln and HSP70-

2 A1267G are single-nucleotide polymorphisms (SNPs) that may modulate their activities, and these SNPs were assessed in 137 scrub typhus patients and 134 controls by PCR restriction fragment length polymorphism. We found that the two TLR4 mutations, TLR4 D299G and TLR4T399I, were present in 19.5% and 22% of the study population, respectively, and was in significant linkage disequilibrium with a D' of 0.8. The TLR2 mutation was found to be rare, whereas the HSP A>G mutation was very common (77.5%). Compared with the controls, the prevalence of heterozygous genotype of the TLR4D299G SNP, but not any of the other SNPs, was significantly higher among scrub typhus patients. Further studies using a larger sample size and more candidate genes may better enable in determining the role of these associations in susceptibility and severity of scrub typhus.

INTL PMID: 23985798 MISC

Jarrett, O. D.;C. A. Wanke;R. Ruthazer;I. Bica;R. Isaac and T. A. Knox

Metabolic syndrome predicts all-cause mortality in persons with human immunodeficiency virus.

Aids Patient Care and Stds. 2013, 27(5): 266-271.

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We examined the association between metabolic syndrome (MS) and its individual defining criteria on all-cause mortality in human immunodeficiency virus (HIV)-infected persons. We used data from 567 HIV-infected participants of the Nutrition for Healthy Living study with study visits between 9/1/2000 and 1/31/2004 and determined mortality through 12/31/2006. MS was defined using modified National Cholesterol Education Program guidelines. Cox proportional hazards for all-

cause mortality were estimated for baseline MS status and for its individual defining criteria. There were 83 deaths with median follow-up of 63 months. Baseline characteristics associated with increased risk of mortality were: older age in years (univariate hazard ratio [HR] 1.04, $p < 0.01$), current smoking (HR 1.99, $p = 0.02$), current heroin use (HR 1.97, $p = 0.02$), living in poverty (HR 2.0, $p < 0.01$), higher mean HIV viral load (HR 1.81, $p < 0.01$), and having a BMI < 18 (HR 5.84, $p < 0.01$). For MS and its criteria, only low HDL was associated with increased risk of mortality on univariate analysis (HR 1.84, $p = 0.01$). However, metabolic syndrome (adjusted HR 2.31, $p = 0.02$) and high triglycerides (adjusted HR 3.97, $p < 0.01$) were significantly associated with mortality beyond 36 months follow-up. MS, low HDL, and high triglycerides are associated with an increased risk of mortality in HIV-infected individuals. © 2013, Mary Ann Liebert, Inc.

INTL MISC

Jayawardena, R.; N. M. Byrne; M. J. Soares; P. Katulanda; B. Yadav and A. P. Hills

High dietary diversity is associated with obesity in Sri Lankan adults: an evaluation of three dietary scores.

BMC Public Health. 2013, 13.

[Jayawardena, Ranil; Byrne, Nuala M.] Queensland Univ Technol, Fac Hlth, Inst Hlth & Biomed Innovat, Brisbane, Qld 4001, Australia. [Jayawardena, Ranil; Katulanda, Prasad] Univ Colombo, Fac Med, Diabet Res Unit, Colombo, Sri Lanka. [Soares, Mario J.] Curtin Univ Technol, Fac Hlth Sci, Sch Publ Hlth, Curtin Hlth Innovat Res Inst, Perth, WA, Australia. [Yadav, Bijesh] Christian Med Coll & Hosp, Dept Biostat, Vellore, Tamil Nadu, India. [Hills, Andrew P.] Griffith Univ, Mater Mothers Hosp, Mater Med Res Inst, Brisbane, Qld 4111, Australia. [Hills, Andrew P.] Griffith Univ, Griffith Hlth Inst, Brisbane, Qld 4111, Australia.

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Background: Dietary diversity is recognized as a key element of a high quality diet. However, diets that offer a greater variety of energy-dense foods could increase food intake and body weight. The aim of this study was to explore association of diet diversity with obesity in Sri Lankan adults.

Methods: Six hundred adults aged > 18 years were randomly selected by using multi-stage stratified

sample. Dietary intake assessment was undertaken by a 24 hour dietary recall. Three dietary scores, Dietary Diversity Score (DDS), Dietary Diversity Score with Portions (DDSP) and Food Variety Score (FVS) were calculated. Body mass index (BMI) $\geq 25 \text{ kg.m}^{-2}$ is defined as obese and Asian waist circumference cut-offs were used diagnosed abdominal obesity.

Results: Mean of DDS for men and women were 6.23 and 6.50 ($p = 0.06$), while DDSP was 3.26 and 3.17 respectively ($p = 0.24$). FVS values were significantly different between men and women 9.55 and 10.24 ($p = 0.002$). Dietary diversity among Sri Lankan adults was significantly associated with gender, residency, ethnicity, education level but not with diabetes status. As dietary scores increased, the percentage consumption was increased in most of food groups except starches. Obese and abdominal obese adults had the highest DDS compared to non obese groups ($p < 0.05$). With increased dietary diversity the level of BMI, waist circumference and energy consumption was significantly increased in this population.

Conclusion: Our data suggests that dietary diversity is positively associated with several socio-demographic characteristics and obesity among Sri Lankan adults. Although high dietary diversity is widely recommended, public health messages should emphasize to improve dietary diversity in selective food items.

INTL WOS:000317775200001 MISC

John, J. and G. Kang

Protection is not just about preventing disease: vaccine equity and ethics in the developing world.

Indian J Med Ethics. 2013, 10(4): 256-259.

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NAT PMID: 24152352 MISC

John, R. R.;D. S. Raju;N. Nesadeepam and L. G. Mathew
CHILD'S PERCEPTION OF HIS/HER ABILITY VERSUS A QOL ASSESSMENT SCORE IN A COHORT OF CHILDREN TREATED FOR OSTEOSARCOMA.

Pediatric Blood & Cancer. 2013, 60: 147-147.

[John, R. R.; Raju, D. S.; Nesadeepam, N.; Mathew, L. G.]
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INTL WOS:000324735501082 MISC

Julka, P. K.;R. T. Chacko;S. Nag;R. Parshad;A. Nair;C. B. Koppiker;F. C. R. Xue;H. Barraclough;N. Dhindsa;A. Seth;A. Majumdar and T. Puri

A phase 2 study of sequential neoadjuvant chemotherapy with gemcitabine and doxorubicin followed by gemcitabine and cisplatin in patients with large or locally advanced operable breast cancer: results from long-term follow-up.

Breast Cancer. 2013, 20(4): 357-362.

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Neoadjuvant chemotherapy (NACT) is being increasingly used for patients with large-size operable breast cancer. This phase 2 study of sequential NACT with gemcitabine and doxorubicin (Gem + Dox) followed by gemcitabine and cisplatin (Gem + Cis) was conducted in women with large or locally advanced breast cancer. The objectives were to evaluate the pathological complete response (pCR) rate, toxicity, pathological and genetic markers predicting response, the proportion of patients undergoing breast conservation surgery, progression-free survival (PFS)

and overall survival (OS) after 5 years, and time to treatment failure (TtTF). In this manuscript, we report the long-term OS, PFS, and TtTF results. Female patients aged at least 18 years with large T2 (at least 3 cm) or locally advanced (T3, T4, or N2) breast carcinoma were included. Treatment consisted of 4 cycles of Gem + Dox (gemcitabine 1,200 mg/m² on days 1 and 8 plus doxorubicin 60 mg/m² on day 1 of each 21-day cycle), followed by 4 cycles of Gem + Cis (gemcitabine 1,000 mg/m² on days 1 and 8 plus cisplatin 70 mg/m² on day 1 of each 21-day cycle), and then surgery. Sixty-five patients were enrolled. The pCR rate was 20%. The 5-year OS probability was 71% (95% CI 56-82%), and the 4-year PFS and TtTF probabilities were 63% (95% CI 48-74%) and 45% (95% CI 32-57%), respectively. NACT with Gem + Dox followed by Gem + Cis was efficacious in patients with operable breast cancer.

INTL WOS:000325419600012 MISC

Kahl, S.;K. Strassburger;B. Nowotny;R. Livingstone;B. Kluppelholz;J. H. Hwang;G. Giani;G. Pacini;A. Gastaldelli and M. Roden

Importance of liver fat indices for diagnosis of hepatic steatosis.

Experimental and Clinical Endocrinology & Diabetes. 2013, 121(3).

[Kahl, S.; Strassburger, K.; Nowotny, B.; Klueppelholz, B.; Hwang, J. H.; Giani, G.; Roden, M.] Univ Dusseldorf, Leibniz Ctr Diabet Res, German Diabet Ctr DDZ, D-40225 Dusseldorf, Germany. [Livingstone, R.] Christian Med Coll & Hosp, Vellore 632004, Tamil Nadu, India. [Pacini, G.] CNR, Inst Biomed Engn, Padua, Italy. [Gastaldelli, A.] CNR, Inst Clin Physiol, Pisa, Italy.

INTL WOS:000316659000153 MISC

Kang, G.

Case studies, case series and biological plausibility.
J Biosci. 2013, 38(5): 825-827.

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NAT PMID: 24296884 MISC

Kekre, N. S.

Recertification: Overhyped or need of the hour.

Indian J Urol. 2013, 29(1): 1.

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NAT PMID: 23671355 PMCID: 3649590 MISC

Kekre, N. S.

Assessing surgical competence: A challenge.

Indian J Urol. 2013, 29(3): 159-160.

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NAT PMID: 24082431 PMCID: 3783690 MISC

Kekre, N. S.

The last editorial.

Indian J Urol. 2013, 29(4): 271-272.

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NAT PMID: 24235785 PMCID: 3822339 MISC

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

Implications of acquired environmental enteric dysfunction for growth and stunting in infants and children living in low-and middle-income countries.

Food and Nutrition Bulletin. 2013, 34(3): 357-364.

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Federal University of Ceara, Fortaleza, Brazil

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Bill and Melinda Gates Foundation, Seattle, WA, United States

Changes in small bowel function early in infancy in developing countries are increasingly being demonstrated, probably accompanied by altered mucosal architecture in most individuals, including reduced enterocyte mass and evidence of immune activation and inflammation in the mucosa. These alterations appear to be the result of factors of uncertain nature in the environment, and may be a cause of growth faltering and stunting in young children. For these reasons, this constellation of findings is being referred to as environmental enteropathy, or as we propose herein, environmental enteric dysfunction. If the causes were known and effective interventions were available, strategies and policies to intervene at-or possibly before-birth could be developed and promoted in order to prevent subsequent malnutrition and recurrent infection, which are known to interact in a cyclical and synergistic manner in a downward clinical course often ending in death. Resources would be mobilized and applied differently, and the emphasis would change from treatment to prevention. In order to move in this highly desired direction, investments in research will be required to establish the criteria to assess environmental enteric dysfunction, determine its predictive value for growth faltering and stunting, identify the causes, and propose and test potential interventions. The concepts and tools are available. What is required is the decision to move forward along this pathway to better health for infants and children in low-income countries. © 2013, The United Nations University.

INTL MISC

Krishnagopal, A.;S. Hareendran;D. Sen;A. Srivastava and G. R. Jayandharan

Regulation of Host Cellular DNA Binding Proteins Augment the Gene Transfer Efficiency of Adeno-Associated Virus (AAV) Vectors.

Molecular Therapy. 2013, 21: S128-S128.

[Krishnagopal, Akshaya; Hareendran, Sangeetha; Srivastava, Alok; Jayandharan, Giridhara R.] Christian Med Coll & Hosp, Ctr Stem Cell Res, Vellore, Tamil Nadu, India.

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INTL WOS:000319858400330 MISC

Krothapalli, S. B.

Carotid Endarterectomies: Who are the Candidates at Risk?

J Clin Neurophysiol. 2013, 30(6): 620.

Christian Medical College Hospital, Vellore, India.

ABSTRACT OF REVIEWED ARTICLE: Predictors of clamp-induced electroencephalographic changes during carotid endarterectomies. Simon MV, Chiappa KH, Kilbride RD, Rordorf GA, Cambria RP, et al. J Clin Neurophysiol 2012;29:462-467. Objective: Electroencephalograms detect clamp-induced cerebral ischemia during carotid endarterectomy, and thus impact management and minimize the risk of perioperative stroke. We hypothesized that age, preoperative neurologic symptoms, $\geq 70\%$ contralateral carotid, and bilateral vertebral stenosis increase the probability of clamp-induced electroencephalogram changes, whereas $\geq 70\%$ unilateral carotid stenosis does not.

Methods: This is an observational cohort study of 299 patients who underwent carotid endarterectomy with electroencephalogram monitoring at a single large urban academic medical center in 2009. Univariate and multivariate logistic regression analyses were used.

Results: Seventy percent or greater ipsilateral carotid stenosis decreases the odds of clamp-induced neurophysiologic dysfunction (odds ratio = 0.43, 95% confidence interval [0.18-0.99], $P = 0.04$) after adjustment for symptomatic status, degree contralateral carotid or vertebral stenosis, and age. Preoperative neurologic symptoms, $\geq 70\%$ contralateral carotid stenosis, and bilateral extracranial vertebral stenosis independently increase these odds (odds ratio 2.62, 95% confidence interval [1.32-5.18], $P = 0.005$; odds ratio 2.84, 95% confidence interval

[1.27-6.34], $P = 0.01$; and odds ratio 3.58, 95% confidence interval [1.02-12.53], $P = 0.04$, respectively), after adjustment for the other factors. Age ≥ 70 years has no significant impact.

Conclusions: Preoperative neurologic symptoms, $\geq 70\%$ contralateral carotid, and bilateral vertebral stenosis increase the probability of clamp-induced ischemia as detected by intraoperative electroencephalogram, whereas $\geq 70\%$ ipsilateral carotid stenosis decreases it.

INTL PMID: 24300987 MISC

Kumar, A.;S. S. Datta;S. D. Wright;V. A. Furtado and P. S. Russell

Atypical antipsychotics for psychosis in adolescents.

Cochrane Database of Systematic Reviews. 2013, (10).

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Background Schizophrenia often presents in adolescence, but current treatment guidelines are based largely on studies of adults with psychosis. Over the past decade, the number of studies on treatment of adolescent-onset psychosis has increased. The current systematic review collates and critiques evidence obtained on the use of various atypical antipsychotic medications for adolescents with psychosis. Objectives To investigate the effects of atypical antipsychotic medications in adolescents with psychosis. We reviewed in separate analyses various comparisons of atypical antipsychotic medications with placebo or a typical antipsychotic medication or another atypical antipsychotic medication or the same atypical antipsychotic medication but at a lower dose. Search methods We searched the Cochrane Schizophrenia Group Register (October 2011), which is based on regular searches of BIOSIS, CENTRAL, CINAHL, EMBASE, MEDLINE and PsycINFO. We inspected references of all identified studies and contacted study

authors and relevant pharmaceutical companies to ask for more information. Selection criteria We included all relevant randomised controlled trials (RCTs) that compared atypical antipsychotic medication with placebo or another pharmacological intervention or with psychosocial interventions, standard psychiatric treatment or no intervention in children and young people aged 13 to 18 years with a diagnosis of schizophrenia, schizoaffective disorder, acute and transient psychoses or unspecified psychosis. We included studies published in English and in other languages that were available in standardised databases. Data collection and analysis Review authors AK and SSD selected the studies, rated the quality of the studies and performed data extraction. For dichotomous data, we estimated risk ratios (RRs) with 95% confidence intervals (CIs) using a fixed-effect model. When possible, for binary data presented in the 'Summary of findings' table, we calculated illustrative comparative risks. We summated continuous data using the mean difference (MD). Risk of bias was assessed for included studies. Main results We included 13 RCTs, with a total of 1112 participants. We found no data on service utilisation, economic outcomes, behaviour or cognitive response. Trials were classified into the following groups. 1. Atypical antipsychotics versus placebo Only two studies compared one atypical antipsychotic medication with placebo. In one study, the number of non-responders treated with olanzapine was not different from the number treated with placebo (1 RCT, $n = 107$, RR 0.84, 95% CI 0.65 to 1.10); however, significantly more (57% vs 32%) people left the study early (1 RCT, $n = 107$, RR 0.56, 95% CI 0.36 to 0.87) from the placebo group compared with the olanzapine group. With regard to adverse effects, young people treated with aripiprazole had significantly lower serum cholesterol compared with those given placebo (1 RCT, $n = 302$, RR 3.77, 95% CI 1.88 to 7.58). 2. Atypical antipsychotics versus typical antipsychotics When the findings of all five trials comparing atypical antipsychotic medications with a typical antipsychotic medication were collated, no difference in the mean end point Brief Psychiatric Rating Scale (BPRS) score was noted between the two arms (5 RCTs, $n = 236$, MD -1.08, 95% CI -3.08 to 0.93). With regard to adverse effects, the mean end point serum prolactin concentration was much higher than the reference range for treatment with risperidone, olanzapine and

molindone in one of the studies. However, fewer adolescents who were receiving atypical antipsychotic medications left the study because of adverse effects (3 RCTs, $n = 187$, RR 0.65, 95% CI 0.36 to 1.15) or for any reason (3 RCTs, $n = 187$, RR 0.62, 95% CI 0.39 to 0.97). 3. One atypical antipsychotic versus another atypical antipsychotic The mean end point BPRS score was not significantly different for people who received risperidone compared with those who received olanzapine; however, the above data were highly skewed. Overall no difference was noted in the number of people leaving the studies early because of any adverse effects between each study arm in the three studies comparing olanzapine and risperidone (3 RCTs, $n = 130$, RR 1.15, 95% CI 0.44 to 3.04). Specific adverse events were not reported uniformly across the six different studies included in this section of the review; therefore it was difficult to do a head-to-head comparison of adverse events for different atypical antipsychotic medications. 4. Lower-dose atypical antipsychotic versus standard/higher-dose atypical antipsychotic Three studies reported comparisons of lower doses of the atypical antipsychotic medication with standard/higher doses of the same medication. One study reported better symptom reduction with a standard dose of risperidone as compared with a low dose (1 RCT, $n = 257$, RR -8.00, 95% CI -13.75 to -2.25). In another study, no difference was reported in the number of participants not achieving remission between the group receiving 10 mg/d and those who received 30 mg/d of aripiprazole (1 RCT, $n = 196$, RR 0.84, 95% CI 0.48 to 1.48). Similarly in the other study, authors reported no statistically significant difference in clinical response between the two groups receiving lower-dose (80 mg/d) and higher-dose (160 mg/d) ziprasidone, as reflected by the mean end point BPRS score (1 RCT, $n = 17$, MD -4.40, 95% CI -19.20 to 10.40). Authors' conclusions No convincing evidence suggests that atypical antipsychotic medications are superior to typical medications for the treatment of adolescents with psychosis. However, atypical antipsychotic medications may be more acceptable to young people because fewer symptomatic adverse effects are seen in the short term. Little evidence is available to support the superiority of one atypical antipsychotic medication over another, but side effect profiles are different for different medications. Treatment with olanzapine, risperidone and clozapine is often

associated with weight gain. Aripiprazole is not associated with increased prolactin or with dyslipidaemia. Adolescents may respond better to standard-dose as opposed to lower-dose risperidone, but for aripiprazole and ziprasidone, lower doses may be equally effective. Future trials should ensure uniform ways of reporting.

INTL WOS:000326373200031 **MISC**

Kunju, N.;R. Ojha and S. R. Devasahayam

A palmar pressure sensor for measurement of upper limb weight bearing by the hands during transfers by paraplegics.

J Med Eng Technol. 2013 Oct;37(7):424-8. doi: 10.3109/03091902.2013.825017. Epub 2013 Aug 22.

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Paraplegic patients have to effect transfer from one seat to another by using their upper limbs. In this process the hands bear almost the entire weight of the body in at least some phases of the transfer. It is desirable to train patients, especially those who are elderly and otherwise weak, to distribute their weight so as to avoid large forces being sustained on any one hand for an extended period. It is also desirable to evaluate the effectiveness of assistive devices like lower limb FES in sharing the load on the hand. This study presents a simple and versatile method of measuring palmar hand force during transfers by paraplegic patients. It is important that this force sensor should not interfere with the grasping and stabilizing properties of the hands and should permit normal transferring. The force sensor comprises an air-filled pouch or pillow that can be placed on any surface. This pneumatic sensor feels like upholstery padding on the surface on which it is placed. The sensor integrates the total pressure applied to the surface of the pouch, thereby obtaining the total force exerted by the palm/hand. The fabrication of the sensor is described, as well as the associated measurement circuit. The static calibration shows that the sensor is linear up to 350 N and the dynamic calibration shows that it has a bandwidth of 13 Hz. The sensor was fabricated using an inflated inelastic airbag attached to a pressure transducer. An automatic offset correction circuit in the preamplifier module ensures that any offset due to initial pressure or sensor drift is removed and the output is zero under no load condition. The key to this sensor

arrangement is the ease of fitting it into the intended location without disturbing the existing arrangement for the subject's activities of daily living (ADL).

INTL PMID:23964668 **MISC**

Lakshmana Gowda, K.;J. John;M. A. M. Marie;G. Sangeetha and S. R. Bindurani

Isolation and characterization of quorum-sensing signalling molecules in Pseudomonas aeruginosa isolates recovered from nosocomial infections.

APMIS. 2013 Sep;121(9):886-9. doi: 10.1111/apm.12047. Epub 2013 Jan 18.

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Pseudomonas aeruginosa is one of the most common pathogens in nosocomial infections. Many studies have documented the role of quorum-sensing (QS) systems in antibiotic tolerance of *P. aeruginosa*. N-acyl homoserine lactones (AHLs) serve as QS signalling molecules and can be a target for modulating bacterial pathogenicity. In this study, nosocomial isolates of *P. aeruginosa* were characterized for the presence of different types of QS signalling molecules. AHLs were solvent extracted and quantified by determination of α -galactosidase activity using the *Escherichia coli* MG4 reporter strain. Further characterization was performed by analytical thin layer chromatography coupled with detection using the *Agrobacterium tumefaciens* A136 biosensor strain. All *P. aeruginosa* isolates produced AHLs, but there were differences in the quantity and nature of AHLs. We identified AHLs belonging to C4-homoserine lactone (HSL), C6-HSL, C8-HSL, C10-HSL and C12-HSL. AHL profiling of *P. aeruginosa* isolates showed differences in the amounts and types of AHLs, suggesting differences in the virulence factors and the potential for infection. Our results may be investigated further using animal model systems. © 2013 APMIS. Published by John Wiley & Sons Ltd.

INTL PMID:23331337 **MISC**

Lee, S. J.;B. Storer;H. Wang;H. M. Lazarus;E. K. Waller;L. M. Isola;T. R. Klumpp;J. B. C. Umejiego;B. N. Savani;A. W. Loren;M. S. Cairo;B. M. Camitta;C. S. Cutler;B. George;H. Jean Khoury;D. I. Marks;D. A. Rizzieri;E. A. Copelan;V. Gupta;J. L. Liesveld;M. R. Litzow;A. M. Miller;H. C. Schouten;R. P. Gale;J. Y. Cahn and D. J. Weisdorf

Providing personalized prognostic information for adult leukemia survivors.

Biol Blood Marrow Transplant. 2013 Nov;19(11):1600-7. doi: 10.1016/j.bbmt.2013.08.013. Epub 2013 Sep 6.

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Prediction of subsequent leukemia-free survival (LFS) and chronic graft-versus-host disease (GVHD) in adults with acute leukemia who survived at least 1 year after allogeneic hematopoietic cell transplantation is difficult. We analyzed 3339 patients with acute myeloid leukemia and 1434 patients with acute lymphoblastic leukemia who received myeloablative conditioning and related or unrelated stem cells from 1990 to 2005. Most clinical factors predictive of LFS in 1-year survivors were no longer significant after 2 or more years. For acute myeloid leukemia, only disease status (beyond first complete remission) remained a significant adverse risk factor for LFS 2 or more years after transplantation. For lymphoblastic leukemia, only extensive chronic GVHD remained a significant adverse predictor of LFS in the second and subsequent years. For patients surviving for 1 year without disease relapse or extensive chronic GVHD, the risk of developing extensive chronic GVHD in the next year was 4% if no risk factors were present and higher if noncyclosporine-based GVHD prophylaxis, an HLA-mismatched donor, or peripheral blood stem cells were used. Estimates for subsequent LFS and extensive chronic GVHD can be derived for individual patients or populations using an online calculator (<http://www.cibmtr.org/LeukemiaCalculators>). This prognostic information is more relevant for survivors than estimates provided before transplantation. © 2013 American Society for Blood and Marrow Transplantation.

INTL PMID:24018394 PMCID:PMC3832127 MISC

Maruo, K.;Y. Ha;S. Inoue;S. Samuel;E. Okada;S. S. Hu;V. Deviren;S. Burch;S. William;C. P. Ames;P. V. Mummaneni;D. Chou and S. H. Berven

Predictive factors for proximal junctional kyphosis in long fusions to the sacrum in adult spinal deformity.

Spine (Phila Pa 1976). 2013, 38(23): E1469-1476.

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STUDY DESIGN: A retrospective study.

OBJECTIVE: To assess the mechanisms and the independent risk factors associated with proximal junctional kyphosis (PJK) in patients treated surgically for adult spinal deformity with long fusions to the sacrum.

SUMMARY OF BACKGROUND DATA: The occurrence of PJK may be related to preoperative and postoperative sagittal parameters. The mechanisms and risk factors for PJK in adults are not well defined.

METHODS: Consecutive patients who underwent long instrumented fusion surgery (≥ 6 vertebrae) to the sacrum with a minimum of 2 years of follow-up were retrospectively studied. Risk factors included patient factors, surgical factors, and radiographical parameters such as thoracic kyphosis (TK), lumbar lordosis (LL), sagittal vertical axis, pelvic tilt, and pelvic incidence.

RESULTS: Ninety consecutive patients (mean age, 64.5 yr) met inclusion criteria. Radiographical PJK occurred in 37 of the 90 (41%) patients with a mean follow-up of 2.9 years. The most common mechanism of PJK was fracture at the upper instrumented vertebra (UIV) in 19 (51%) patients. Twelve (13%) patients with PJK were treated surgically with proximal extension of the instrumented fusion. Preoperative TK more than 30 degrees, preoperative proximal junctional angle more than 10 degrees, change in LL more than 30 degrees, and pelvic incidence more than 55 degrees were identified as predictors associated with PJK. Achievement of ideal global sagittal realignment (sagittal vertical axis < 50 mm, pelvic tilt < 20 degrees, and pelvic incidence-LL $< \pm 10$ degrees) protected against the development of PJK (19% vs. 45%). A

multivariate regression analysis revealed changes in LL more than 30 degrees, and preoperative TK more than 30 degrees were the independent risk factors associated with PJK.

CONCLUSION: Fracture at the UIV was the most common mechanism for PJK. Change in LL more than 30 degrees and pre-existing TK more than 30 degrees were identified as independent risk factors. Optimal postoperative alignment of the spine protects against the development of PJK. A surgical strategy to minimize PJK may include preoperative planning for reconstructions with a goal of optimal postoperative alignment. Level of Evidence: 3.

INTL PMID: 23921319 MISC

McKie, A.;N. Patel;J. Varghese;P. Masaratana;M. Jacob;O. Latunde-Dada and R. J. Simpon

ATO8 REGULATES HEPICIDIN TRANSCRIPTION, CELLULAR PSMAD1,5,8 LEVELS AND IS SUPPRESSED BY ERYTHROPOIETIC ACTIVITY.

American Journal of Hematology. 2013, 88(5): E53-E53.

[McKie, Andrew] Kings Coll London, London, England. [Patel, Neeta; Latunde-Dada, Oluyemisi; Simpon, Robert J.] Kings Coll London, Div Diabet & Nutr Sci, London, England. [Varghese, Joe; Jacob, Molly] Christian Med Coll & Hosp, Dept Biochem, Vellore, Tamil Nadu, India. [Masaratana, Patarabutr] Siriraj Hosp, Fac Med, Dept Biochem, Bangkok, Thailand.

INTL WOS:000318043500081 MISC

McMahon, J. H.;A. Manoharan;C. A. Wanke;S. Mammen;H. Jose;T. Malini;T. Kadavanu;M. R. Jordan;J. H. Elliott;S. R. Lewin and D. Mathai

Pharmacy and self-report adherence measures to predict virological outcomes for patients on free antiretroviral therapy in Tamil Nadu, India.

Aids and Behavior. 2013, 17(6): 2253-2259.

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Burnet Institute, Melbourne, VIC, Australia

Over 480,000 individuals receive free antiretroviral therapy (ART) in India yet data associating ART adherence with HIV viral load for populations exclusively receiving free ART are not available. Additionally estimates of adherence using pharmacy data on ART pick-up are not available for any population in India. After 12-months ART we found self-reported estimates of adherence were not associated with HIV viral load. Individuals with <100 % adherence using pharmacy data predicted HIV viral load, and estimates combining pharmacy data and self-report were also predictive. Pharmacy adherence measures proved a feasible method to estimate adherence in India and appear more predictive of virological outcomes than self-report. Predictive adherence measures identified in this study warrant further investigation in populations receiving free ART in India to allow for identification of individuals at risk of virological failure and in need of adherence support. © 2013 Springer Science+Business Media New York.

INTL MISC

McMahon, J. H.;A. Manoharan;C. Wanke;S. Mammen;H. Jose;T. Malini;T. Kadavanu;M. R. Jordan;J. H. Elliott;S. R. Lewin and D. Mathai

Targets for intervention to improve virological outcomes for patients receiving free antiretroviral therapy in Tamil Nadu, India.

AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV. 2013. Oct 15. [Epub ahead of print]

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Operational research to identify factors predicting poor clinical outcomes is critical to maximize patient care and prolong first-line regimens for those receiving free antiretroviral therapy (ART) in India. We sought to identify social or clinical factors amenable to intervention that predict virological outcomes after 12 months of ART. We examined a retrospective cohort of consecutive adults initiating free nonnucleoside reverse transcriptase inhibitor-based regimens. Individuals remaining in care 12 months post-ART initiation were tested for HIV viral load and surveyed to identify barriers and facilitators to adherence, and to determine clinic travel times and associated costs. Uni- and multivariate logistic regression identified factors predicting HIV viral load >200 copies/mL after 12 months of ART. Of 230 adults initiating ART, 10% of patients died, 8% transferred out, 5% were lost to follow-up, and 174/230 (76%) completed 12 months of ART, the questionnaire, and viral load testing. HIV viral load was <200 copies/mL in 140/174 (80%) patients. In multivariate models, being busy with work or caring for others (OR 2.9, $p < 0.01$), having clinic transport times ≥ 3 hours (OR 3.0, $p = 0.02$), and alcohol use (OR 4.8, $p = 0.03$) predicted viral load >200 copies/mL after 12 months of ART. Clinical outcomes following ART are related to programmatic factors such as prolonged travel time and individual factors such as being busy with family or using alcohol. Simple interventions that alter these factors should be

evaluated to improve clinical outcomes for populations receiving free ART in similar settings. © 2013 Taylor & Francis.

INTL PMID:24125035 MISC

Muthukumar, K.; M. S. Kamath; A. M. Mangalaraj; T. Aleyamma; A. Chandy and K. George

Comparison of clinical outcomes following vitrified warmed day 5/6 blastocyst transfers using solid surface methodology with fresh blastocyst transfers.

J Hum Reprod Sci. 2013, 6(1): 59-64.

Reproductive Medicine Unit, Christian Medical College, Vellore, Tamil Nadu, India.

OBJECTIVES: The literature regarding clinical outcomes following day 5/6 vitrified warmed blastocysts transfer has been conflicting. We decided to evaluate and compare the clinical outcomes following vitrified warmed day 5/6 blastocyst transfer using a solid surface vitrification protocol with fresh blastocyst transfers.

SETTINGS: University teaching hospital.

STUDY DESIGN: A total of 249 women were retrospectively analyzed: 146 fresh day 5 blastocyst (group 1), 57 day 5 vitrified warmed blastocyst (group 2), and 46 vitrified warmed day 6 blastocyst (group 3) transfer cycles. Vitrification was done using solid surface methodology (non immersion protocol). The main outcomes were implantation rates, clinical pregnancy, and live birth rate per embryo transfer.

RESULTS: The baseline clinical characteristics were similar among all three groups. The implantation and clinical pregnancy rates following vitrified warmed day 6 blastocyst transfers (20.9% and 32.6%) were significantly lower as compared to day 5 fresh and vitrified warmed day 5 blastocyst transfers (40.3% and 56.1%, 36.3%, and 52.6%). However, there was no significant difference in the live birth rates across the three groups (group 1: 37.6%, group 2: 40.3%, and group 3: 28.2%).

CONCLUSION: No statistically significant difference was observed in live birth rates between fresh day 5 blastocyst transfers and vitrified warmed day 5/6 blastocyst transfers. Vitrification of blastocysts using solid surface methodology is an efficient method of cryopreservation.

INTL PMID: 23869154 PMCID: 3713580 MISC

Naik, G. S.; T. S. Vijayakumar; M. Krishnan; S. K. Mathew; D. H. Fleming; M. Thomas and R. George

"A Study on the Association of HLA-B*1502 and Severe Cutaneous Adverse Drug Reactions Induced by Aromatic Amine Anti-Epileptic Drugs in Indian Patients": An Interim Report.

Therapeutic Drug Monitoring. 2013, 35(5): 711-711.

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INTL WOS:000324887600168 MISC

Nair, M. K. C. and P. S. Russell

Development and normative validation of Developmental Assessment Tool for Anganwadis for 3- to 4-year-old children (DATA-II).

Journal of Clinical Epidemiology. 2013, 66(1): 23-29.

[Russell, P. S.] Christian Med Coll & Hosp, Dept Psychiat, Facil Children Intellectual Disabil, Child & Adolescent Psychiat Unit, Vellore 632002, Tamil Nadu, India. [Nair, M. K. C.] Coll Med, Child Dev Ctr, Thiruvananthapuram 695011, Kerala, India.

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Objective: To develop, standardize, and validate a developmental scale for children. 3-4 years old, attending Anganwadis (Integrated Child Development Scheme) in India, as a follow-up assessment. using a normative approach.

Study Design and Setting: After the development of the 12-item Developmental Assessment Tool for Anganwadis (DATA-II), its internal consistency as well as face, content, and construct validities were studied in 100 children in Anganwadis and were found to be appropriate. A total of 385 children with a mean (standard deviation) age of 43.05 (5.02) months from randomly selected 36 Anganwadis were recruited for its standardization. Raw scores were converted to standardized T scores. Scoring pattern for domains and aggregate developmental scores were formulated.

Results: Except for four items in the original scale, all the items were endorsed by parents suggesting a good content validity, and Kuder-Richardson Formula 20 coefficient of 0.80 suggested a high internal consistency. Factor analysis replicated the six-factor structure explaining 76.5% of variance. An aggregated developmental score based on the standardized T scores demonstrated that a DATA-II score between 29 and 33 suggested “at risk” for developing developmental delays. A score of 28 or less suggested already delayed milestones. A score of 19-28 suggested a “mild delay,” 8-18 suggested a “moderate delay,” and 7 or less suggested a “severe delay” in development.

Conclusion: The DATA-II is a measure for use in Anganwadis for identifying children at risk or with developmental delays during the first follow-up assessment, in India, for appropriate referrals and interventions. (C) 2013 Elsevier Inc. All rights reserved.

INTL WOS:000311979100006 MISC

Nair, M. K. C.;B. Thiruvankiteswari;M. L. Leena;C. Nirmala;M. Manjula;B. George and P. S. S. Russell

ARSH 9: Lower Reproductive Tract Infections Among Unmarried Girls (15-24 y) - A Clinic Based Validation Study.

Indian Journal of Pediatrics. 2013, 80: S240-S243.

[Nair, M. K. C.; Leena, M. L.; George, Babu] Thiruvananthapuram Med Coll, Child Dev Ctr, Thiruvananthapuram 695011, Kerala, India. [Thiruvankiteswari, B.; Nirmala, C.; Manjula, M.] SAT Hosp, Dept Gynecol, Coll Med, Thiruvananthapuram, Kerala, India. [Russell, Paul Swamidhas Sudhakar] Christian Med Coll & Hosp, Child & Adolescent Psychiat Unit, Vellore, Tamil Nadu, India.

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Objective To compare clinical and laboratory diagnosis of lower reproductive tract infections (RTIs) in a clinic setting, among unmarried adolescents and young adults between 15 and 24 y and to validate clinical diagnosis of lower RTIs against the microbiological diagnosis as gold standard. **Methods** A structured questionnaire was administered among the participants to assess symptoms of lower reproductive tract infections and associated known risk factors. A

qualified gynecologist conducted the visual inspection of the external genitalia for any clinical evidence of lower RTIs and took cotton tipped swab from the vulva (outside the hymen) for laboratory examination. The swabs were examined by a qualified Laboratory Technician for evidence of candidiasis, and bacterial vaginosis. **Results** Out of the total of 427 unmarried girls enrolled in the study, 344 (80.6 %) belonged to the age group 15-19 y and 83 (19.4 %) to 20-24 y. The results of this clinic based study validating clinical diagnosis against laboratory diagnosis as gold standard have shown 62.69 % sensitivity, 97.78 % specificity, 0.76 positive predictive value, 0.96 negative predictive value and 92.27 overall accuracy. **Conclusions** The results of this clinic based study on unmarried adolescent lower reproductive tract infections validating clinical diagnosis against laboratory diagnosis as gold standard have shown a high 0.96 negative predictive value, suggesting that external genital examination is enough to rule out lower reproductive tract infections among unmarried adolescents.

NAT WOS:000326607300021 MISC

Nair, M. K. C.;G. S. H. Nair;B. George;N. Suma;C. Neethu;M. L. Leena and P. S. S. Russell

Development and Validation of Trivandrum Development Screening Chart for Children Aged 0-6 years [TDSC (0-6)].

Indian J Pediatr. 2013 Nov;80 Suppl 2:S248-55. doi: 10.1007/s12098-013-1144-2. Epub 2013 Sep 8.

Child Development Centre, Thiruvananthapuram Medical College, Thiruvananthapuram, 695 011, India

Clinical Epidemiology Resource and Training Centre and Radiology Department, Government Medical College, Thiruvananthapuram, India

Child and Adolescent Psychiatry Unit, Christian Medical College, Vellore, India

Objective: To develop and validate a simple screening tool for identifying developmental delay among children of 0-6 y of age in the community.

Methods: The 51-items of Trivandrum Development Screening Chart for children of 0-6 y [TDSC (0-6 y)], were carefully prepared from the norms in various existing developmental charts/scales, by experts keeping in mind the face validity and content validity. The criterion validity was assessed in a community

sample of 1,183 children of 0-6 y with a mean age of 35.38 mo (SD of 19.25) including 597 (50.46 %) boys and 586 (49.54 %) girls. TDSC (0-6 y) was validated against Denver Developmental Screening Test (DDST) as the 'Reference Standard'.

Results: When one item delay in TDSC (0-6 y) was considered as 'TDSC delay' (test positive), the sensitivity and specificity of TDSC (0-6 y) was found to be 84.62 % (95 % CI: 71.92-93.12) and 90.8 % (95 % CI: 88.97-92.43) respectively with a Negative Predictive Value of 99.23 % (95 % CI: 98.48-99.67) and LR (negative) of 0.17(95 % CI: 0.09-0.32). The test-retest and inter-rater reliability [an interclass correlation (ICC) of 0.77 for test-retest and ICC of 0.97 for inter-rater] were good and acceptable.

Conclusions: TDSC (0-6 y) is a simple, reliable and valid screening tool for use in the community to identify children between 0 and 6 y with developmental delay, enabling early intervention practices. © 2013 Dr. K C Chaudhuri Foundation.

NAT PMID:24014206 **MISC**

Nair, M. K. C.;G. S. H. Nair;B. George;N. Suma;C. Neethu;M. L. Leena and P. S. S. Russell
Development and Validation of Trivandrum Development Screening Chart for Children Aged 0-6 years TDSC (0-6).
Indian Journal of Pediatrics. 2013, 80: S248-S255.

[Nair, M. K. C.; George, Babu; Suma, N.; Neethu, C.; Leena, M. L.] Thiruvananthapuram Med Coll, Child Dev Ctr, Thiruvananthapuram 695011, Kerala, India. [Nair, G. S. Harikumar] Govt Med Coll, Clin Epidemiol Resource & Training Ctr, Thiruvananthapuram, Kerala, India. [Nair, G. S. Harikumar] Govt Med Coll, Dept Radiol, Thiruvananthapuram, Kerala, India. [Russell, Paul Swamidhas Sudhakar] Christian Med Coll & Hosp, Child & Adolescent Psychiat Unit, Vellore, Tamil Nadu, India.

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Objective To develop and validate a simple screening tool for identifying developmental delay among children of 0-6 y of age in the community. **Methods** The 51-items of Trivandrum Development Screening Chart for children of 0-6 y [TDSC (0-6 y)], were carefully prepared from the norms in various existing developmental charts/scales, by experts keeping in mind the face validity and content validity. The criterion validity was assessed in

a community sample of 1,183 children of 0-6 y with a mean age of 35.38 mo (SD of 19.25) including 597 (50.46 %) boys and 586 (49.54 %) girls. TDSC (0-6 y) was validated against Denver Developmental Screening Test (DDST) as the 'Reference Standard'. **Results** When one item delay in TDSC (0-6 y) was considered as 'TDSC delay' (test positive), the sensitivity and specificity of TDSC (0-6 y) was found to be 84.62 % (95 % CI: 71.92-93.12) and 90.8%(95% CI: 88.97-92.43) respectively with a Negative Predictive Value of 99.23%(95% CI: 98.48-99.67) and LR ((negative)) of 0.17(95 % CI: 0.09-0.32). The test-retest and inter-rater reliability [an interclass correlation (ICC) of 0.77 for test-retest and ICC of 0.97 for inter-rater] were good and acceptable. **Conclusions** TDSC (0-6 y) is a simple, reliable and valid screening tool for use in the community to identify children between 0 and 6 y with developmental delay, enabling early intervention practices.

NAT WOS:000326607300023 **MISC**

Nair, M. K. C.;G. S. Harikumar Nair;A. O. Mini;S. Indulekha;S. Letha and P. S. Russell
Development and validation of Language Evaluation Scale Trivandrum for children aged 0-3 years - LEST (0-3).
Indian Pediatr. 2013 May 8;50(5):463-7. Epub 2012 Nov 5.
Department of Pediatrics and Clinical Epidemiology, Child Development Centre, Government Medical College Campus, Thiruvananthapuram, Kerala, India

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Child and Adolescent Psychiatry Unit, Christian Medical College, Vellore, 632 002 Tamil Nadu, India

Objective: To develop and validate a simple screening tool which can be used in the Community to identify delay in language development among children of 0-3 years of age. **Methods:** The normal range for the 33-items of "Language Evaluation Scale Trivandrum for 0-3years-LEST(0-3)" were carefully selected from various existing language development charts and scales, by experts keeping in mind the face validity and content validity. The criterion validity was assessed using a community sample of 643 children of 0 to 3 years of age, including 340 (52.9%) boys. LEST (0-3) was validated against Receptive Expressive Emergent

Language Scale, for screening delay in language development among children of 0-3 years. Results: When one item delay was taken as 'LEST delay' (test positive), the sensitivity and specificity of LEST(0-3), was found to be 95.85% and 77.5%, respectively with a negative predictive value of 99.8% and LR (negative) of 0.05. When two item delay was taken as 'LEST delay' (test positive), the sensitivity and specificity of LEST(0-3), was found to be 66.7% and 94.8% respectively with a negative predictive value of 98.7% and LR (negative) of 0.35. The test-retest and inter-rater reliability were good and acceptable (Interclass correlation of 0.69 for test-retest and 0.94 for inter-rater). Conclusion: LEST (0-3) is a simple, reliable and valid screening tool for use in the community to identify children between 0-3 years with delay in language development, enabling early intervention practices. © 2013 Indian Academy of Pediatrics.

NAT PMID:23255695 **MISC**

Nair, M. K. C.; M. L. Leena; Y. Thankachi; B. George and P. S. S. Russell

ARSH 1: Reproductive and Sexual Health Problems of Adolescents and Young Adults: A Cross Sectional Community Survey on Knowledge, Attitude and Practice. Indian Journal of Pediatrics. 2013, 80: S192-S198.

[Nair, M. K. C.; Leena, M. L.; Thankachi, Yamini; George, Babu] Thiruvananthapuram Med Coll, Child Dev Ctr, Thiruvananthapuram 695011, Kerala, India. [Russell, Paul Swamidhas Sudhakar] Christian Med Coll & Hosp, Child & Adolescent Psychiat Unit, Vellore, Tamil Nadu, India.

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Objective To understand the problems faced and the difference in knowledge, attitude and practice of young people across the age group of 10-24 y on reproductive and sexual health issues and to get their suggestions regarding adolescent care services. **Methods** This cross sectional community survey involving three districts in Kerala was conducted among adolescents and young adults of 10-24 y using a population proportion to sample size technique. **Results** The main problems faced by the young people between 10 and 24 y of age were financial, substance abuse in family, poor academic performance, difference of opinion, disease in self/family, mental problems, lack of talent,

strict parents, difficulty in mingling, love failure, broken family, loneliness and problems at school/office in the descending order. As the age advances higher percentage of both boys (43.4 %) and girls (61.7 %) discuss reproductive sexual health issues among themselves. There was a statistically significant difference in personal hygiene practices like changing napkins/cloths more than once a day (94.3 %), cleaning genital organs with soap every day (71.7 %), washing after urination (69.2 %), washing from front to back after defecation (62.2 %) and washing hands with soap after defecation (73.2 %) between 10-14, 15-19, and 20-24 y age group with higher percentages in the older groups. In order to make the service more useful, more of the older group participants suggested giving information on adolescent services to parents, adolescents and society as a whole by creating better societal acceptance and keeping confidentiality in service delivery. **Conclusions** This study has shown an overall inadequacy in reproductive health knowledge in all age groups, but increasing knowledge gain and better attitude and practices on reproductive and sexual health as the age increases. The suggestions made by the group regarding need for adolescent reproductive sexual health (ARSH) and counseling services with privacy and confidentiality ensured, is useful for planning ARSH services under National Rural Health Mission.

NAT WOS:000326607300013 **MISC**

Nair, M. K. C.; P. S. S. Russell and K. Ellangovan

Editorial: The Fear Factor and Forbidden Facts.

Indian Journal of Pediatrics. 2013, 80: S129-S131.

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NAT WOS:000326607300001 **MISC**

Nair, M. K. C.;P. S. S. Russell;V. S. Subramaniam;S. Nazeema;A. Z. Sequeira;N. Chembagam and B. George
ADad 6: The Predictive Factors for Anxiety Disorders Among Adolescents in a Rural Community Population in India.

Indian J Pediatr. 2013 Nov;80 Suppl 2:S160-4. doi: 10.1007/s12098-013-1231-4. Epub 2013 Oct 5.

[Nair, M. K. C.; Subramaniam, Vinod Shanmukham; Nazeema, Suma; Chembagam, Neethu; George, Babu] Thiruvananthapuram Med Coll, Child Dev Ctr, Thiruvananthapuram 695011, Kerala, India. [Russell, Paul Swamidhas Sudhakar; Sequeira, Anupama Zeena] Christian Med Coll & Hosp, Child & Adolescent Psychiat Unit, Vellore, Tamil Nadu, India.

Nair, MKC (reprint author), Thiruvananthapuram Med Coll, Child Dev Ctr, Thiruvananthapuram 695011, Kerala, India.

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Objective Development of Anxiety Disorders (AD) among adolescents is the interplay of risk and protective factors that have a biological and environmental basis. This study documents the predictive factors associated with the presence of AD among adolescents in India. **Methods** The authors prospectively collected data for 500 adolescents in a community with independent, trained raters. Data on the dependent variable of AD and its subtypes was collected with Screen for Child Anxiety Related Emotional Disorders (SCARED), Socio-economic status with Modified Kuppuswamy Scale, depression with Beck Depression Inventory and the other independent variables with a specially designed proforma. The predictive factors for the presence of AD were analyzed with univariate and multivariate regression analyses appropriately, and a parsimonious predictive model was built. **Results** Gender (adjusted OR=1.96), and presence of Depressive Disorder (adjusted OR=24.14) emerged as independent risk factors. Level of education came-out as a protective factor (adjusted OR=0.66). Adolescent girls were at risk of developing Separation Anxiety Disorder (SeAD) (adjusted OR=3.51) and Social Anxiety Disorder (SoAD) (adjusted OR=1.69). Level of education had a protective influence on SeAD (adjusted OR=0.39) and SoAD (adjusted OR=0.59) among those doing high school. This protective effect increased if they were in higher-secondary school for SeAD (adjusted OR=0.21) and SoAD (adjusted OR=0.22). In the multivariate model age of the adolescent also gained significance and the 3-factor model had a good model fit. Panic Disorder and Generalized Anxiety

Disorder were not related to any specific variable. **Conclusions** Identifying the factors associated with AD and the subtypes can be used to predict, prevent or treat these disorders in this population. Educating adolescent girls to higher-secondary school level seem to be an important step in this direction.

NAT PMID:24091869 WOS:000326607300007 MISC

Nair, M. K. C.;P. S. S. Russell;V. S. Subramaniam;S. Nazeema;N. Chembagam;S. Russell;S. R. Shankar;P. K. Jakati and H. Charles

ADad 8: School Phobia and Anxiety Disorders Among Adolescents in a Rural Community Population in India.

Indian J Pediatr. 2013 Nov;80 Suppl 2:S171-4. doi: 10.1007/s12098-013-1208-3. Epub 2013 Sep 18.

[Nair, M. K. C.; Subramaniam, Vinod Shanmukham; Nazeema, Suma; Chembagam, Neethu] Thiruvananthapuram Med Coll, Child Dev Ctr, Thiruvananthapuram 695011, Kerala, India. [Russell, Paul Swamidhas Sudhakar; Russell, Sushila; Shankar, Satya Raj; Jakati, Praveen Kumar; Charles, Helen] Christian Med Coll & Hosp, Child & Adolescent Psychiat Unit, Vellore, Tamil Nadu, India.

Nair, MKC (reprint author), Thiruvananthapuram Med Coll, Child Dev Ctr, Thiruvananthapuram 695011, Kerala, India.

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Objective: School Phobia (SP), although is not a formal psychiatric diagnosis, is widely prevalent debilitating phenomenon with a gamut of underlying psychiatric conditions in an overwhelming majority of cases. This study documents the prevalence, symptom presentation and the relationship between the various subtypes of Anxiety Disorders (AD) and School Phobia.

Methods: In a prospective community survey of 500 adolescents, independent raters administered the Screen for Child Anxiety Related Emotional Disorders and Schedule for Affective Disorders and Schizophrenia for School-Age Children/Present and Lifetime to identify SP and subtype of AD respectively. Descriptive statistics for the prevalence and symptom presentation, Spearman's Correlation test, Independent t tests, on-way ANOVA and Chi-square tests were done to compare the prevalence and severity of School Phobia among various age groups and gender. Univariate and multivariate analyses were done for documenting the relationship between the School Phobia and Anxiety Disorders.

Results: School Phobia was noted in 4.8 % of adolescents. Although age was related to SP, gender, school grade the adolescent was attending and family structure were not related to SP. Somatic symptoms were more often noted than cognitive-emotional symptoms among adolescents with SP. Panic Disorder (OR = 8.62), Social Anxiety Disorder (OR = 8.63), and Separation Anxiety Disorder (OR = 6.26), were significantly related to SP.

Conclusions: School Phobia is noted in a significant proportion of adolescents in the community. Anxiety Disorder is a major underlying factor resulting in SP. Community and clinical intervention and service models should include anxiety alleviation methods in adolescents with School Phobia. © 2013 Dr. K C Chaudhuri Foundation.

NAT PMID:24043514 WOS:000326607300009 MISC
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Nair, M. K. C.;Y. Thankachi;M. L. Leena;B. George and P. S. S. Russell

ARSH 3: Reproductive and Sexual Health Knowledge: A Comparison Among Married Male and Female Young Adults (15-24 y).

Indian J Pediatr. 2013 Nov;80 Suppl 2:S203-8. doi: 10.1007/s12098-013-1137-1. Epub 2013 Jul 11.

[Nair, M. K. C.; Thankachi, Yamini; Leena, M. L.; George, Babu] Thiruvananthapuram Med Coll, Child Dev Ctr, Thiruvananthapuram 695011, Kerala, India. [Russell, Paul Swamidhas Sudhakar] Christian Med Coll & Hosp, Child & Adolescent Psychiat Unit, Vellore, Tamil Nadu, India.

Nair, MKC (reprint author), Thiruvananthapuram Med Coll, Child Dev Ctr, Thiruvananthapuram 695011, Kerala, India.

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Objective To examine reproductive and sexual knowledge of young married men and women between (15-24 y) in Kerala and to compare the reproductive health knowledge and sexual health knowledge among young married men and women of 20-24 y. **Methods** This cross sectional community survey was conducted in three districts in Kerala. The married young adults were stratified into age groups of 15-19 y and 20-24 y. Data was collected using separate pretested structured interview schedule. **Results** There were no married males below the age of 20 y and only 24 females below the age of 20 y. More proportion of males had statistically significant knowledge about masturbation (72.3 %), night emission in boys as an

indicator of adolescence (92.6 %), the fact that there is no relation between size of penis and sexual performance (78.8 %) and condom prevents pregnancy and HIV/AIDS. Among the married 20-24 y group higher proportion of males had knowledge on safe period (47.9 %) and condom use (97.9 %) whereas higher proportion of females had knowledge on copper-T. With regard to sexual health higher percentage females talked about satisfactory sexual life (83.5 %) and good sexual hygiene practices (81.5 %). **Conclusions** This study on reproductive sexual health knowledge of married men and women between 15 and 24 y, conducted in three districts of Kerala suggests a gap in knowledge level of reproductive health between married men and women. However, with regard to sexual health the opinion expressed are more open in content but not necessarily healthy, suggesting the need for both premarital and newlywed counseling.

NAT PMID:23838752 MISC
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Nair, M. K. C.;Y. Thankachi;M. L. Leena;B. George and P. S. S. Russell

ARSH 4: Parental Understanding of Adolescent Issues: Parent-Adolescent Dyad Agreement.

Indian J Pediatr. 2013 Nov;80 Suppl 2:S209-13. doi: 10.1007/s12098-013-1062-3. Epub 2013 Jul 28.

Child Development Centre, Thiruvananthapuram Medical College, Thiruvananthapuram, 695 011, India

Child and Adolescent Psychiatry Unit, Christian Medical College, Vellore, India

Objective: To elicit areas of discordance between the parent-adolescent dyad with regard to reproductive sexual health issues using the same questions to both and to elicit the gender sensitivity of the parents.

Methods: This study was conducted using similar questions for both adolescents and young adults and their parents in three districts of Kerala. Data analysis was done comparing unmarried adolescents and young adults' response to reproductive and sexual health issues and the parental agreement status with their ward's responses.

Results: There were a total of 3,625 parent-unmarried young adults dyads. Parental attitudinal difference towards their sons and daughters on selected parenting issues was observed. With regard to the following reproductive and sexual health problems, (i) knew about menstruation before menarche (64.1 %),

(ii) got information on hygiene practices from home (80.8 %), (iii) have menstrual problems (66.4 %), agreement with adolescent response was high, whereas with regard to (i) anxious about adolescent physical and mental changes (29.2 %), (ii) received information on reproductive sexual health (RSH) from mother (26.7 %), (iii) do not have any abnormal vaginal discharge (46.7 %), (iv) parents taken precautions to prevent sexual abuse (17.5 %), (v) have been sexually abused (15.6 %), agreement with unmarried young adults' response was low and all these differences were statistically significant.

Conclusions: The results of 3,625 parent-unmarried adolescents and young adults dyad data showed poor agreement on vital issues like sexual abuse apart from gender inequality favouring sons. © 2013 Dr. K C Chaudhuri Foundation.

NAT PMID:23893366 **MISC**

Nair, M. K. C.; Y. Thankachi; M. L. Leena; B. George and P. S. S. Russell

ARSH 4: Parental Understanding of Adolescent Issues: Parent-Adolescent Dyad Agreement.

Indian Journal of Pediatrics. 2013, 80: S209-S213.

[Nair, M. K. C.; Thankachi, Yamini; Leena, M. L.; George, Babu] Thiruvananthapuram Med Coll, Child Dev Ctr, Thiruvananthapuram 695011, Kerala, India. [Russell, Paul Swamidhas Sudhakar] Christian Med Coll & Hosp, Child & Adolescent Psychiat Unit, Vellore, Tamil Nadu, India.

Nair, MKC (reprint author), Thiruvananthapuram Med Coll, Child Dev Ctr, Thiruvananthapuram 695011, Kerala, India.

cdcmkc@gmail.com

Objective To elicit areas of discordance between the parent-adolescent dyad with regard to reproductive sexual health issues using the same questions to both and to elicit the gender sensitivity of the parents. **Methods** This study was conducted using similar questions for both adolescents and young adults and their parents in three districts of Kerala. Data analysis was done comparing unmarried adolescents and young adults' response to reproductive and sexual health issues and the parental agreement status with their ward's responses. **Results** There were a total of 3,625 parent-unmarried young adults dyads. Parental attitudinal difference towards their sons and daughters on selected parenting issues was observed. With regard to the following reproductive and sexual health

problems, (i) knew about menstruation before menarche (64.1 %), (ii) got information on hygiene practices from home (80.8 %), (iii) have menstrual problems (66.4 %), agreement with adolescent response was high, whereas with regard to (i) anxious about adolescent physical and mental changes (29.2 %), (ii) received information on reproductive sexual health (RSH) from mother (26.7 %), (iii) do not have any abnormal vaginal discharge (46.7 %), (iv) parents taken precautions to prevent sexual abuse (17.5 %), (v) have been sexually abused (15.6 %), agreement with unmarried young adults' response was low and all these differences were statistically significant. **Conclusions** The results of 3,625 parent-unmarried adolescents and young adults dyad data showed poor agreement on vital issues like sexual abuse apart from gender inequality favouring sons.

NAT WOS:000326607300016 **MISC**

Nandakumar, V.; S. Chittaranjan; V. M. Kurian and M. Doble **Characteristics of bacterial biofilm associated with implant material in clinical practice.**

Polymer Journal. 2013, 45(2): 137-152.

[Nandakumar, Venkatesan; Doble, Mukesh] Indian Inst Technol, Dept Biotechnol, Madras 600036, Tamil Nadu, India. [Chittaranjan, Samuel] Christian Med Coll & Hosp, Dept Orthoped, Vellore, Tamil Nadu, India. [Kurian, Valikapathalil Mathew] Madras Med Mission, Inst Cardiovasc Dis, Madras, Tamil Nadu, India.

Doble, M (reprint author), Indian Inst Technol, Dept Biotechnol, Madras 600036, Tamil Nadu, India. mukeshd@iitm.ac.in

Colonization of bacteria around native host cells or polymeric implant surfaces results in a dense growth on the surface, which leads to infection. The change of a bacterium from a motile planktonic to a nonmotile long chain of growing cells is a complex, regulated process that depends on several factors. The probability of a biofilm-related infection occurrence is between 65 and 80%. This review critically evaluates the mode of biofilm formation on native tissues and orthopedics, dental, cardiac, and urological implants and vascular grafts. The combination of biochemical advancements with conventional microbiological techniques and the use of radio-labeled monoclonal antibodies in imaging techniques, with recent developments in the detection of these biofilm in vivo, would help in designing biomaterials that prevent bacterial adhesion and biofilm formation, and dislodge the formed biofilm,

thereby accelerating the product development phase. Polymer Journal (2013) 45, 137-152; doi:10.1038/pj.2012.130; published online 11 July 2012

INTL WOS:000315239100004 MISC

Panda, A. and N. S. Kekre

Plagiarism: Is it time to rethink our approach?

Indian J Urol. 2013, 29(2): 87-88.

Department of Urology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India E-mail: nitinkekre@hotmail.com

NAT PMID: 23956506 PMCID: 3737679 MISC

Patel, N.;J. Varghese;P. Masaratana;G. O. Latunde-Dada;M. Jacob;R. J. Simpson and A. T. McKie

The transcription factor ATOH8 is regulated by erythropoietic activity and regulates HAMP transcription and cellular pSMAD1,5,8 levels.

Br J Haematol. 2014 Feb;164(4):586-96. doi: 10.1111/bjh.12649. Epub 2013 Nov 16.

Division of Diabetes and Nutritional Sciences Kings College London London UK

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ATOH8 has previously been shown to be an iron-regulated transcription factor, however its role in iron metabolism is not known. ATOH8 expression in HEK293 cells resulted in increased endogenous HAMP mRNA levels as well as HAMP promoter activity. Mutation of the E-box or SMAD response elements within the HAMP promoter significantly reduced the effects of ATOH8, indicating that ATOH8 activates HAMP transcription directly as well as through bone morphogenic protein (BMP) signalling. In support of the former, Chromatin immunoprecipitation assays provided evidence that ATOH8 binds to E-box regions within the HAMP promoter while the latter was supported by the finding that ATOH8 expression in HEK293 cells led to increased phosphorylated SMAD1,5,8 levels. Liver Atoh8 levels were reduced in mice under conditions associated with increased erythropoietic activity such as hypoxia, haemolytic anaemia, hypotransferrinaemia and erythropoietin treatment and increased by inhibitors of erythropoiesis. Hepatic Atoh8 mRNA levels increased

in mice treated with holo transferrin, suggesting that Atoh8 responds to changes in plasma iron. ATOH8 is therefore a novel transcriptional regulator of HAMP, which is responsive to changes in plasma iron and erythroid activity and could explain how changes in erythroid activity lead to regulation of HAMP. © 2013 The Authors.

INTL PMID:24236640 MISC

Peedicayil, J.

The Epigenome in Personalized Medicine.

Clinical Pharmacology & Therapeutics. 2013, 93(2): 149-150.

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INTL WOS:000314139100011 MISC

Peter, D.;L. George and S. A. Pulimood

Trichoscopic features of various types of alopecia areata in India: application of a hand-held dermoscope.

Australas J Dermatol. 2013, 54(3): 198-200.

Department of Dermatology, Venereology and Leprosy, Christian Medical College, Vellore, Tamil Nadu, India.

INTL PMID: 22943070 MISC

Peter, J. V.

Can calculated central venous saturation be used as a reliable tool to guide therapy in patients with shock?

Indian J Crit Care Med. 2013, 17(2): 69-70.

Medical Intensive Care Unit, Christian Medical College, Vellore, India.

NAT PMID: 23983409 PMCID: 3752869 MISC

Peter, J. V.;R. Iyyadurai;S. Immanuel and A. Begum

PYRETHROID POTENTIATES ORGANOPHOSPHATE TOXICITY IN HUMANS.

Internal Medicine Journal. 2013, 43: 48-49.

[Peter, John Victor; Iyyadurai, Ramya; Immanuel, Sushil; Begum, Anisa] Christian Med Coll & Hosp, Med Intens Care Unit, Vellore, Tamil Nadu, India.

INTL WOS:000318911400142 MISC

Ponnudurai, R.

Judeo-Christian concepts related to psychiatry.

Indian J Psychiatry. 2013, 55(Suppl 2): S201-204.

Department of Psychiatry, A. C. S. Medical College and Hospital, Velappan Chavadi, Chennai, India.

The behavioral manifestations of psychotic disorders that are attributed to evil spirits in the Judeo-Christian scriptures as demonstrated by Jesus Christ have been narrated. The descriptions of false beliefs and the perceptual experiences that are consistent with the psychiatric terminologies “delusions and hallucinations” are briefly discussed. Attempt has been made to analyze the patterns of suicidal behaviors, guilt feelings, and, expressions of depressive symptoms in the Jewish culture. Of interest is the mass suicide by the Jews in the 1st century AD at the Fort Masada, perhaps the first of its kind recorded in the history. Noteworthy are alcohol and related mental health problems prevalent in the Jewish culture. While highlighting the descriptions of dreams and their revelations recorded in the Bible, it is suggested that such concepts about dreams might have influenced Sigmund Freud’s classical works on dreams. The biblical messages and teachings that could be applied for psychotherapy and behavior modification strategies have been outlined. The mental concepts of Jewish culture and their relevance to Indian culture have also been discussed from a cross-cultural perspective.

NAT PMID: 23858255 PMCID: 3705683 MISC

Purgato, M.;M. Välimäki;R. Whittington;A. Clifton;E. S. F. Coutinho;G. Huf;P. Tharyan and C. E. Adams

‘Consent rituals’ in evaluation of coercive care.

Evid Based Ment Health. 2013 May;16(2):32-3. doi: 10.1136/eb-2012-101190. Epub 2013 Feb 20.

Department of Public Health and Community Medicine, Section of Psychiatry, University of Verona, Verona, Italy

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Division of Psychiatry, University of Nottingham, Nottingham, United Kingdom

INTL PMID:23426959 MISC

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

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

Indian J Gastroenterol. 2013 Oct 9. [Epub ahead of print]

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

NAT PMID: 24105666 MISC

Rahman, S. M.;K. V. David;R. A. Priscilla and S. Cynthia
Audit on diabetes care in a secondary hospital in South India.

Indian J Endocrinol Metab. 2013, 17(6): 1130-1132.

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

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

Department of Community Medicine, Duncan Hospital, Raxaul, Bihar, Uttar Pradesh, India.

NAT PMID: 24381901 PMCID: 3872702 MISC

Rajagopal, K.;S. K. Chilbule and V. Madhuri

Viability, proliferation and phenotype maintenance in cryopreserved human iliac apophyseal chondrocytes.

Cell Tissue Bank. 2013 Aug 11. [Epub ahead of print]

Paediatric Orthopaedics Unit, Department of Orthopaedics, Christian Medical College, Vellore, 632004, Tamil Nadu, India, karthikeyan.rr@gmail.com.

Cryopreservation preserves cells at low temperature and creates a reserve for future use while executing the clinical translation. Unlike articular chondrocyte, cryopreservation protocol and its outcome are not described in iliac apophyseal chondrocytes, a potential source of chondrocytes in cartilage engineering. This

study for the first time describes the cryopreservation of human iliac apophyseal chondrocytes. Four cartilage samples were procured from iliac crests of children undergoing hip surgery after consent. The total chondrocyte yield was divided into two groups. First group was grown as monolayer while second group was cryopreserved following the slow cooling method in the medium containing 10 % Dimethyl sulfoxide for 3 months. Group two cells were also grown as a monolayer following thawing. Viability, time to confluence, population doubling time and phenotype maintenance were compared for both the groups. Viability was 65.75 % after 3 months of cryopreservation at -196 degrees C, as compared to 94.19 % for fresh chondrocytes ($p = 0.001$). Fresh and cryopreserved cells reached confluence on 10th and 15th day of culture respectively. Population doubling time was significantly more in fresh than cryopreserved chondrocytes on 10th ($p = 0.0006$) and 15th day ($p = 0.0002$) in culture. Both fresh and cryopreserved cells maintain their chondrocyte phenotype as assessed by immunocytochemistry. Relative gene expression by real time polymerase chain reaction showed similar upregulation of mRNA of Collagen 2, SOX 9, Aggrecan and Collagen 1 in cryopreserved chondrocyte as compared to fresh chondrocyte. Iliac apophyseal chondrocytes cryopreserved for 3 months maintained the phenotype successfully 2 weeks after thawing in culture. The viability and proliferation rates after thawing were adequate for a clinical translation of these cells.

INTL PMID: 23934174 MISC

Rajkumar, A. P.

Anti-NMDA receptor encephalitis: Clinical and research implications.

Acta Neuropsychiatrica / Volume 25 / Issue 03 / June 2013, pp 125-127

DOI: <http://dx.doi.org/10.1017/neu.2013.24> (About DOI),
Published online: 30 May 2013

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INTL MISC

Rajkumar, A. P.; B. Poonkuzhali; A. Kuruvilla; A. Srivastava; M. Jacob and K. S. Jacob

Association between CYP1A2 gene single nucleotide polymorphisms and clinical responses to clozapine in patients with treatment-resistant schizophrenia.

Acta Neuropsychiatrica. 2013, 25(1): 2-11.

[Rajkumar, Anto P.; Kuruvilla, Anju; Jacob, K. S.] Christian Med Coll & Hosp, Dept Psychiat, Vellore 632002, Tamil Nadu, India. [Rajkumar, Anto P.] Aarhus Univ Hosp, Ctr Psychiat Res, DK-8240 Risskov, Denmark. [Poonkuzhali, B.; Srivastava, Alok] Christian Med Coll & Hosp, Dept Haematol, Vellore 632002, Tamil Nadu, India. [Jacob, Molly] Christian Med Coll & Hosp, Dept Biochem, Vellore 632002, Tamil Nadu, India.

Rajkumar, AP (reprint author), Aarhus Univ Hosp, Ctr Psychiat Res, 2 Skovagervej, DK-8240 Risskov, Denmark.

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Objectives: Despite clozapine's superior clinical efficacy in treatment-resistant schizophrenia (TRS), its adverse effects, need for periodic leukocyte monitoring, cost and variable clinical outcomes mandate a clinical need to predict its treatment response. Although cytochrome P450 1A2 (CYP1A2) is the principal determinant of metabolism of clozapine, the role of CYP1A2 gene in the clinical response to clozapine is uncertain. Hence, we investigated its association with treatment responses and adverse events of clozapine in TRS.

Methods: We evaluated four single nucleotide polymorphisms (SNP) in the CYP1A2 gene, clinical responses and serum clozapine levels in 101 consecutive patients with TRS on stable doses of clozapine. We defined clozapine response a priori and investigated allelic and genotypic associations. We assessed the socio-demographic and clinical profiles, premorbid adjustment, traumatic life events, cognition and disability of the participants, using standard assessment schedules for appropriate multivariate analyses.

Results: Our results revealed that CYP1A2 gene SNP (*1C, *1D, *1E and *1F) were not associated with clozapine treatment response, adverse effects, serum clozapine levels or with disability (p values > 0.10).

Conclusions: As CYP1A2 gene SNP do not help to predict the clinical response to clozapine, routine screening for them prior to start clozapine is currently unwarranted. We suggest future longitudinal genome-wide association studies investigating clinical and pharmacogenetic variables together.

INTL WOS:000320548100002 MISC

Rajshekhar, V.; S. S. K. Gaddam; S. Babu and G. Chacko
Filum terminale RESPONSE.

Journal of Neurosurgery-Pediatrics. 2013, 11(4): 485-485.

[Rajshekhar, Vedantam; Gaddam, Samson Sujith Kumar; Babu, Srinivasa; Chacko, Geeta] Christian Med Coll & Hosp, Vellore, Tamil Nadu, India.

Rajshekhar, V (reprint author), Christian Med Coll & Hosp, Vellore, Tamil Nadu, India.

INTL WOS:000316715600021 MISC

Ramalingam, M.; S. Ramakrishna and G. Rutledge

A special section on advances in electrospinning of nanofibers and their biomedical applications.

Journal of Nanoscience and Nanotechnology. 2013, 13(7): 4645-4646.

DOI: <http://dx.doi.org/10.1166/jnn.2013.7185>

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National University of Singapore, Singapore

Department of Chemical Engineering, Massachusetts Institute of Technology, United States

INTL MISC

Ramani, S.; N. W. Cortes-Penfield; L. Hu; S. E. Crawford; R. Czako; D. F. Smith; G. Kang; R. F. Ramig; J. Le Pendu; B. V. V. Prasad and M. K. Estes

The VP8* domain of neonatal rotavirus strain G10P[11] binds to type II precursor glycans.

J Virol. 2013 Jul;87(13):7255-64. doi: 10.1128/JVI.03518-12. Epub 2013 Apr 24.

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Naturally occurring bovine-human reassortant rotaviruses with a P[11] VP4 genotype exhibit a tropism for neonates. Interaction of the VP8* domain of the spike protein VP4 with sialic acid was thought to be the key mediator for rotavirus infectivity. However,

recent studies have indicated a role for nonsialylated glycoconjugates, including histo-blood group antigens (HBGAs), in the infectivity of human rotaviruses. We sought to determine if the bovine rotavirus-derived VP8* of a reassortant neonatal G10P[11] virus interacts with hitherto uncharacterized glycans. In an array screen of >600 glycans, VP8* P[11] showed specific binding to glycans with the Gal α 1-4GlcNAc motif, which forms the core structure of type II glycans and is the precursor of H type II HBGA. The specificity of glycan binding was confirmed through hemagglutination assays; GST-VP8* P[11] hemagglutinates type O, A, and B red blood cells as well as pooled umbilical cord blood erythrocytes. Further, G10P[11] infectivity was significantly enhanced by the expression of H type II HBGA in CHO cells. The bovine-origin VP4 was confirmed to be essential for this increased infectivity, using laboratory-derived reassortant viruses generated from sialic acid binding rotavirus SA11-4F and a bovine G10P[11] rotavirus, B223. The binding to a core glycan unit has not been reported for any rotavirus VP4. Core glycan synthesis is constitutive in most cell types, and modification of these glycans is thought to be developmentally regulated. These studies provide the first molecular basis for understanding neonatal rotavirus infections, indicating that glycan modification during neonatal development may mediate the age-restricted infectivity of neonatal viruses. © 2013, American Society for Microbiology.

INTL PMID:23616650 PMCID:PMC3700318
 WOS:000320116500006 MISC

Ramón-Azcón, J.;S. Ahadian;M. Estili;X. Liang;S. Ostrovidov;H. Kaji;H. Shiku;M. Ramalingam;K. Nakajima;Y. Sakka;A. Khademhosseini and T. Matsue
Dielectrophoretically aligned carbon nanotubes to control electrical and mechanical properties of hydrogels to fabricate contractile muscle myofibers.

Adv Mater. 2013 Aug 7;25(29):4028-34. doi: 10.1002/adma.201301300. Epub 2013 Jun 25.

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Institut National de la Santé et de la Recherche Médicale U977, Faculté de Chirurgie Dentaire, Université de Strasbourg, Strasbourg 67085, France

Dielectrophoresis is used to align carbon nanotubes (CNTs) within gelatin methacrylate (GelMA) hydrogels in a facile and rapid manner. Aligned GelMA-CNT hydrogels show higher electrical properties compared with pristine and randomly distributed CNTs in GelMA hydrogels. The muscle cells cultured on these materials demonstrate higher maturation compared with cells cultured on pristine and randomly distributed CNTs in GelMA hydrogels. Copyright © 2013 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim.

INTL PMID:23798469

MISC

Rao, N.;L. Jeyaseelan;A. Joy;V. S. Kumar;M. Thenmozhi and S. Acharya

Factors associated with high-risk Behaviour among migrants in the state of Maharashtra, India.

Journal of Biosocial Science. 2013, 45(5): 627-641.

Avert Society, Mumbai, India

Department of Biostatistics, Christian Medical College, Vellore, India

Health Office, United States Agency for International Development, New Delhi, India

Studies among migrants show that they are more susceptible to HIV infection than the general population and thereby spread the epidemic from high prevalence to low prevalence areas. It is therefore critical to enhance the body of knowledge on factors associated with condom use among migrants. This study, conducted in 2009 in the State of Maharashtra, covers 4595 single in-migrants aged 15-49 years and aims at understanding the factors associated with non-use of condoms consistently. Information was collected using a Structured Interview Schedule covering demographic, socioeconomic profile, sexual history, knowledge, behaviour and stigma and discrimination indicators. Logistic regression analysis was used to understand the association between unprotected sex and various socio-demographic and environmental factors. The models were run using the Enter method. The goodness-of-fit of the model was assessed using Hosmer and Lemeshow chi-squared statistics. A significant association is observed between sex with sex workers and older migrants (>24 years), the literate, those who are mobile, unmarried, employed in the textile, quarry and construction industries, who often consume alcohol and who watch pornographic films. The factors associated with unprotected sex are age between 30 and 34 years and no literacy. Migrants who are mobile and consume alcohol show a significant association with unprotected sex. The findings suggest a need for a comprehensive HIV prevention programme including strategies to address the stressful work conditions. The prevention programmes should focus not only on skills for safer sex practices, but also on alcohol use reduction. Copyright © Cambridge University Press 2013.

INTL

MISC

Ravindran, V.;G. R. Rempel and L. Ogilvie
Parenting burn-injured children in India: A grounded theory study.

Int J Nurs Stud. 2013 Jun;50(6):786-96. doi: 10.1016/j.ijnurstu.2012.06.011. Epub 2012 Jul 15.

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Faculty of Nursing, Population Health Investigator, Alberta Heritage Foundation for Health Research, University of Alberta, Edmonton, Canada

Faculty of Nursing, Prairie Metropolis Centre, University of Alberta, Edmonton, Canada

Background: Burn injury is one of the major traumas that a child can experience. Parents of burn-injured children experience anxiety, depression, guilt and post traumatic stress disorders as they care for their burn-injured children. Such empirical evidence related to effects of burns on parents and parenting process is unavailable from low and middle income countries like India.

Objectives: The aim of the study was to discover the process of parenting burn-injured children in India. The objective of this paper is to present one of the substantive processes “Enduring the Blame” that emerged from the data.

Design: Constructivist grounded theory methodology was used to explore the experiences of parenting burn-injured children. Setting: The study was conducted through a tertiary hospital that provided advanced paediatric burn care in a town in South India.

Participants: Nine mothers, nine fathers, three grandmothers and one aunt from 12 families of children who were 15 years or younger and had sustained greater than 20% total body surface burns were purposively included.

Methods: Twenty-two semi structured individual or family interviews were conducted in Tamil over a period of one year. The interview started with an overview question and then was followed by trigger questions as the participants shared their experiences. Second interviews were conducted with three participants in three families for theoretical saturation purposes.

Results: Mothers and fathers encountered blame from family members, health professionals, strangers, and their burn-injured children along the burn injury trajectory. They suffered double trauma of their child's

burn and the blame. Parenting their burn-injured child involved a process of “Enduring the Blame.” Enduring the Blame included four stages: internalizing blame, submitting to blame, rising above blame, and avoiding blame.

Conclusions: Encouraging and assisting parents in caring for their children instead of blaming is a vital component of paediatric burn care. Parents will benefit from ongoing assessment and psychological interventions that will provide emotional support. Studying the perceptions of health professionals and the burn-injured children will help in further clarification of blame related issues and developing a parenting theory. © 2012.

INTL PMID:22795907 MISC

Rempel, G. R.;V. Ravindran;L. G. Rogers and J. Magill-Evans

Parenting under Pressure: a grounded theory of parenting young children with life-threatening congenital heart disease.

Journal of Advanced Nursing. 2013, 69(3): 619-630.

[Rempel, Gwen R.; Rogers, Laura G.] Univ Alberta, Fac Nursing, Edmonton, AB, Canada. [Rempel, Gwen R.] Univ Alberta, Dept Pediat, Fac Med & Dent, Edmonton, AB, Canada. [Ravindran, Vinitha] Christian Med Coll & Hosp, Coll Nursing, Vellore, Tamil Nadu, India. [Magill-Evans, Joyce] Univ Alberta, Fac Rehabil Med, Edmonton, AB, Canada.

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rempe g.r., ravindran v., rogers l.g. & magill-evans j. (2013) Parenting under pressure: a grounded theory of parenting young children with life-threatening congenital heart disease. *Journal of Advanced Nursing* 69(3), 619-630. doi: 10.1111/j.1365-2648.2012.06044.x Abstract Aim. To report a grounded theory study to describe the process of parenting young children who have survived hypoplastic left heart syndrome to inform parent-focused interventions. Background. Technological advances in paediatric cardiology worldwide have improved the survival rates for young children with hypoplastic left heart syndrome who undergo staged surgical palliation. These children, however, are at risk for life-threatening complications and parents are charged with the responsibility to monitor their children at home with minimal support and guidance from healthcare professionals once

home. Design. A constructivist grounded theory study. Method. The study was conducted in 2006-2008. Participants were 25 parents (15 mothers, 10 fathers) and 28 grandparents (17 grandmothers, 11 grandfathers) of 15 young children (6 months-4 years) who had undergone the Sano surgical approach for hypoplastic left heart syndrome. The 53 interviews were digitally recorded, transcribed and analysed using open and focused coding, constant comparative analysis and memoing. Findings. A process of Parenting under Pressure emerged that was characterized by four overlapping and re-emerging phases: (1) realizing and adjusting to the inconceivable; (2) growing increasingly attached; (3) watching for and accommodating the unexpected; and (4) encountering new challenges. Conclusions. In-depth understanding of the phases of Parenting under Pressure provides direction for nurses to support parents of children who survive hypoplastic left heart syndrome. Interventions that help carers of children with complex health conditions move through the phases of our Parenting under Pressure process may help them safeguard the survival of their children, and their own survival as parents as they manage multiple demands.

INTL WOS:000315097200013 **MISC**

Richard, S. A.; R. E. Black; R. H. Gilman; R. L. Guerrant; G. Kang; C. F. Lanata; K. Mølbak; Z. A. Rasmussen; R. B. Sack; P. Valentiner-Branth and W. Checkley

Diarrhea in early childhood: Short-Term association with weight and long-Term association with length.

Am J Epidemiol. 2013 Oct 1;178(7):1129-38. doi: 10.1093/aje/kwt094. Epub 2013 Aug 21.

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The short-Term association between diarrhea and weight is well-accepted, but the long-Term association between diarrhea and growth is less clear. Using data from 7 cohort studies (Peru, 1985-1987; Peru, 1989-1991; Peru, 1995-1998; Brazil, 1989-1998; Guinea-Bissau, 1987-1990; Guinea-Bissau, 1996-1997; and Bangladesh, 1993-1996), we evaluated the lagged relationship between diarrhea and growth in the first 2 years of life. Our analysis included 1,007 children with 597,638 child-days of diarrhea surveillance and 15,629 anthropometric measurements. We calculated the associations between varying diarrhea burdens during lagged 30-day periods and length at 24 months of age. The cumulative association between the average diarrhea burden and length at age 24 months was -0.38 cm (95% confidence interval: -0.59, -0.17). Diarrhea during the 30 days prior to anthropometric measurement was consistently associated with lower weight at most ages, but there was little indication of a short-Term association with length. Diarrhea was associated with a small but measurable decrease in linear growth over the long term. These findings support a focus on prevention of diarrhea as part of an overall public health strategy for improving child health and nutrition; however, more research is needed to explore catch-up growth and potential confounders. © 2013 © The Author 2013. Published by Oxford University Press on behalf of the Johns Hopkins Bloomberg School of Public Health. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com.

INTL PMID:23966558 PMCID:PMC3783094 MISC

Russell, P. S. and M. K. Nair

ADad 1: rationale and study design for Anxiety Disorders among adolescents in a rural community population in India.

Indian J Pediatr. 2013, 80 Suppl 2: S132-138.

Child and Adolescent Psychiatry Unit, Christian Medical College, Vellore, 632 002, Tamil Nadu, Southern India, russell@cmcvellore.ac.in.

OBJECTIVE: The Anxiety Disorders among adolescents (ADad) study aimed to document the prevalence, clinical pattern, co-morbidities, predictive factors, relationship with depression, associated suicidal phenomenon and school phobia of Anxiety Disorders

in a rural community population in India. This paper reviews the rationale and study design used as well as discusses the strengths and limitations of the survey.

METHODS: The ADad was a cross-sectional study that recruited 537 adolescents, with anganwadi workers, representative of the population aged 11-19 y. Trained raters independently administered the Screen for Child Anxiety Related Emotional Disorders (SCARED), Beck Depression Inventory (BDI), SAD PERSONS scale and Schedule for Affective Disorders and Schizophrenia for School-Age Children/Present and Lifetime Version (K-SADS-PL). Appropriate bivariate and multivariate statistical analyses were done.

RESULTS: Five hundred adolescents opted to participate and completed the study. About 37% of boys and 63.4% of girls responded to the measures, almost comparable with the gender distribution in the panchayat.

CONCLUSIONS: The ADad study creates a comprehensive database on validation of measure, the prevalence, clinical pattern, co-morbidities, predictive factors, relationship with depression, associated outcomes of suicidal phenomenon, school phobia, impairment associated with Anxiety Disorders and policy recommendations in a community population of adolescents in India. These data will enable policy makers to rationally plan clinical services and prevention programs for the target population.

NAT PMID: 24052181 WOS:000326607300002 MISC

Russell, P. S.;M. K. Nair;A. Chandra;V. S. Subramaniam;K. Bincymol;B. George and B. Samuel

ADad 9: Suicidal behavior in Anxiety Disorders among adolescents in a rural community population in India.

Indian J Pediatr. 2013, 80 Suppl 2: S175-180.

Child and Adolescent Psychiatry Unit, Christian Medical College, Vellore, 632 002,, Tamil Nadu, South India, russell@cmcvellore.ac.in.

OBJECTIVE: The risk of suicidal behavior associated with Anxiety Disorders (AD) among adolescents is known. However, concurrent mood disorders complicate these findings, and no data is available from India as well as from the community. This study aimed to address the suicidal risk associated with AD from different perspectives.

METHODS: The authors prospectively collected data for 500 adolescents in a community with independent, trained raters. Risk for suicidal behavior was measured

with SADPERSONS scale, socio-economic status with Modified Kuppaswamy Scale, depression and anxiety disorders with Beck Depression Inventory and Screen for Child Anxiety Related Emotional Disorders respectively. The relationship between predictors and need for preventive action was analyzed with univariate and multivariate regression analyses and a predictive model was built.

RESULTS: Suicidal behavior was increased by the presence of AD (adjusted OR = 6.28), the number of co-morbid AD (adjusted OR = 2.04), severity of the AD (adjusted OR = 4.98). Being a boy increased the risk of suicidal behavior associated with AD (adjusted OR = 9.37), Generalized Anxiety Disorder (adjusted OR = 5.65), Separation Anxiety Disorder (unadjusted OR = 3.28), Social Anxiety Disorder (unadjusted OR = 5.91) while controlling for the confounding effect of Depressive Disorder. Gender did not have an influence on Panic Disorder. Presence of AD and co-morbid Depressive Disorder significantly contributed to a risk model for suicidal behavior.

CONCLUSIONS: Anxiety Disorder is associated with the risk for potential suicidal behavior. Adolescent boys with AD and Depressive Disorder need to be identified as the high risk group for suicide prevention in the community.

NAT PMID: 24062265 WOS:000326607300010 MISC

Russell, P. S.;M. K. Nair;P. Mammen;N. Chembagam;K. S. Vineetha;S. R. Shankar;S. Nazeema and B. George

ADad 5: the co-morbidity in Anxiety Disorders among adolescents in a rural community population in India.

Indian J Pediatr. 2013, 80 Suppl 2: S155-159.

Child and Adolescent Psychiatry Unit, Christian Medical College, Vellore, 632 002, Tamil Nadu, South India, russell@cmcvellore.ac.in.

OBJECTIVE: Anxiety Disorders (AD) have been known to have high prevalence of intra-AD and extra-AD co-morbidities. This study documents the prevalence and profile of intra and extra-AD co-morbidities, the effect of the presence and number of co-morbidities on the severity of anxiety symptoms and the influence of age as well as gender on the co-morbidity.

METHODS: In a prospective community survey of 500 adolescents, independent raters administered the Screen for Child Anxiety Related Emotional Disorders (SCARED) and Schedule for Affective Disorders and Schizophrenia for School-Age Children/Present and

Lifetime Version (K-SADS-PL) to collect the required data. Descriptive statistics, independent t tests, one-way ANOVA and Chi-square tests were done to evaluate the prevalence and profile of co-morbidity presentation, compare the effect of co-morbidity on severity of anxiety symptoms as well as analyse the influence of age groups and gender on intra-AD co-morbidities.

RESULTS: Among those with AD, 14.2% had a DSM-IV-TR intra-AD co-morbidity and 70% had SCARED based intra-AD co-morbidity. Adolescents with Separation Anxiety Disorder and Generalised Anxiety Disorder had the highest SCARED and DSM-IV-TR prevalence of intra-AD co-morbidity respectively. Also, 23.7% had overlapping extra-AD co-morbidity. Presence and number of intra-AD co-morbidity was significantly associated with severity of total anxiety score and subscale scores (all with $P = 0.001$). Age and gender of adolescents were not related to the co-morbidity.

CONCLUSIONS: Intra and extra-AD co-morbidities are quite prevalent among adolescents with Anxiety Disorders in India. As such, co-morbidities increase the severity of anxiety symptoms, they should be identified and appropriate management should be established.

NAT PMID: 24062269 WOS:000326607300006 MISC

Russell, P. S.;M. K. Nair;S. R. Shankar;S. Tsheringla;P. K. Jakati;N. Chembagam and S. Nazeema

ADad 7: Relationship between depression and Anxiety Disorders among adolescents in a rural community population in India.

Indian J Pediatr. 2013, 80 Suppl 2: S165-170.

Child and Adolescent Psychiatry Unit, Christian Medical College, Vellore, 632 002, Tamil Nadu, South India, russell@cmcvellore.ac.in.

OBJECTIVES: Anxiety Disorders (AD) often co-exist with the heterotypic co-morbidity of Major Depressive Disorder (MDD) and Dysthymia (DysD). This study documents the prevalence of concurrent Depressive Disorder and its subtypes among AD, relationship between specific AD and Depressive Disorders, influence of severity of Depressive Disorders (DD) on AD and vice-versa, as well as the effect of age and gender on this co-morbidity.

METHODS: In a prospective community survey of 500 adolescents, independent raters administered the Screen for Child Anxiety Related Emotional Disorders,

Beck Depression Inventory and Schedule for Affective Disorders and Schizophrenia for School-Age Children/ Present and Lifetime Version to collect the required data. Descriptive statistics, Independent t tests and Chi-square tests were done to evaluate the prevalence of concurrent Depressive Disorders among AD, relationship between specific AD and Depressive Disorders, severity of DD, and effect of age and gender on this co-morbidity.

RESULTS: Depressive Disorders were concurrently present in 23.7% of adolescents with AD, while 13.9% had concurrently only MDD, 8.3% had only DysD and 1.5% had both. More adolescents with AD had multiple mood disorders than otherwise. Twenty percent of adolescents with Panic Disorder, 12.1% with Generalised anxiety Disorder, 5.3% with Separation Anxiety Disorder and 12% with Social Anxiety Disorder had Depressive Disorders. Dysthymic disorder was statistically significantly more among those with PD ($P = 0.009$). Depressive Disorders were more severe among those with AD ($P = 0.001$) and the AD was more severe in those with DD ($P = 0.01$). As the severity of AD increased the severity of the DD also increased ($P = 0.001$). While DD were more prevalent among the late adolescence ($P = 0.001$), gender did not have any influence.

CONCLUSIONS: The two-way overlap between AD and DD is prevalent. Adolescents with Anxiety Disorders should be screened for Depressive Disorders, and when present should be treated.

NAT PMID: 24062271 WOS:000326607300008 MISC

Russell, P. S.;M. K. Nair;S. Russell;P. Mammen;S. Tsheringla;A. Chandran and B. George

ADad 10: the impairment in Anxiety Disorders among adolescents in a rural community population in India.

Indian J Pediatr. 2013 Nov;80 Suppl 2:S181-5. doi: 10.1007/s12098-013-1213-6. Epub 2013 Sep 18.

Child and Adolescent Psychiatry Unit, Christian Medical College, Vellore, 632 002, Tamil Nadu, South India, russell@cmcvellore.ac.in.

OBJECTIVES: There is significant paucity of studies on the impairment associated with Anxiety Disorders (AD) among adolescents. This study focuses on the prevalence and pattern of impairment as well as impairment in the context of severity of AD, co-morbidities, suicide, age and gender in this population.

METHODS: In a prospective community survey of 500 adolescents, independent raters administered the Screen for Child Anxiety Related Emotional Disorders (SCARED) and Schedule for Affective Disorders and Schizophrenia for School-Age Children/Present and Lifetime to collect the required data. Descriptive statistics and Chi-square tests were done to evaluate the prevalence and profile of impairment, compare the impairment among different types of AD, severity of AD, number of co-morbidities, age and gender on impairment, effect of impairment on the need for suicide prevention.

RESULTS: Impairment in adolescents with AD was a rule, noted in 94.4%. Irrespective of the type of AD diagnosed, impairment at home was significant in adolescents with AD. The presentation of impairment among different Anxiety Disorders was different with different functional settings. Severity of AD and the number of co-morbidities was related to the impairment. Need for suicide related interventions were not different in those with and without impairment. Age and gender did not influence the presence of impairment.

CONCLUSIONS: Anxiety Disorders among adolescents in India result in significant functional impairment. Clinically, in this population assessment of impairment is required. Community policies and plans should have special management strategy to address impairment in adolescents with Anxiety Disorders.

NAT PMID: 24043515 WOS:000326607300011 MISC

Russell, P. S.;M. K. Nair;S. Russell;V. S. Subramaniam;A. Z. Sequeira;S. Nazeema and B. George

ADad 2: the validation of the Screen for Child Anxiety Related Emotional Disorders for Anxiety Disorders among adolescents in a rural community population in India.

Indian J Pediatr. 2013, 80 Suppl 2: S139-143.

Child and Adolescent Psychiatry Unit, Christian Medical College, Vellore, 632 002, Tamil Nadu, South India, russell@cmcvellore.ac.in.

OBJECTIVE: Screen for Child Anxiety Related Emotional Disorders (SCARED), a measure found useful in different settings and cultures has not been validated in the subcontinent. This study validated this measure for identifying Anxiety Disorder (AD) among adolescents in an Indian community context.

METHODS: Five hundred adolescents were assessed with SCARED and DSM-IV-TR reference standard for diagnosis of AD. The interviewers were experienced

raters who were further trained to interview participants using Schedule for Affective Disorders and Schizophrenia for School-Age Children/Present and Lifetime Version (K-SADS-PL). Sensitivity, specificity, likelihood ratios and predictive values for various SCARED cut-off scores were calculated. Test-retest reliability and inter-rater reliability of SCARED were examined. The dichotomized SCARED score was correlated with the DSM-IV-TR clinical diagnosis of AD to establish the criterion validity of SCARED as a measure of AD.

RESULTS: A SCARED total score of ≥ 21 ($S_n = 84.62\%$, $S_p = 87.36\%$; $AUC = 90\%$) is suggested for diagnostic use in Indian population. Specific threshold scores were identified for the Panic Disorder, Generalized Anxiety Disorder, Separation Anxiety Disorder and Social Anxiety Disorder subscales. The inter-rater reliability ($ICC = 0.87$) and test-retest reliability ($ICC = 0.90$) for SCARED is good. Besides the adequate face and content validity, SCARED demonstrates good internal consistency (Cronbach's $\alpha = 0.89$) and item-total correlation. There is a high concordance rate with the reference standard, DSM-IV-TR diagnosis [81% ; Cohen's $\kappa = 0.42$ ($95\% CI = 0.31$ to 0.52); $P = 0.001$] in classifying AD.

CONCLUSIONS: SCARED has adequate psychometric properties and is now available for clinical and research work in India.

NAT PMID: 24113880 WOS:000326607300003 MISC

Samuel, R.;L. Daheron;S. Liao;T. Vardam;W. S. Kamoun;A. Batista;C. Buecker;R. Schäfer;X. Han;P. Au;D. T. Scadden;D. G. Duda;D. Fukumura and R. K. Jain

Generation of functionally competent and durable engineered blood vessels from human induced pluripotent stem cells.

Proc Natl Acad Sci U S A. 2013 Jul 30;110(31):12774-9. doi: 10.1073/pnas.1310675110. Epub 2013 Jul 16.

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Efficient generation of competent vasculogenic cells is a critical challenge of human induced pluripotent stem (hiPS) cell-based regenerative medicine. Biologically relevant systems to assess functionality of the engineered vessels in vivo are equally important for such development. Here, we report a unique approach for the derivation of endothelial precursor cells from hiPS cells using a triple combination of selection markers-CD34, neuropilin 1, and human kinase insert domain-containing receptor-and an efficient 2D culture system for hiPS cell-derived endothelial precursor cell expansion. With these methods, we successfully generated endothelial cells (ECs) from hiPS cells obtained from healthy donors and formed stable functional blood vessels in vivo, lasting for 280 d in mice. In addition, we developed an approach to generate mesenchymal precursor cells (MPCs) from hiPS cells in parallel. Moreover, we successfully generated functional blood vessels in vivo using these ECs and MPCs derived from the same hiPS cell line. These data provide proof of the principle that autologous hiPS cell-derived vascular precursors can be used for in vivo applications, once safety and immunological issues of hiPS-based cellular therapy have been resolved. Additionally, the durability of hiPS-derived blood vessels in vivo demonstrates a potential translation of this approach in long-term vascularization for tissue engineering and treatment of vascular diseases. Of note, we have also successfully generated ECs and MPCs from type 1 diabetic patient-derived hiPS cell lines and use them to generate blood vessels in vivo, which is an important milestone toward clinical translation of this approach. © PNAS 2013.

INTL PMID:23861493 MISC

Seidi, A.;K. Sampathkumar;A. Srivastava;S. Ramakrishna and M. Ramalingam

Gradient nanofiber scaffolds for tissue engineering. *Journal of Nanoscience and Nanotechnology*. 2013, 13(7): 4647-4655.

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Scaffolds are one of the key factors for the success of tissue engineering, in particular when dealing with anchorage-dependent cells. The concept of using scaffolds in tissue engineering lies in mimicking the physical, chemical and biological features of native extracellular matrix (ECM) in order to support cell function, which in turn regulates cellular microenvironment that directs cell growth and subsequent tissue formation. Nanofibers fabricated from both synthetic and natural polymers are being used as scaffolds in many tissue engineering applications. At the molecular level, native ECM is made up of a gradient of fibrous proteins and polysaccharides that are nanoscale structures. The gradient cues of ECM, directs critical cell behaviors such as alignment, motility and differentiation, particularly in the region between soft and hard tissues called interfacial tissue. Therefore, it is essential to develop gradient nanofiber scaffolds particularly for interfacial tissue engineering applications. Keeping these points in view, in this article, we review the recent developments of gradient nanofiber scaffolds, their design strategies, and their applications in tissue engineering. Copyright © 2013 American Scientific Publishers All rights reserved.

INTL PMID:23901487 MISC

Selot, R.;N. Gabriel;M. Kumari and G. R. Jayandharan
Targeted Bio-Engineering of Adeno Associated Virus
Serotype rh. 10 Capsid Improves Its Gene Delivery In Vitro
and In Vivo.

Molecular Therapy. 2013, 21: S211-S212.

[Selot, Ruchita; Kumari, Monika; Jayandharan, Giridhara R.] Christian Med Coll & Hosp, Ctr Stem Cell Res, Vellore, Tamil Nadu, India. [Gabriel, Nishanth; Jayandharan, Giridhara R.] Christian Med Coll & Hosp, Vellore, Tamil Nadu, India.

INTL WOS:000319858400548 **MISC**

Sen, D.;M. Huchital and Y. L. Chen

Crosstalk between delta opioid receptor and nerve
growth factor signaling modulates neuroprotection and
differentiation in rodent cell models.

International Journal of Molecular Sciences. 2013, 14(10):
21114-21139.

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Both opioid signaling and neurotrophic factor signaling have played an important role in neuroprotection and differentiation in the nervous system. Little is known about whether the crosstalk between these two signaling pathways will affect neuroprotection and differentiation. Previously, we found that nerve growth factor (NGF) could induce expression of the delta opioid receptor gene (Oprd1, dor), mainly through PI3K/Akt/NF- κ B signaling in PC12h cells. In this study, using two NGF-responsive rodent cell model systems, PC12h cells and F11 cells, we found the delta opioid neuropeptide [D-Ala2, D-Leu5] enkephalin (DADLE)-mediated neuroprotective effect could be blocked by pharmacological reagents: the delta opioid antagonist naltrindole, PI3K inhibitor LY294002, MAPK inhibitor PD98059, and Trk inhibitor K252a, respectively. Western blot analysis revealed that DADLE activated both the PI3K/Akt and MAPK pathways in the two cell lines. siRNA Oprd1 gene knockdown experiment showed that the upregulation of NGF mRNA level was inhibited with concomitant inhibition of the survival effects of DADLE

in the both cell models. siRNA Oprd1 gene knockdown also attenuated the DADLE-mediated neurite outgrowth in PC12h cells as well as phosphorylation of MAPK and Akt in PC12h and F11 cells, respectively. These data together strongly suggest that delta opioid peptide DADLE acts through the NGF-induced functional G protein-coupled Oprd1 to provide its neuroprotective and differentiating effects at least in part by regulating survival and differentiating MAPK and PI3K/Akt signaling pathways in NGF-responsive rodent neuronal cells. © 2013 by the authors; licensee MDPI, Basel, Switzerland.

INTL **MISC**

Sen, D.;P. Agarwal;V. Kalaivani;A. Srivastava and G. R. Jayandharan

Improved Adeno-Associated Virus Serotype (AAV)5
Vectors for Hepatic Gene Therapy.

Molecular Therapy. 2013, 21: S207-S208.

[Sen, Dwaipayan; Kalaivani, V.; Srivastava, Alok; Jayandharan, Giridhara R.] Christian Med Coll & Hosp, Vellore, Tamil Nadu, India. [Agarwal, Prachi; Srivastava, Alok; Jayandharan, Giridhara R.] Christian Med Coll & Hosp, Ctr Stem Cell Res, Vellore, Tamil Nadu, India.

INTL WOS:000319858400536 **MISC**

Sen, D.;R. A. Gadkari;G. Sudha;N. Gabriel;V. Ramya;S. C. Nair;N. Srinivasan;A. Srivastava and G. R. Jayandharan
A Novel Adeno-Associated Virus Serotype (AAV)-8 Capsid
Mutant Improves Human Coagulation Factor IX Expression
In Vivo.

Molecular Therapy. 2013, 21: S47-S47.

[Sen, Dwaipayan; Gabriel, Nishanth; Ramya, V.; Nair, Suresh C.; Srivastava, Alok; Jayandharan, Giridhara R.] Christian Med Coll & Hosp, Vellore, Tamil Nadu, India. [Gadkari, Rupali A.; Sudha, Govindarajan; Srinivasan, N.] Indian Inst Sci, Mol Biophys Unit, Bengaluru, India. [Srivastava, Alok; Jayandharan, Giridhara R.] Christian Med Coll & Hosp, Ctr Stem Cell Res, Vellore, Tamil Nadu, India.

INTL WOS:000319858400115 **MISC**

Sen, D.;V. Kalaivani;R. Gadkari;G. Sudha;N. Srinivasan;A. Srivastava and G. R. Jayandharan

Multiple Molecular Alterations in Phosphodegrons 1-3 within AAV2 Capsid Demonstrates Higher Hepatic Gene Transfer Efficiency.

Molecular Therapy. 2013, 21: S206-S207.

[Sen, Dwaipayan; Kalaivani, V.; Srivastava, Alok; Jayandharan, Giridhara R.] Christian Med Coll & Hosp, Vellore, Tamil Nadu, India. [Gadkari, Rupali; Sudha, G.; Srinivasan, N.] Indian Inst Sci, Mol Biophys Unit, Bengaluru, India. [Srivastava, Alok; Jayandharan, Giridhara R.] Christian Med Coll & Hosp, Ctr Stem Cell Res, Vellore, Tamil Nadu, India.

INTL WOS:000319858400535 MISC

Senthilkumaran, S.;S. S. David;N. Balamurugan and P. Thirumalaikolundusubramanian

Energy drinks overdose and metabolic abnormalities - A double whammy!

American Journal of Emergency Medicine. 2013, 31(6): 984.

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INTL MISC

Senthilkumaran, S.;S. S. David;N. N. Jena and P. Thirumalaikolundusubramanian

Limitations and consumer aspects of point-of-care in snake envenomation.

Emerg Med Australas. 2013 Nov 18. doi: 10.1111/1742-6723.12161. [Epub ahead of print]

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INTL PMID:24238068 MISC

Senthilkumaran, S.;S. S. David;R. G. Menezes and P. Thirumalaikolundusubramanian

C-reactive protein value in organophosphate-poisoned patients - Promises and pitfalls.

Clinical Toxicology. 2013, 51(2): 121-121.

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INTL WOS:000315313800013 MISC

Shima, M.;J. Thachil;S. C. Nair and A. Srivastava

Towards standardization of clot waveform analysis and recommendations for its clinical applications.

Journal of Thrombosis and Haemostasis. 2013, 11(7): 1417-1420.

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INTL WOS:000321763500022 MISC

Sieper, J.;S. Srinivasan;O. Zamani;H. Mielants;D. Choquette;K. Pavelka;A. G. Loft;P. Géher;D. Danda;T. Reitblat;F. Cantini;C. Ancuta;S. Erdes;H. Raffayová;A. Keat;J. S. H. Gaston;S. Praprotnik and N. Vastesaeger
Comparison of two referral strategies for diagnosis of axial spondyloarthritis: The Recognising and Diagnosing Ankylosing Spondylitis Reliably (RADAR) study.

Ann Rheum Dis. 2013 Oct;72(10):1621-7. doi: 10.1136/annrheumdis-2012-201777. Epub 2012 Oct 13.

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Objective To determine which of two referral strategies, when used by referring physicians for patients with chronic back pain (CBP), is superior for diagnosing axial spondyloarthritis (SpA) by rheumatologists across several countries. **Methods** Primary care referral sites in 16 countries were randomised (1 : 1) to refer patients with CBP lasting >3 months and onset before age 45 years to a rheumatologist using either strategy 1 (any

of inflammatory back pain (IBP), HLA-B27 or sacroiliitis on imaging) or strategy 2 (two of the following: IBP, HLAB27, sacroiliitis, family history of axial SpA, good response to non-steroidal anti-inflammatory drugs, extraarticular manifestations). The rheumatologist established the diagnosis. The primary analysis compared the proportion of patients diagnosed with definite axial SpA by referral strategy. **Results** Patients (N=1072) were referred by 278 sites to 64 rheumatologists: 504 patients by strategy 1 and 568 patients by strategy 2. Axial SpA was diagnosed in 35.6% and 39.8% of patients referred by these respective strategies (between-group difference 4.40%; 95% CI -7.09% to 15.89%; p=0.447). IBP was the most frequently used referral criterion (94.7% of cases), showing high concordance (85.4%) with rheumatologists' assessments, and having sensitivity and a negative predictive value of >85% but a positive predictive value and specificity of <50%. Combining IBP with other criteria (eg, sacroiliitis, HLA-B27) increased the likelihood for diagnosing axial SpA. **Conclusions** A referral strategy based on three criteria leads to a diagnosis of axial SpA in approximately 35% of patients with CBP and is applicable across countries and geographical locales with presumably different levels of expertise in axial SpA.

INTL PMID:23065731 MISC

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Prompt plasma exchanges and immunosuppressive treatment improves the outcomes of anti-factor H autoantibody-associated hemolytic uremic syndrome in children.

Kidney Int. 2013 Oct 2. doi: 10.1038/ki.2013.373. [Epub ahead of print]

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Antibodies to complement factor H are an uncommon cause of hemolytic uremic syndrome (HUS). Information on clinical features and outcomes in children is limited. In order to explore this we studied a multicenter cohort of 138 Indian children with anti-complement factor H antibody associated HUS, constituting 56% of patients with HUS. Antibody titers were high (mean 7054 AU/ml) and correlated inversely with levels of complement C3, but not complement factor H. Homozygous deletion of the CFHR1 gene was found in 60 of 68 patients. Therapies included dialysis in 119 children, 105 receiving plasma exchanges and 26 intravenous immunoglobulin. Induction immunosuppression consisted of 87 children receiving prednisolone with or without intravenous cyclophosphamide or rituximab. Antibody titers fell

significantly following plasma exchanges and increased during relapses. Adverse outcome (stage 4-5 CKD or death) was seen in 36 at 3 months and 41 by last follow up, with relapse in 14 of 122 available children. Significant independent risk factors for adverse outcome were an antibody titer over 8000 AU/ml, low C3 and delay in plasma exchange. Combined plasma exchanges and induction immunosuppression resulted in significantly improved renal survival: one adverse outcome prevented for every 2.6 patients treated. Maintenance immunosuppressive therapy, of prednisolone with either mycophenolate mofetil or azathioprine, significantly reduced the risk of relapses. Thus, prompt use of immunosuppressive agents and plasma exchanges are useful for improving outcomes in pediatric patients with anti-complement factor H-associated HUS. *Kidney International* advance online publication, 2 October 2013; doi:10.1038/ki.2013.373.

INTL PMID:24088957 MISC

Siromani, U.;T. T. Rita Isaac;D. Daniel;S. Kg;J. J. Mammen and S. C. Nair

Recruitment and retention of voluntary blood donors through electronic communication.

Acta Inform Med. 2013, 21(2): 142.

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INTL PMID: 24324291 PMCID: 3766533 MISC

Siromani, U.;T. Tsubaki;D. Daniel;J. J. Mammen and S. C. Nair

Perspectives and attitudes to voluntary blood donation in a tertiary referral hospital blood bank.

Asian J Transfus Sci. 2013, 7(2): 158-159.

Department of Transfusion Medicine and Immunohaematology, John Scudder Memorial Blood Bank, Christian Medical College, Vellore - 632 004, Tamilnadu, India.

INTL PMID: 24014951 PMCID: 3757781 MISC

Song, L. J.;M. A. Kauss;E. Kopin;M. Chandra;T. Ul-Hasan;E. Miller;G. R. Jayandharan;A. E. Rivers;G. V. Aslanidi;C. Ling;B. Z. Li;W. Q. Ma;X. M. Li;L. M. Andino;L. Zhong;A. F. Tarantal;M. C. Yoder;K. K. Wong;M. Q. Tan;S. Chatterjee and A. Srivastava

Transduction of Murine, Nonhuman Primate, and Human Hematopoietic Stem Cells (HSCs) by Recombinant AAV Serotype Vectors: Identification of AAV6 as the Most Efficient Serotype for Human HSCs, and Further Augmentation in Transduction Efficiency In Vitro and In Vivo with Point-Mutations of Tyrosine Residues in the Viral Capsid.

Molecular Therapy. 2013, 21: S209-S209.

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INTL WOS:000319858400541 MISC

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Optimizing the transduction efficiency of capsid-modified AAV6 serotype vectors in primary human hematopoietic stem cells in vitro and in a xenograft mouse model in vivo.

Cytotherapy. 2013, 15(8): 986-998.

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INTL WOS:000321993900010 MISC

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Background aims. Although recombinant adeno-associated virus serotype 2 (AAV2) vectors have gained attention because of their safety and efficacy in numerous phase I/II clinical trials, their transduction efficiency in hematopoietic stem cells (HSCs) has been reported to be low. Only a few additional AAV serotype vectors have been evaluated, and comparative analyses of their transduction efficiency in HSCs from

different species have not been performed. Methods. We evaluated the transduction efficiency of all available AAV serotype vectors (AAV1 through AAV10) in primary mouse, cynomolgus monkey and human HSCs. The transduction efficiency of the optimized AAV vectors was also evaluated in human HSCs in a murine xenograft model in vivo. Results. We observed that although there are only six amino acid differences between AAV1 and AAV6, AAV1, but not AAV6, transduced mouse HSCs well, whereas AAV6, but not AAV1, transduced human HSCs well. None of the 10 serotypes transduced cynomolgus monkey HSCs in vitro. We also evaluated the transduction efficiency of AAV6 vectors containing mutations in surface-exposed tyrosine residues. We observed that tyrosine (Y) to phenylalanine (F) point mutations in residues 445, 705 and 731 led to a significant increase in transgene expression in human HSCs in vitro and in a mouse xenograft model in vivo. Conclusions. These studies suggest that the tyrosine-mutant AAV6 serotype vectors are the most promising vectors for transducing human HSCs and that it is possible to increase further the transduction efficiency of these vectors for their potential use in HSC-based gene therapy in humans.

INTL WOS:000321993900010 **MISC**

Song, L. J.;X. M. Li;G. R. Jayandharan;Y. Wang;G. V. Aslanidi;C. Ling;L. Zhong;G. P. Gao;M. C. Yoder;C. Q. Ling;M. Q. Tan and A. Srivastava

High-Efficiency Transduction of Primary Human Hematopoietic Stem Cells and Erythroid Lineage-Restricted Expression by Optimized AAV6 Serotype Vectors In Vitro and in a Murine Xenograft Model In Vivo. PLoS One. 2013, 8(3).

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We have observed that of the 10 AAV serotypes, AAV6 is the most efficient in transducing primary human hematopoietic stem cells (HSCs), and that the transduction efficiency can be further increased by specifically mutating single surface-exposed tyrosine (Y) residues on AAV6 capsids. In the present studies, we combined the two mutations to generate a tyrosine double-mutant (Y705+731F) AAV6 vector, with which >70% of CD34(+) cells could be transduced. With the long-term objective of developing recombinant AAV vectors for the potential gene therapy of human hemoglobinopathies, we generated the wild-type (WT) and tyrosine-mutant AAV6 vectors containing the following erythroid cell-specific promoters: beta-globin promoter (beta p) with the upstream hyper-sensitive site 2 (HS2) enhancer from the beta-globin locus control region (HS2-beta bp), and the human parvovirus B19 promoter at map unit 6 (B19p6). Transgene expression from the B19p6 was significantly higher than that from the HS2-beta p, and increased up to 30-fold and up to 20-fold, respectively, following erythropoietin (Epo)-induced differentiation of CD34(+) cells in vitro. Transgene expression from the B19p6 or the HS2-beta p was also evaluated in an immuno-deficient xenograft mouse model in vivo.

Whereas low levels of expression were detected from the B19p6 in the WT AAV6 capsid, and that from the HS2-beta p in the Y705+ 731F AAV6 capsid, transgene expression from the B19p6 promoter in the Y705+ 731F AAV6 capsid was significantly higher than that from the HS2-beta p, and was detectable up to 12 weeks post-transplantation in primary recipients, and up to 6 additional weeks in secondary transplanted animals. These data demonstrate the feasibility of the use of the novel Y705+ 731F AAV6-B19p6 vectors for high-efficiency transduction of HSCs as well as expression of the b-globin gene in erythroid progenitor cells for the potential gene therapy of human hemoglobinopathies such as beta-thalassemia and sickle cell disease.

INTL WOS:000316407400061 MISC

Song, L. J.;X. M. Li;G. R. Jayandharan;Y. Wang;G. V. Aslanidi;C. Ling;L. Zhong;G. P. Gao;M. C. Yoder;C. Q. Ling;M. Q. Tan and A. Srivastava

High-Efficiency Transduction of Primary Human Hematopoietic Stem Cells and Erythroid Lineage-Restricted Expression by Optimized scAAV6 Serotype Vectors In Vitro and in a Murine Xenograft Model In Vivo. *Molecular Therapy*. 2013, 21: S126-S127.

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INTL WOS:000319858400327 MISC

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Prognostic risk stratification of men with advanced penile squamous cell cancer (PSCC) receiving first-line systemic therapy.

European Journal of Cancer. 2013, 49: S647-S647.

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INTL WOS:000326843604118 MISC

Sreekar, H.

Teaching Plastic Surgeons How to Be Better Teachers.

Plastic and Reconstructive Surgery. 2013, 131(1): 117E-118E.

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INTL WOS:000312898700020 MISC

Sreekar, H. and R. B. Shetty

Current microsurgery training programs in India.

Ann Plast Surg. 2013, 71(5): 624.

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INTL PMID: 23241798 MISC

Sreekar, H.;S. Lamba and A. K. Gupta
Training young surgeons in sectioning scalp for hair
transplantation; a simple method.

An Bras Dermatol. 2013 Mar-Apr;88(2):317.

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INTL PMID:23894759 MISC

Srivastava, A.;A. K. Brewer;E. P. Mauser-Bunschoten;N.
S. Key;S. Kitchen;A. Llinas;C. A. Ludlam;J. N. Mahlangu;K.
Mulder;M. C. Poon and A. Street

Guidelines for the management of hemophilia.

Haemophilia. 2013, 19(1): e1-47.

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Hemophilia is a rare disorder that is complex to
diagnose and to manage. These evidence-based
guidelines offer practical recommendations on the
diagnosis and general management of hemophilia, as
well as the management of complications including
musculoskeletal issues, inhibitors, and transfusion-
transmitted infections. By compiling these guidelines,
the World Federation of Hemophilia aims to assist
healthcare providers seeking to initiate and/or
maintain hemophilia care programs, encourage
practice harmonization around the world and, where
recommendations lack adequate evidence, stimulate
appropriate studies.

INTL PMID:22776238 MISC

Su, T. T.;A. M. Bulgiba;P. Sampatanukul;S.
Sastroasmoro;P. Chang;P. Tharyan;V. Lin and Y. L. Wong
Clinical Epidemiology (CE) and Evidence-Based Medicine
(EBM) in the Asia Pacific region (Round Table Forum).

Preventive Medicine. 2013, 57(SUPPL): S5-S7.

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Clinical Epidemiology (CE) and Evidence-Based
Medicine (EBM) have become increasingly important
in an era of rising costs, patient safety concerns and
evidence-based health care. CE and EBM research in
the Asia Pacific region have grown significantly.
However, there are three main challenges such as
linking evidence to practice and policy; developing a
strong collaborative network; and a need for resources
and technical expertise to produce evidence. The
Cochrane Collaboration is a possible solution to
resolve above challenges identified, particularly the
challenge of transforming evidence to practice. In
addition, training can be carried out to enhance
technical expertise in the region and there is also the
promising potential that collaborations could extend
beyond systematic reviews. To improve the adoption
of evidence-based health policy, selection of the best
evidence for the right audience and focusing on the
relevant issues through appropriate methodology are
essential. Information on effectiveness and cost
effectiveness needs to be highlighted for policy
makers. The way forward to strengthen research and
capacity building is to establish the Asia Pacific
Consortium for CE and EBM. The consortium would
help to create mutually rewarding scientific research
and collaborations that will augur well for advances
in CE and EBM. © 2013 Elsevier Inc.

INTL MISC

Sukumaran, A.;J. James;H. P. Janardhan;A. Amaladas;L. M. Suresh;D. Danda;V. Jeyeseelan;B. S. Ramakrishna and M. Jacob

Expression of iron-related proteins in the duodenum is up-regulated in patients with chronic inflammatory disorders.

Br J Nutr. 2013; 1-10.

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Mechanisms responsible for derangements in Fe homeostasis in chronic inflammatory conditions are not entirely clear. The aim of the present study was to test the hypothesis that inflammation affects the expression of Fe-related proteins in the duodenum and monocytes of patients with chronic inflammatory disorders, thus contributing to dysregulated Fe homeostasis. Duodenal mucosal samples and peripheral blood monocytes obtained from patients with chronic inflammatory disorders, namely ulcerative colitis (UC), Crohn's disease (CD) and rheumatoid arthritis, were used for gene and protein expression studies. Hb levels were significantly lower and serum C-reactive protein levels were significantly higher in patients in the disease groups. The gene expression of several Fe-related proteins in the duodenum was significantly up-regulated in patients with UC and CD. In patients with UC, the protein expression of divalent metal transporter 1 and ferroportin, which are involved in the absorption of dietary non-haem Fe, was also found to be significantly higher in the duodenal mucosa. The gene expression of the duodenal proteins of interest correlated positively with one another and negatively with Hb. In patients with UC, the gene expression of Fe-related proteins in monocytes was found to be unaffected. In a separate group of patients with UC, serum hepcidin levels were found to be significantly lower than those in the control group. In conclusion, the expression of Fe-related proteins was up-regulated in the duodenum of patients with chronic inflammatory conditions in the present study. The effects appeared to be secondary to anaemia and the consequent erythropoietic drive.

INTL PMID: 24160450

MISC

Thakur, A.;D. Muniswami;G. Tharion and I. Kanakasabapathy

Isolating globose Basal stem cells from albino wistar rats using a highly specific monoclonal antibody.

J Clin Diagn Res. 2013, 7(11): 2419-2422.

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Introduction: Olfactory mucosa which is situated in the roof of the nasal cavity possesses an extremely peculiar and exceptional type of pluripotent stem cells called Globose Basal Cells (GBCs) which help in lifelong regeneration of the olfactory mucosa. Previous literature doesn't provide much knowledge on the cytological, histochemical and electrophysiological properties of these cells, as they have never been isolated in pure form.

Material and Methods: Olfactory mucosa was obtained from six Albino Wistar rats by using standardized surgical and chemical separation procedures. GBCs were isolated by using different chemical, surgical and fluorescent techniques.

Results: In this research work, we standardized the techniques for isolating these stem cells in pure form from rat olfactory mucosa by tagging them with GBC-III antibody and separating them from other epithelial cells by using Fluorescence Activated Cell Sorter (FACS). GBC-III antibody is a mouse monoclonal IgM antibody which recognizes a 40 kDa surface antigen, which is a laminin receptor surface protein present on the GBCs. It is a highly specific marker for GBCs, unlike the earlier antibodies used, like GBC-I, which were nonspecific markers for GBCs and showed positive reactions, even with Horizontal Basal Cells (HBCs), sustentacular cells (Sus) and duct cells. This study also standardized the techniques for surgically excising the olfactory mucosa from the nasal septum and chemically separating the olfactory epithelium from the lamina propria.

Conclusion: GBCs are an important group of cells which can be exploited in future to study and treat neuro-degenerative disorders like multiple sclerosis, brain

ischaemia, etc. and spinal cord trauma, as they reside in a niche similar to the microenvironment in the central nervous system and have the similar ectodermal development as the neuronal and non-neuronal cells of the CNS. Moreover, olfactory epithelium is easily accessible for autologous transplantation of GBCs for different CNS disorders.

INTL PMID: 24392361 PMCID: 3879839 MISC

Tharyan, P.

Introducing conceptual and analytical clarity on dimensions of complexity in systematic reviews of complex interventions.

J Clin Epidemiol. 2013, 66(11): 1202-1204.

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Tyagi, M. G.; A. Ramaswamy and S. Sengottuvelu

Is KCNQ channel a mediator of urinary bladder disorders in multiple sclerosis?

Research Journal of Pharmaceutical, Biological and Chemical Sciences. 2013, 4(3): 1322-1327.

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The KCNQ encoded channels in such pacemaker cells as well as smooth muscles regulate the excitability and membrane physiology. ICC like cells in the ureter are distributed throughout the ureter with higher distribution in the upper ureter i.e pyeloureteric junction. These cells in the absence of neural input can still maintain peristalsis for propulsion of urine from the kidney to ureter. Ion channels encoded by the KCNQ gene family (Kv7.1-7.5) are major determinants of neuronal membrane potential and the cardiac action potential. This key physiological role is highlighted by the existence of a number of hereditary disorders caused by mutations to KCNQ genes. Recently, KCNQ gene expression has been identified in vascular and non-vascular smooth muscles. In addition, experiments with an array of pharmacological modulators of KCNQ channels have supported a crucial role for these channels in regulating smooth muscle

contractility. This article will provide an overview of present understanding in this nascent area of KCNQ research and will offer guidance as to future directions. This hypothetical review examines the possibility of KCNQ channels and their role in urinary bladder disorders in multiple sclerosis.

INTL MISC

van Ginneken, N.; P. Tharyan; S. Lewin; G. N. Rao; S. M. Meera; J. Pian; S. Chandrashekar and V. Patel

Non-specialist health worker interventions for the care of mental, neurological and substance-abuse disorders in low- and middle-income countries.

Cochrane Database of Systematic Reviews. 2013, (11).

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Background Many people with mental, neurological and substance-use disorders (MNS) do not receive health care. Non-specialist health workers (NSHWs) and other professionals with health roles (OPHRs) are a key strategy for closing the treatment gap. **Objectives** To assess the effect of NSHWs and OPHRs delivering MNS interventions in primary and community health care in low-and middle-income countries. **Search methods** We searched the Cochrane Central Register of Controlled Trials (CENTRAL) (including the Cochrane Effective Practice and Organisation of Care (EPOC) Group Specialised Register) (searched 21 June 2012); MEDLINE, OvidSP; MEDLINE In Process & Other Non-Indexed Citations, OvidSP; EMBASE, OvidSP (searched 15 June 2012); CINAHL, EBSCOhost; PsycINFO, OvidSP (searched 18 and 19 June 2012); World Health Organization (WHO) Global Health Library (searched 29 June 2012); LILACS; the International Clinical Trials

Registry Platform (WHO); OpenGrey; the metaRegister of Controlled Trials (searched 8 and 9 August 2012); Science Citation Index and Social Sciences Citation Index (ISI Web of Knowledge) (searched 2 October 2012) and reference lists, without language or date restrictions. We contacted authors for additional studies. Selection criteria Randomised and non-randomised controlled trials, controlled before-and-after studies and interrupted-time-series studies of NSHWs/OPHR-delivered interventions in primary/community health care in low-and middle-income countries, and intended to improve outcomes in people with MNS disorders and in their carers. We defined an NSHW as any professional health worker (e. g. doctors, nurses and social workers) or lay health worker without specialised training in MNS disorders. OPHRs included people outside the health sector (only teachers in this review). Data collection and analysis Review authors double screened, double data-extracted and assessed risk of bias using standard formats. We grouped studies with similar interventions together. Where feasible, we combined data to obtain an overall estimate of effect. Main results The 38 included studies were from seven low-and 15 middle-income countries. Twenty-two studies used lay health workers, and most addressed depression or post-traumatic stress disorder (PTSD). The review shows that the use of NSHWs, compared with usual healthcare services: 1. may increase the number of adults who recover from depression or anxiety, or both, two to six months after treatment (prevalence of depression: risk ratio (RR) 0.30, 95% confidence interval (CI) 0.14 to 0.64; low-quality evidence); 2. may slightly reduce symptoms for mothers with perinatal depression (severity of depressive symptoms: standardised mean difference (SMD) -0.42, 95% CI -0.58 to -0.26; low-quality evidence); 3. may slightly reduce the symptoms of adults with PTSD (severity of PTSD symptoms: SMD -0.36, 95% CI -0.67 to -0.05; low-quality evidence); 4. probably slightly improves the symptoms of people with dementia (severity of behavioural symptoms: SMD -0.26, 95% CI -0.60 to 0.08; moderate-quality evidence); 5. probably improves/slightly improves the mental well-being, burden and distress of carers of people with dementia (carer burden: SMD -0.50, 95% CI -0.84 to -0.15; moderate-quality evidence); 6. may decrease the amount of alcohol consumed by people with alcohol-use disorders (drinks/drinking day in last 7 to 30 days:

mean difference -1.68, 95% CI -2.79 to -0.57); low-quality evidence). It is uncertain whether lay health workers or teachers reduce PTSD symptoms among children. There were insufficient data to draw conclusions about the cost-effectiveness of using NSHWs or teachers, or about their impact on people with other MNS conditions. In addition, very few studies measured adverse effects of NSHW-led care - such effects could impact on the appropriateness and quality of care. Authors' conclusions Overall, NSHWs and teachers have some promising benefits in improving people's outcomes for general and perinatal depression, PTSD and alcohol-use disorders, and patient-and carer-outcomes for dementia. However, this evidence is mostly low or very low quality, and for some issues no evidence is available. Therefore, we cannot make conclusions about which specific NSHW-led interventions are more effective.

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Varghese, J.;A. T. McKie and M. Jacob

DOES INSULIN AFFECT EXPRESSION OF PROTEINS INVOLVED IN IRON HOMEOSTASIS? PRELIMINARY RESULTS FROM HEPG2 CELLS AND PRIMARY MOUSE HEPATOCYTES.

American Journal of Hematology. 2013, 88(5): E235-E235. [Varghese, Joe; Jacob, Molly] Christian Med Coll & Hosp, Vellore, Tamil Nadu, India. [McKie, Andrew Tristan] Kings Coll London, London WC2R 2LS, England.

INTL WOS:000318043500401 MISC

Varghese, J.;M. P. Chacko;M. Rajaiah and D. Daniel

Red cell alloimmunization among antenatal women attending a tertiary care hospital in south India.

Indian J Med Res. 2013, 138: 68-71.

Department of Transfusion Medicine & Immunohaematology, Christian Medical College & Hospital, Vellore, India.

BACKGROUND & OBJECTIVES: Detection of maternal alloimmunization against red cell antigens is vital in the management of haemolytic disease of the foetus and newborn (HDFN). This study was conducted to measure the presence of allosensitization to blood group antibodies in the antenatal women attending a tertiary care hospital and to observe the proportion of minor blood group antibodies to assess the benefit of screening for the same.

METHODS: All antenatal women registered in the hospital between January 2008 and January 2009, were screened for irregular antibodies using a commercial 3-cell antibody screening panel. Antibody identification was performed on samples found positive using a commercial 11 cell-panel.

RESULTS: Screening was performed on 5347 women, 339 (6.34%) of whom were Rh negative. Allosensitization was found in 79 women (1.48%; confidence interval 1.17-1.84). In 29 of these 79 (37%) women the allo-antibodies could not be identified. In the remaining 50 women, 54 antibodies were characterized. A total of 40 clinically significant antibody specificities were identified among 36 women, of whom four were Rh(D) positive. Allosensitization with clinically significant antibodies was found in 9.43 per cent (confidence interval 6.55-13.06) Rh(D) negative and in 0.08 per cent (confidence interval .02-0.2) Rh(D) positive women. Anti D was the most frequent antibody found in 8.85 per cent Rh(D) negative women. The remaining clinically significant antibodies identified included anti-C, c, E, Jk(a), Jk(b), M and S. In Rh(D) negative women, anti-D and antibodies of the Rh system contributed 83.3 and 94.4 per cent of clinically significant antibodies. However, in Rh(D) positive women, non-Rh antibodies comprised three out of four clinically significant antibodies.

INTERPRETATION & CONCLUSIONS: The presence of alloimmunization in our study corroborated with data reported from India. The most frequent antibody was anti-D. However, a significant fraction was non-D. Alloimmunization among Rh(D) positive women though low as compared to Rh(D) negative women, included clinically significant antibodies, and most of these were non Rh.

NAT . . . **PMID: 24056557** **PMCID: 3767264** **MISC**

Varghese, K. M.;A. Kekre and K. S. Jacob

Sexual dysfunction among young married women in south India.

Bjog-an International Journal of Obstetrics and Gynaecology. 2013, 120: 580-581.

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INTL **WOS:000320781602031** **MISC**

Vasan, S. K.;F. Karpe;H. F. Gu;K. Brismar;C. H. Fall;E. Ingelsson and T. Fall

FTO genetic variants and risk of obesity and type 2 diabetes: A meta-analysis of 28,394 Indians.

Obesity (Silver Spring). 2013 Aug 20. doi: 10.1002/oby.20606. [Epub ahead of print]

Department of Molecular Medicine and Surgery Rolf Luft Research Center for Diabetes and Endocrinology, Karolinska Institutet, Stockholm, Sweden; Department of Endocrinology Diabetes and Metabolism, Christian Medical College, Vellore, Tamil Nadu, India.

OBJECTIVE: To investigate the magnitude of association of FTO variants with obesity, type 2 diabetes (T2DM), and related traits among Asian Indians.

DESIGN AND METHODS: Random-effect meta-analysis was performed on pooled data from eight studies (n = 28,394) for obesity and related traits and six studies (n = 24,987) for assessment of T2DM risk in Indians where FTO variants were reported.

RESULTS: The minor A-allele of the FTO variant rs9939609 was associated with increased risk of obesity (OR 1.15, 95% CI 1.08-1.21, p = 2.14 x 10⁻⁵), BMI (beta = 0.30 kg/m², 95% CI 0.21-0.38, p = 4.78 x 10⁻¹¹) and other regional adiposity measurements [waist (beta = 0.74 cm, 95% CI 0.49-0.99), HC (beta = 0.52, 95% CI 0.26-0.78), and waist-hip ratio (WHR) (beta = 0.002, 95% CI 0.001-0.004)] in Indians (p <= 0.001). An increased risk for T2DM (OR 1.11; 95% CI 1.04-1.19, p = 0.002) was observed, which attenuated when adjusted for age, gender, and BMI (OR 1.09; 95%CI 1.02-1.16, p = 0.01).

CONCLUSIONS: Our study provides evidence of association between common FTO variant and obesity risk among Indians with comparable effect sizes as in Caucasians. The attenuation of FTO-T2DM risk on BMI adjustment reinforces that BMI does not fully account for the adiposity effects among Asian Indians who are more centrally obese.

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Venkatraman, A.;X. C. He;J. L. Thorvaldsen;R. Sugimura;J. M. Perry;F. Tao;M. Zhao;M. K. Christenson;R. Sanchez;J. Y. Yu;L. Peng;J. S. Haug;A. Paulson;H. Li;X. B. Zhong;T. L. Clemens;M. S. Bartolomei and L. Li

Maternal imprinting at the H19-Igf2 locus maintains adult haematopoietic stem cell quiescence.

Nature. 2013, 500(7462): 345-349.

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The epigenetic regulation of imprinted genes by monoallelic DNA methylation of either maternal or paternal alleles is critical for embryonic growth and development. Imprinted genes were recently shown to be expressed in mammalian adult stem cells to support self-renewal of neural and lung stem cells; however, a role for imprinting per se in adult stem cells remains elusive. Here we show upregulation of growth-restricting imprinted genes, including in the H19-Igf2 locus, in long-term haematopoietic stem cells and their downregulation upon haematopoietic stem cell activation and proliferation. A differentially methylated region upstream of H19 (H19-DMR), serving as the imprinting control region, determines the reciprocal expression of H19 from the maternal allele and Igf2 from the paternal allele. In addition, H19 serves as a source of miR-675, which restricts Igf1r expression. We demonstrate that conditional deletion of the maternal but not the paternal H19-DMR reduces adult haematopoietic stem cell quiescence, a state required for long-term maintenance of haematopoietic stem cells, and compromises haematopoietic stem cell function. Maternal-specific H19-DMR deletion results in activation of the Igf2-Igfr1 pathway, as shown by the translocation of phosphorylated FoxO3 (an inactive form) from nucleus to cytoplasm and the release of FoxO3-mediated cell cycle arrest, thus leading to

increased activation, proliferation and eventual exhaustion of haematopoietic stem cells. Mechanistically, maternal-specific H19-DMR deletion leads to Igf2 upregulation and increased translation of Igf1r, which is normally suppressed by H19-derived miR-675. Similarly, genetic inactivation of Igf1r partly rescues the H19-DMR deletion phenotype. Our work establishes a new role for this unique form of epigenetic control at the H19-Igf2 locus in maintaining adult stem cells. © 2013 Macmillan Publishers Limited. All rights reserved.

INTL

MISC

Vyas, R.;A. Zachariah;I. Swamidasan;P. Doris and I. Harris
Role of distance-learning modules and contact sessions in developing knowledge and skills of junior doctors for practicing effectively in rural hospitals in India.

Medical Teacher. 2013, 35(2): 170-170.

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MISC

Kalampokas, T.;M. S. Kamath and E. Kalampokas
AMH after laparoscopic surgery of the ovaries: A review. Gynecological Endocrinology. 2013, 29(5): 408-411.

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Operative laparoscopy compared with laparotomy has been established as the gold standard surgical approach in treating ovarian cysts. However, the safety of a laparoscopic cystectomy has been questioned in what has to do with the subsequent damage to the ovarian reserve of the operated ovary. One of the best available methods to determine ovarian reserve, due to its biochemical and pathological characteristics is anti-Mullerian hormone (AMH). With this study, we are reviewing currently available studies examining the effect laparoscopic operations have on AMH levels. © 2013 Informa UK Ltd All rights reserved: reproduction in whole or part not permitted.

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