



CHRISTIAN MEDICAL COLLEGE

Volume 1 Issue 7, Jan - Jun 2010

RESEARCH DIGEST

ABSTRACTS FROM Jan - Jun 2010

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EDITORIAL

India is home to one-sixth of the world's population and despite considerable efforts, health care delivery is frequently inadequate or inaccessible. The economic and social benefits of globalization are limited to 20% of the population, and over 750 million people live on less than \$2/day. It is not widely understood that both the absolute numbers and the proportion of the population that lives on less than \$2/day is still greater in India than in sub-Saharan Africa. This has been recently high-lighted by the Multi-dimensional Poverty Index (MPI) developed and used by the UN and Oxford University, which showed that more MPI poor people in eight Indian states alone (421 million in Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh, and West Bengal) than in the 26 poorest African countries combined (410 million). As an institution committed to serving the nation, we have a responsibility to work in partnership with the government and other agencies to see that the health needs of our fellow citizens are addressed. The allocation of limited resources to large needs requires commitment, pragmatism and strategies to make the best use of what is available while seeking to expand resources. As the single largest private medical college hospital in India, with over 31 clinical and allied specialties, we have an advantage in that we have not limited ourselves to tertiary care, but actively pursued secondary and primary care models for delivery of health care, all of which has offered a vast potential for research as a result of patient and laboratory-based information that has been accumulated over the last 15 years and has resulted in some instances in wider applications of significant importance. The CMC model of a village based health worker has been adapted as the ASHA worker in the National Rural Health Mission. The pulse-polio programme was developed based on research at CMC showing that increased doses of oral polio vaccine could result in increased proportions of the population being protected from polio. New research in oral rehydration, vaccines and low cost technologies for infant monitoring or water treatment are expanding areas where we are currently engaged in potentially important public health interventions. We have the skills and capabilities to make a difference, not just to individual patients, but to the country, and we should use them in the letter and the spirit of service to our nation.

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Vice Principal (Research)

PUBLICATIONS AND ABSTRACTS

Anandan S, Augustine A, Mathai E, Jesudason MV.

Evaluation of IgM ELISA using a sonicate and a lipopolysaccharide antigen for the serodiagnosis of melioidosis.

Indian J Med Microbiol. 2010 Apr-Jun;28(2):158-61.

Department of Microbiology, Christian Medical College, Vellore - 632 004, India.

Melioidosis, caused by *Burkholderia pseudomallei*, has variable manifestations. The disease can present as an acute or a chronic form or localized or disseminated or can remain latent for many years. Acute septicaemic melioidosis has a high fatality rate when untreated and therefore, an early diagnosis is critical. Lack of testing facilities and of an awareness of the manifestations of the disease makes it likely that it is underreported in India. A sonicate and a lipopolysaccharide (LPS) antigen were evaluated by an IgM enzyme immunoassay in patients with culture-confirmed melioidosis (n = 29), fever of unknown origin (n = 214) and healthy controls (n = 109). Patients with melioidosis had significantly higher optical density values than both control categories, but the sensitivity of both tests was low (25% for sonicate, 62% for LPS). These data highlight the problems with serodiagnosis in endemic settings, where high cut-off values are required for specificity, and result in low sensitivity.



Anderson GA, Thomas BP, Pallapati SC

Flexor carpi ulnaris tendon transfer to the split brachioradialis tendon to restore supination in paralytic forearms.

J Bone Joint Surg Br. 2010 Feb;92(2):230-4.

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

Inability to actively supinate the forearm makes common activities of daily living and certain vocational activities awkward or impossible to perform. A total of 11 patients with deficient supination of the arm underwent transfer of the tendon of flexor carpi ulnaris to the split tendon of brachioradialis with its bony insertion into the radial styloid left intact. Active supination beyond neutral rotation was a mean of 37.2 degrees (25 degrees to 49.5 degrees) at a minimum follow-up of three years, representing a significant improvement (95% confidence interval 25 to 50, $p < 0.001$). Functional evaluation of the hand after this transfer showed excellent and good results in ten patients and fair in one. The split tendon of brachioradialis as an insertion for transfer of the flexor carpi ulnaris appears to provide adequate supination of the forearm without altering the available pronation and avoids the domination of wrist extension sometimes associated with transfers of the flexor carpi ulnaris to the radial extensors of the wrist.



Annapandian VM, Fleming DH, Mathew BS, John GT.

Mycophenolic acid area under the curve recovery time following rifampicin withdrawal.

Indian J Nephrol. 2010 Jan;20(1):51-3.

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

Renal transplant patients prescribed mycophenolate mofetil (MMF) may require treatment for tuberculosis with a regimen including the tuberculocidal drug rifampicin. MMF is an ester prodrug which is rapidly hydrolysed to the active compound, mycophenolic acid (MPA). Therapeutic drug monitoring of mycophenolate involves the measurement of MPA area under the curve (MPA-AUC(0-12)). Rifampicin is known to increase the metabolism and decrease enterohepatic recirculation of mycophenolic acid, (MPA). When MPA is monitored after the discontinuation of rifampicin, an important factor is the time required for the MPA area under the curve to return to the pre-rifampicin value. At present this is not known. This report describes one such renal allograft patient, on long term MMF and prescribed rifampicin by a local physician. As expected there was a clinically significant decrease in MPA-AUC(0-12) Three weeks after rifampicin was discontinued the MPA-AUC(0-12) was still only 65% of the pre-rifampicin value and only 55% of the steady state MPA-AUC(0-12) measured six months later.



Balaji V, Daley P, Anand AA, Sudarsanam T, Michael JS, Sahni RD, Chordia P, George IA, Thomas K, Ganesh A, John KR, Mathai D.

Risk factors for MDR and XDR-TB in a tertiary referral hospital in India.

PLoS One. 2010 Mar 4;5(3):e9527.

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

BACKGROUND: India has a high burden of drug resistant TB, although there are few data on XDR-TB. Although XDR-TB has existed previously in India, the definition has not been widely applied, and surveillance using second line drug susceptibility testing has not been performed. Our objective was to analyze clinical and demographic risk factors associated with isolation of MDR and XDR TB as compared to susceptible controls, at a tertiary center. **METHODOLOGY/FINDINGS:** Retrospective chart review based on positive cultures isolated in a high volume mycobacteriology laboratory between 2002 and 2007. 47 XDR, 30 MDR and 117 susceptible controls were examined. Drug resistant cases were less likely to be extrapulmonary, and had received more previous treatment regimens. Significant risk factors for XDR-TB included residence outside the local state (OR 7.43, 3.07-18.0) and care costs subsidized (OR 0.23, 0.097-0.54) in bivariate analysis and previous use of a fluoroquinolone and injectable agent (other than streptomycin) (OR 7.00, 95% C.I. 1.14-43.03) and an initial treatment regimen which did not follow national guidelines (OR 5.68, 1.24-25.96) in multivariate analysis. Cavitation and HIV did not influence drug resistance. **CONCLUSIONS/SIGNIFICANCE:** There is significant selection bias in the sample available. Selection pressure from previous treatment and an inadequate initial regimen increases risk of drug resistance. Local patients and those requiring financial subsidies may be at lower risk of XDR-TB.



Balamurugan R, Mary RR, Chittaranjan S, Jancy H, Shobana Devi R, Ramakrishna BS
Low levels of faecal lactobacilli in women with iron-deficiency anaemia in south India.

Br J Nutr. 2010 May 7:1-4. [Epub ahead of print]

Wellcome Trust Research Laboratory, Department of Gastrointestinal Sciences, Christian Medical College, Vellore 632 004, India.

Fe deficiency in women contributes significantly to maternal and child morbidity in India. The intestinal bacterial flora may facilitate absorption of Fe from the caecum and proximal colon. The present study investigated the possibility that intestinal microbiota of anaemic young women may differ from that of women with normal Hb levels. The microbiota was quantified by real-time PCR in faeces of eight anaemic (Hb \leq 100 g/l) and twenty-six normohaemic (Hb \geq 120 g/l) women aged 18-25 years. Sequences of 16S ribosomal DNA (rDNA) specific to Bifidobacterium genus, Lactobacillus acidophilus group, Bacteroides-Prevotella-Porphyromonas group, Clostridium leptum group and Eubacterium rectale were amplified and expressed (as relative difference) relative to the universally conserved bacterial 16S rDNA sequences. Dietary intakes of energy, carbohydrate, fibre and Fe were ascertained by maintenance of a diet diary for a week. Faecal lactobacilli were significantly lower in anaemic women (median 6.6×10^{-8} , relative difference compared with total bacteria) than in the reference group (2.9×10^{-6} ; $P = 0.001$, unpaired t test with logarithmic transformation). There was no difference between the two groups with respect to any of the other bacteria that were examined. Intakes of energy, carbohydrate, fibre, Fe and milk were similar in both the groups. Fe deficiency in young women in south India was associated with low levels of lactobacilli in the faeces. The relationship between lactobacilli and Fe deficiency needs to be explored further.



Saravanan B, Jacob KS, Johnson S, Prince M, Bhugra D, David AS.

Outcome of first-episode schizophrenia in India: longitudinal study of effect of insight and psychopathology.

Br J Psychiatry. 2010 Jun;196(6):454-9.

Section of Cognitive Neuropsychiatry, PO Box 68, Institute of Psychiatry, King's College London, Denmark Hill, London SE58AF, UK.

BACKGROUND: Transcultural studies have found lack of insight to be an almost invariable feature of acute and chronic schizophrenia, but its influence on prognosis is unclear. **AIMS:** To investigate the relationship between insight, psychopathology and outcome of first-episode schizophrenia in Vellore, India. **METHOD:** Patients with a DSM-IV diagnosis of schizophrenia ($n = 131$) were assessed prospectively at baseline and at 6-month and 12-month follow-up. Demographic and clinical measures included insight, psychopathology, duration of untreated psychosis (DUP) and social functioning. Linear and logistic regression was used to measure predictors of outcome. **RESULTS:** Follow-up data were available for 115 patients at 1 year. All achieved remission, half of them with and half without residual symptoms. Changes in psychopathology and insight during the first 6 months and DUP strongly predicted outcome (relapse or functional impairment), controlling for baseline measures. **CONCLUSIONS:** Outcome

of schizophrenia in this setting is driven by early symptomatic improvement and is relatively favourable, in line with other studies from low- and middle-income countries. Early improvement in insight might be a useful clinical guide to future outcome. Reduction of DUP should be a target for intervention.



Bertha A, Danda S, Tjandrajana E, Srivastava V, Subramanian R, Mathew J
Klinefelter syndrome with systemic lupus erythematosus in an Indian man.

Lupus. 2010;19(7):870-1.

Clinical Genetics Unit, CMC, Vellore, India.

Previously, cases of systemic lupus erythematosus (SLE) and Klinefelter syndrome (KS) in men have been reported in Western populations. We report the case of a 30-year-old man from southern India with known infertility who was diagnosed to have SLE and KS by fluorescence in-situ hybridization, as routine karyotype cultures failed. The diagnosis has implications in management and highlights the need for strong clinical suspicion and laboratory confirmation of KS by molecular methods when suspected in all men with SLE. Quicker, long-term remission and genetic counseling of such individuals can help in better management and coping with this chronic, potentially fatal disease.



Bhagat SK, Gopalakrishnan G, Kumar S, Devasia A, Kekre NS

Redo-urethroplasty in pelvic fracture urethral distraction defect: an audit.

World J Urol. 2010 Mar 5. [Epub ahead of print]

Department of Urology, Christian Medical College, Vellore, 632004, India.

PURPOSE: To predict the outcome of redo-urethroplasty after failed single or multiple open urethral procedures for pelvic fracture urethral distraction defects. **METHODS:** From January 1997 to December 2006, 43 patients underwent redo-urethroplasty for pelvic fracture urethral distraction defect. Forty-one were referred from other centers. All had undergone open surgery along with an endoscopic procedure (one or more procedures in each patient) which included endoscopic internal urethrotomy, urethral stenting or urethral dilations. **RESULTS:** There were 43 men with mean age of 29 (range 11-52). Eleven had associated injuries: intraperitoneal bladder rupture (3), bladder neck (2), rectum (3), anal sphincter (2), combined bladder, rectum and anal sphincter (1). Trocar suprapubic cystostomy was performed in 22, rail-road procedures in 10 and open suprapubic cystostomy in 11 along with the management of associated injuries as immediate treatment. Of 43 patients, 28 had progressive perineal, and 12 had transpubic repair. Three patients had total bulbar necrosis, and they underwent prepuceal tube reconstruction (1)

and staged substitution with BMG and standard scrotal inlay (2). Analysis of various factors like number of attempts at previous surgery and stricture length did not affect the outcome. A successful result was achieved in 36 (83.72%), improved and stable in five and failure in two. **CONCLUSIONS:** The overall result of redo-urethroplasty for pelvic fracture urethral distraction defect continues to be gratifying. Failures happen usually within the first 3 months. Substitution urethroplasty can be reserved for those who have long distraction defect. Long-term follow-up is essential using stringent criteria to measure success.



Boopalan PR, Arumugam S, Livingston A, Mohanty M, Chittaranjan S.

Pulsed electromagnetic field therapy results in healing of full thickness articular cartilage defect.

Int Orthop. 2010 Mar 26. [Epub ahead of print]

Department of Orthopaedics Unit 3, Christian Medical College, Vellore, Vellore, Tamil Nadu, India, 632004

This study aimed to determine the efficacy of PEMF (pulsed electromagnetic field) treatment in experimental osteochondral defect healing in a rabbit model. The study was conducted on 12 New Zealand white rabbits. Six rabbits formed the study group and six rabbits the control group. The right knee joints of all 12 animals were exposed and a 3.5-mm diameter osteochondral defect was created in the trochlear groove. The defect was filled with calcium phosphate scaffold. Six animals from the study group were given PEMF of one hour duration once a day for six weeks with set parameters for frequency of 1 Hz, voltage 20 V, sine wave and current +/-30 mA. At six weeks the animals were sacrificed and histological evaluation was done using H&E, Safranin O, Masson's trichrome staining and immunohistochemistry for type 2 collagen. The quality of the repair tissue was graded and compared between groups with the Wakitani histological grading scale and a statistical analysis was done. The total histological score was significantly better in the study group ($p = 0.002$) with regeneration similar to adjacent normal hyaline cartilage. Immunohistochemistry for collagen type II was positive in the study group. PEMF stimulation of osteochondral defects with calcium phosphate scaffold is effective in hyaline cartilage formation. PEMF is a non-invasive and cost effective adjuvant treatment with salvage procedures such as abrasion chondroplasty and subchondral drilling.



Boopalan PR, Nithyananth M, Jepeganam TS.

Lateral Gastrocnemius Flap Cover for Distal Thigh Soft Tissue Loss.

J Trauma. 2010 Mar 15. [Epub ahead of print]

Department of Orthopaedics Unit 3 and 1, Christian Medical College, Vellore, Tamil Nadu, India.

BACKGROUND: The gastrocnemius muscle flap has been used extensively for cover around the knee. However, the use of the lateral gastrocnemius for cover of the distal thigh has not been well described. **METHODS:** The lateral gastrocnemius flap was used in eight patients from October

2004 to February 2009 for cover of the distal thigh proximal to the knee joint. We included patients who had soft tissue loss secondary to trauma and infection and who required soft tissue cover in the distal lateral thigh (>8 cm proximal to the joint line). The average age of the patients was 40 years (21-64 years). Four patients had soft tissue loss secondary to trauma, two had loss secondary to chronic infection, and two patients had soft tissue loss after surgical infection. **RESULTS:** All patients had resolution of infection at final follow-up. The average area of soft tissue cover achieved was 14 x 9 cm. The maximal proximal extent reached with lateral gastrocnemius flap from the joint line was 17 cm (8-17 cm) measured in full knee extension. There were two complications. One patient developed a common peroneal palsy and infection, which recovered after re-exploration. Another patient developed a sinus, which resolved after removal of a loose screw. **CONCLUSION:** The lateral gastrocnemius muscle flap is effective in the cover of the lateral distal thigh.



Booshanam DS, Cherian B, Joseph CP, Mathew J, Thomas R

Evaluation of posture and pain in persons with benign joint hypermobility syndrome.

Rheumatol Int. 2010 May 20. [Epub ahead of print]

Physiotherapy, Department of Physical Medicine & Rehabilitation, Christian Medical College, Vellore, India.

The objective of the present study is to compare and quantify the postural differences and joint pain distribution between subjects with benign joint hypermobility syndrome (BJHS) and the normal population. This observational, non-randomized, and controlled study was conducted at Rheumatology and Physical Medicine and Rehabilitation Medicine Departments of a tertiary care teaching hospital. Subjects comprise 35 persons with diagnosis of BJHS, and the control group was matched for age and sex. Reedco's Posture score (RPS) and visual analogue scale (VAS) were the outcome measures. The subjects were assessed for pain in ten major joints and rated on a VAS. A standard posture assessment was conducted using the Reedco's Posture score. The same procedure was executed for an age- and sex-matched control group. Mean RPS for the BJHS group was 55.29 +/- 8.15 and for the normal group it was 67 +/- 11.94. The most common postural deviances in subjects with BJHS were identified in the following areas of head, hip (Sagittal plane), upper back, trunk, and lower back (Coronal plane). Intensity of pain was found to be more in BJHS persons than that of the normal persons, and the knee joints were the most affected. The present study compared and quantified the postural abnormalities and the pain in BJHS persons. The need for postural re-education and specific assessment and training for the most affected joints are discussed. There is a significant difference in posture between subjects with BJHS and the normal population. BJHS persons need special attention to their posture re-education during physiotherapy sessions to reduce long-term detrimental effects on the musculoskeletal system.



Chrispal A, Begum A, Ramya I, Zachariah A.

Hair dye poisoning—an emerging problem in the tropics: an experience from a tertiary care hospital in South India.

Trop Doct. 2010 Apr;40(2):100-3.

Department of Medicine 2, Christian Medical College, Vellore 632004, Tamil Nadu, India.

Super-Vasmol, a cheap, freely-available hair dye is emerging as a major cause of suicidal poisoning in India. It contains potential toxins including paraphenylenediamine, resorcinol, sodium ethylenediaminetetraacetic acid and propylene glycol which can result in multiorgan dysfunction. A retrospective study was conducted over 3.5 years (January 2006-July 2009) of 13 consecutive patients with Super-Vasmol poisoning admitted to a tertiary care, referral hospital in South India. A chart review including records of clinical presentations, laboratory findings and treatment details was carried out. Eleven of the patients were women and the mean age was 27.2 years. The predominant clinical features were cervico-facial oedema and pain, cola-coloured urine and oliguria. Laboratory investigations revealed elevated hepatic transaminases (100%), leucocytosis (92.3%), elevated creatinine phosphokinase (92.3%), metabolic acidosis (84.6%), hypocalcaemia (61.5%), hyperphosphataemia (46.2%) and renal failure (38.5%). Eight of the patients were discharged with complete recovery. Trends towards a poor outcome were evident among the following patients: late presentation at our centre; when no gastric lavage was done at the primary-care centre; those requiring tracheostomy/intubation at the primary centre; presentation with a low Glasgow Coma Score or seizures; established renal failure; and those who subsequently require dialysis, mechanical ventilation or intensive care. Hair dye poisoning classically presents with cervico-facial oedema, severe rhabdomyolysis and renal failure. Early therapy with tracheostomy and aggressive forced diuresis are essential in order to prevent the high mortality associated with this toxin. It is imperative to raise public awareness of the potential toxicity of the dye as well as to educate physicians about the need for aggressive and early treatment.



Chrispal A, Boorugu H, Gopinath KG, Prakash JA, Chandy S, Abraham OC, Abraham AM, Thomas K.

Scrub typhus: an unrecognized threat in South India - clinical profile and predictors of mortality.

Trop Doct. 2010 Jul;40(3):129-33.

Department of Medicine Unit 2, Christian Medical College, Vellore 632004, Tamil Nadu, India.

Scrub typhus is an important cause of acute undifferentiated febrile illnesses in the Indian subcontinent. Delay in diagnosis and in the initiation of appropriate treatment can result in severe complications such as acute respiratory distress syndrome (ARDS), septic shock and multisystem organ failure culminating in death. We conducted a prospective, observational study to delineate the clinical profile and predictors of mortality in scrub typhus in adults admitted to the medical wards of a tertiary care, referral hospital in South India over a one-year period. The case fatality rate in this study was 12.2%. Metabolic acidosis (odds ratio [OR] 6.1), ARDS (OR 3.6), altered

sensorium (OR 3.6) and shock (OR 3.1) were independent predictors of mortality. It appears that scrub typhus has four possible overlapping clinical presentations: mild disease; respiratory predominant disease; central nervous system predominant disease (meningoencephalitis); or sepsis syndrome. Given the telltale presence of an eschar (evident in 45.5%), the characteristic clinical profile and the dramatic therapeutic response to a cheap, yet effective, drug such as doxycycline, medical practitioners in the region should have ample opportunity to reach an early diagnosis and initiate treatment which could, potentially, reduce the mortality and morbidity associated with scrub typhus.



Christopher DJ, Daley P, Armstrong L, James P, Gupta R, Premkumar B, Michael JS, Radha V, Zwerling A, Schiller I, Dendukuri N, Pai M.

Tuberculosis infection among young nursing trainees in South India.

PLoS One. 2010 Apr 29;5(4):e10408.

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

BACKGROUND: Among healthcare workers in developing countries, nurses spend a large amount of time in direct contact with tuberculosis (TB) patients, and are at high risk for acquisition of TB infection and disease. To better understand the epidemiology of nosocomial TB among nurses, we recruited a cohort of young nursing trainees at Christian Medical College, a large, tertiary medical school hospital in Southern India. **METHODOLOGY/PRINCIPAL FINDINGS:** Among 535 nursing students enrolled in 2007, 468 gave consent to participate, and 436 underwent two-step tuberculin skin testing (TST). A majority (95%) were females, and almost 80% were under 22 years of age. Detailed TB exposure information was obtained using interviews and clinical log books. Prevalence of latent TB infection (LTBI) was estimated using Bayesian latent class analyses (LCA). Logistic regression analyses were done to determine the association between LTBI prevalence and TB exposure and risk factors. 219 of 436 students (50.2%, 95% CI: 45.4-55.0) were TST positive using the 10 mm or greater cut-off. Based on the LCA, the prevalence of LTBI was 47.8% (95% credible interval 17.8% to 65.6%). In the multivariate analysis, TST positivity was strongly associated with time spent in health care, after adjusting for age at entry into healthcare. **CONCLUSIONS:** Our study showed a high prevalence of LTBI even in young nursing trainees. With the recent TB infection control (TBIC) policy guidance from the World Health Organization as the reference, Indian healthcare providers and the Indian Revised National TB Control Programme will need to implement TBIC interventions, and enhance capacity for TBIC at the country level. Young trainees and nurses, in particular, will need to be targeted for TBIC interventions.



Das Adhikary S, Gopalakrishnan G.

Varicocele: in search of a human model.

Urol Int. 2010;84(2):226-30. Epub 2010 Mar 4.

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

AIMS: To study the effects of left gonadal vein ligation on semen parameters and venous hemodynamics of the testis. SUBJECTS AND METHODS: All male voluntary kidney donors who were scheduled to have left donor nephrectomy between March 2004 and February 2005, by either open or laparoscopic technique, were considered for this study. RESULTS: A total of 95 live related renal transplants were performed. Left donor nephrectomy was performed in 22 of 37 males. Only 19 were evaluable; 7 patients underwent laparoscopic donor nephrectomy; 6 were unmarried. We observed that 66% (12) of our study patients showed radiological evidence of varicocele, and this was statistically significant; 22% (4) also developed contralateral varicocele; 44% (8) developed oligoasthenozoospermia. CONCLUSION: Ligation of the left gonadal vein is part of organ harvesting for live related renal transplantation and produces radiologically confirmed varicocele in some men. In these men, alterations in semen parameters are observed over 4-24 weeks. Due to short follow-up, we are unable to state if this is a permanent or temporary effect. We presume that since these men had normal semen parameters earlier, the stress pattern would revert to normal. If it does not however, this would have particular implications upon informed consent for unmarried male donors.



Das S, Ram TS, Chacko RT, Pavamani S, Viswanathan PN, Viswanathan FR, Kurian S.
Primitive Neuroectodermal Tumor of the Jejunum; A Case Report and Literature Review.
J Gastrointest Cancer. 2010 Mar 27. [Epub ahead of print]
Department of Radiation Oncology Unit I, Christian Medical College Vellore, Vellore, 632004,
Tamil Nadu, India.

OBJECTIVE AND IMPORTANCE: The aim of this paper is to report an unusual presentation of extranodal follicular dendritic cell tumor of neck with spinal metastasis. Follicular dendritic cells are nonlymphoid immune accessory cells present in the germinal centers of lymphoid follicles and play a crucial role in the induction and maintenance of the humoral immune response. Tumors from these cells are rare and treatment modality poorly defined. CLINICAL PRESENTATION: A 37-year-old lady presented with recurrent neck swelling which was initially reported as malignant paraganglioma. The primary disease was treated with surgery and radiotherapy. Eleven years later, the patient presented with metastasis to the spinal cord. Subsequent immunohistochemical analysis of the primary site tumor and the metastatic deposits revealed it to be a follicular dendritic cell tumor. INTERVENTION: The patient was treated with surgery followed by radiotherapy to spine, and one and half year after treatment, the patient is doing well and has regained complete motor functions. CONCLUSION: Metastasis to spinal cord for follicular dendritic cell tumor is very rare, and to the best of our knowledge, no such case has been previously reported in the scientific literature so far. In the present case, good local control was achieved with initial surgery and radiotherapy but resulted in distant failure after 11 years. This underlines the need for adjuvant systemic therapy, and understanding the biology of the tumor may help in formulating targeted therapy in the future for this rare disorder.



David J, Rajasekar A, Daniel HD, Ngui SL, Ramakrishna B, Zachariah UG, Eapen CE, Abraham P.

Infection with hepatitis C virus genotype 3—experience of a tertiary health care centre in south India.

Indian J Med Microbiol. 2010 Apr-Jun;28(2):155-7.

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

To analyse the response rate and the predictive values of virological, biochemical and histological factors on HCV antiviral therapy in HCV genotype 3 infected patients, we retrospectively studied 21 HCV genotype 3 infected patients, who underwent HCV antiviral therapy. Low (57%) sustained viral response (SVR) rate and significant association of SVR with normalization of alanine transaminase (ALT) levels were observed in our study. Absence of early viral response (EVR) showed high (80%) predictive value on SVR. Absence of EVR and normalisation of the ALT levels can predict the outcome of HCV antiviral therapy.



Devadoss U, Babu S, Cherian V.

Quantifying the effect of isoflurane and nitrous oxide on somatosensory-evoked potentials.

Indian J Anaesth. 2010 Jan;54(1):40-4.

Department of Anaesthesia, Christian Medical College, Vellore - 632 004, Tamilnadu, India.

Anaesthetic techniques may have a significant effect on intraoperative-evoked potentials (EP). The present study is designed to compare Propofol anaesthesia with Isoflurane (with or without nitrous oxide) during intraoperative somatosensory-evoked potential (SSEP) monitoring in 15 ASA Grade I and II patients undergoing surgery for intracranial tumours. SSEPs in response to median and posterior tibial nerve stimulation were recorded under four different anaesthetic conditions: 1) Propofol infusion and ventilation with air-oxygen, 2) Isoflurane, 1.0 MAC and ventilation with air-oxygen, 3) Isoflurane 1.0 MAC and ventilation with nitrous oxide-oxygen, and 4) Return to Isoflurane, 1.0 MAC and ventilation with air-oxygen. Intraoperative monitoring of somatosensory evoked potentials is best recordable using Propofol. The morphology of the EP is reproducible with Isoflurane. This effect is exaggerated when it is advisable to avoid nitrous oxide.



Ebenezer J, Rupa V.

Preoperative predictors of incudal necrosis in chronic suppurative otitis media.

Otolaryngol Head Neck Surg. 2010 Mar;142(3):415-20.

Department of ENT, Speech and Hearing, Christian Medical College Hospital, Vellore, India.

OBJECTIVE: To determine the predictive value of preoperative clinical, audiological, and radiological factors in diagnosing incudal necrosis in patients with tubotympanic chronic

suppurative otitis media (CSOM). **STUDY DESIGN:** Case series with planned data collection. **SETTING:** Tertiary care referral center. **SUBJECTS AND METHODS:** Patients older than five years of age diagnosed with tubotympanic CSOM who underwent tympanomastoid surgery were recruited. Findings on otoscopy, x-ray mastoid, pure-tone audiometry, and intraoperative otomicroscopy were recorded. **RESULTS:** Incus necrosis occurred in 24 (16%) of a total of 150 patients. On bivariate analysis, findings of active ear discharge ($P = 0.01$), anterosuperior location of perforation ($P = 0.03$), exposure of incudostapedial joint ($P = 0.05$), edematous middle ear mucous membrane ($P = 0.05$), middle ear granulations ($P = 0.004$), foreshortening of the handle of malleus ($P = 0.04$), moderate to moderately severe hearing loss (41-70 dB HL) ($P = 0.000$), and air-bone gap > 40 dB ($P = 0.001$) were found to be associated with incus necrosis. Intraoperative findings of aditus block ($P = 0.001$) and mastoid granulations ($P = 0.005$) were also found to be significantly associated with incus necrosis. Mastoid pneumatization and perforation size and site were not associated with incus necrosis. On multivariate analysis, only middle ear granulations ($P = 0.04$; odds ratio [OR] 3.161; 95% confidence interval [95% CI] 1.087-9.196) and a moderate to moderately severe hearing loss (41-70 dB HL) ($P = 0.03$; OR 1.720; CI 1.064-2.782) were found to be significant risk factors. **CONCLUSION:** Incus necrosis is best predicted by the presence of middle ear granulations and moderate to moderately severe hearing loss (41-70 dB HL). Knowledge of this information preoperatively can influence surgical decision making and preparedness regarding ossiculoplasty and patient consent.



Fletcher GJ, Gnanamony M, Samuel P, Ismail AM, Kannangai R, Daniel D, Eapen CE, Abraham P.

Association of mannose-binding lectin polymorphisms and HBV outcome in a South Indian population.

Int J Immunogenet. 2010 Jun;37(3):177-84. Epub 2010 Feb 24.

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

Mannose binding lectin (MBL) is an important innate immune system pattern recognition molecule. The MBL gene polymorphisms are reported to play a crucial role in outcome of hepatitis B virus (HBV) infection. In this study, we ascertained the association of MBL genotypes with HBV outcome in a South Indian population. The MBL gene polymorphisms at codons 52, 54 and 57 of exon I, and promoter polymorphisms at -221 were typed by polymerase chain reaction-sequence specific primer in spontaneously recovered and in chronic HBV group. The allele frequency of codon 52 'C' was significantly higher in chronic HBV group than in the recovered group (98.5% vs. 93.6%; $P = 0.003$) and codon 52 'T' was significantly higher in recovered group than in the chronic group (6.4% vs. 1.5%; $P = 0.003$). In multivariate analysis, after adjusting for age, sex and state of origin, codon 52 'CC' and 'CT' genotypes were significantly associated with chronicity and recovery respectively [odds ratio (OR), 0.25; 95% confidence interval (CI), 0.08-0.80, $P = 0.02$] in co-dominant analyzing models. This was re-affirmed in analysis performed exclusively on Tamil Nadu subjects (OR, 0.23; 95% CI, 0.06-0.93, $P = 0.039$). The frequency of low/none haplotype (XY/O) was significantly higher in recovered group

than in chronic group (15.6% vs 7.5%) and associated with spontaneous recovery (OR, 2.28; 95% CI, 1.04-4.99, P = 0.035). Our results provide preliminary evidence that inheritance of codon 52 genotypes and XY/O haplotype associated with low MBL level substantially determine the outcome of HBV infection in a sympatrically isolated South Indian population.



George B, Mathews V, Viswabandya A, Lakshmi KM, Srivastava A, Chandy M
Allogeneic hematopoietic stem cell transplantation is superior to immunosuppressive therapy in Indian children with aplastic anemia—a single-center analysis of 100 patients.
Pediatr Hematol Oncol. 2010 Mar;27(2):122-31.

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

The authors compared the outcome in 100 children (61 boys, 39 girls; median age of 10.1 +/- 3.4 years) with aplastic anemia who underwent either immunosuppressive therapy (IST; n = 70) or hematopoietic stem cell transplantation (HSCT; n = 30) between 1998 and 2007. Conditioning regimes for HSCT were a combination of either cyclophosphamide (Cy) with antilymphocyte globulin (ALG) or fludarabine (Flu) with Cy or busulfan (Bu) +/- antithymocyte globulin (ATG). Stem cell source was bone marrow in 20 and peripheral blood stem cells (PBSCs) in 10. Patients undergoing IST received either equine ALG or ATG in combination with steroids and cyclosporine. Primary engraftment was seen in 25 children (83.3%), with acute graft-versus-host disease (aGvHD) in 5 (16.6%). The day 100 transplant-related mortality (TRM) was 30% and at a median follow up of 36 months (range: 6-197), the overall and disease-free survival is 70%. Among children who received IST, 60 children received ALG while 10 received ATGAM. Responses were seen in 27 children (43.5%), which was complete (CR) in 12 and partial (PR) in 15. At a median follow up of 38 months (range: 1-84), the overall survival is 37.1%, with 81.4% survival among responders and <10% survival among non-responders. HSCT would be the treatment of choice in children with severe aplastic anemia who have a human leukocyte antigen (HLA)-matched related donor and is superior to IST in this series from India.



George K, Aleyamma T, Kamath M, Chandy A, Mangalaraj AM, Muthukumar K, Londhe V
Symptomatic unilateral pleural effusion: A rare presentation of ovarian hyperstimulation syndrome.

J Hum Reprod Sci. 2010 Jan;3(1):49-51.

Department of Reproductive Medicine Unit, Christian Medical College, Vellore - 632 004, India.

Isolated pleural effusion is a rare presentation of ovarian hyperstimulation syndrome. The pathogenesis of this disorder has not been fully elucidated. It supports the role of systemic factors rather than transudation of fluid from the surface of enlarged ovaries. This article describes a rare case of isolated pleural effusion following controlled ovarian hyperstimulation during an in-vitro fertilization cycle.



George N, Shiny PJ, Miriam J, Nancy CA, Dhanasekar KR, Peedicayil J.

Inhibitory effect of anticholinergics on the contraction of isolated caprine urinary bladder detrusor muscle.

Auton Autacoid Pharmacol. 2010 Jul;30(3):173-7. Epub 2010 Jan 19.

Department of Pharmacology, Christian Medical College, Vellore 632002, India.

This study investigated whether four anticholinergics which are not clinically used for relaxing the urinary bladder detrusor muscle inhibit the contraction of isolated caprine (goat) detrusor muscle: cyclopentolate (100 nm), homatropine (5 microm), ipratropium (500 nm) and valethamate (1 microm). The effects of these anticholinergics were compared with tolterodine (3 microm), an anticholinergic clinically used for relaxing the detrusor muscle. The inhibitory effect of each of these five anticholinergics was studied on six strips of caprine detrusor muscle made to contract with 100 mum acetylcholine (ACh) by determining the percent inhibition of height of contraction and the area under the contractile curve (AUC). It was found that all five anticholinergics inhibited the ACh-induced contraction of the caprine detrusor and that this inhibition was reversed by raising the concentration of ACh. Hence, these four anticholinergics, like tolterodine, may be useful in managing clinical conditions that require relaxation of the detrusor muscle.



Goel R, Danda D, Mathew J, Edwin N.

Mycophenolate mofetil in Takayasu's arteritis.

Clin Rheumatol. 2010 Mar;29(3):329-32.

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

Mycophenolate mofetil (MMf) has recently been reported as a useful alternative immunosuppressive drug in autoimmune diseases. There is paucity of literature on its use in Takayasu's arteritis (TA). The aim of this study was to assess the safety and efficacy of MMf in Asian Indian patients with Takayasu's arteritis. Records of 21 consecutive patients with TA on treatment with oral MMF attending our centre from January 2005 to August 2008 were studied. The clinical, laboratory and angiography findings were noted and disease activity assessment was done using Indian Takayasu's arteritis activity score (ITAS) and physician's global observation score at baseline and last follow-up. Eleven patients were on steroids alone at baseline while ten patients had received azathioprine prior to administration of mycophenolate. The mean duration of follow-up on mycophenolate was 9.6 (+/-6.4) months. Nineteen patients (90%) received mycophenolate due to active disease, while in the other two patients, it was given to facilitate steroid tapering. Mycophenolate had to be discontinued in one patient due to skin rash. At the last visit, all the remaining 20 patients who continued mycophenolate had improvement in disease activity as evident by the drop in median ITAS [7 (range 0-19) versus 1 (range 0-7); p=0.001]. A similar trend was noted in laboratory markers of inflammation with a reduction in mean Erythrocyte Sedimentation Rate (ESR) (68+/-36.5 versus 43.2+/-34 mm/first hour; p=0.003) and mean C - Reactive protein (CRP) (31+/-46.7 versus 17.3+/-23.9 mg/L; p=1.00). All patients received concomitant steroids, but there was a significant decrease in steroid dosage from 36 (+/-16) mg/

day at baseline to 19 (+/-14) mg/day at last follow-up ($p < 0.001$). This study is the largest series till date establishing the use of mycophenolate as a safe and effective steroid-sparing immunosuppressant in Takayasu's arteritis.



Irodi A, Cherian R, Keshava SN, James P.

Dual arterial supply to normal lung: within the sequestration spectrum.

Br J Radiol. 2010 May;83(989):e86-9.

Departments of Radiology, Christian Medical College and Hospital, Vellore, India.

We report a rare case of dual arterial supply to an otherwise normal left lower lobe. In addition to normal pulmonary arterial supply, the lower lobe of the left lung also received systemic arterial supply from the coeliac axis. The relevant anatomy and literature are reviewed. To the best of our knowledge, there are no other reported cases of anomalous systemic arterial supply from the coeliac axis to the basal segments of the left lower lobe with normal bronchial branching and pulmonary arterial supply.



Jacob TJ, Perakath B, Keighley MR.

Surgical intervention for anorectal fistula.

Cochrane Database Syst Rev. 2010 May 12;5:CD006319.

Department of Surgery, Christian Medical College, Ida Scudder road, Vellore, Tamil Nadu, India, 632004.

BACKGROUND: Surgery for anorectal fistula may result in recurrence, or impairment of continence. The ideal treatment for anorectal fistulae should be associated with low recurrence rates, minimal incontinence and good quality of life. **OBJECTIVES:** To assess the efficacy and morbidity of operative procedures for chronic anal fistula, primary outcomes being recurrence and incontinence. **SEARCH STRATEGY:** The following databases were searched: EMBASE (Webspirs 5.1, Silver Platter version 2.0, 1950-2009); Medline (Webspirs 5.1, Silver Platter version 2.0, 1950-2009); The Cochrane Central Register of Controlled Trials (2009 issue 4) and the IndMed (Indian Medline, www.indmed.nic.in) database. We restricted our search to the English literature. The Indian Journal of Surgery was electronically searched (issues between 2003 and vol 71, Oct 2009). We also searched all primary trial registers (Indian, Australian, Chinese, WHO, ISRCTN and American). **SELECTION CRITERIA:** Randomised controlled trials comparing operative procedures for anorectal fistulae were considered. Non randomised trials and cohort studies were examined where data on recurrence and function were available. **DATA COLLECTION AND ANALYSIS:** Two reviewers (TJ and BP) independently selected the trials for inclusion in the review. Disagreements were solved by discussion. Where disagreement persisted and published results made data extraction difficult, we obtained clarification from the authors. **REVMAN 5** was used for statistical analysis. Quality of the trials were assessed and

allowances made for subgroup analysis and prevention of publication bias, using funnel plots if needed. **MAIN RESULTS:** Ten randomised controlled trials were available for analysis. The quality of included studies was adequate, though in some trials the numbers were small and they were inadequately powered for equivalence or to detect significant differences. Comparisons were made between various modalities of treatments. There were no significant difference in recurrence rates or incontinence rates in any of the studied comparisons except in the case of advancement flaps. There were more recurrences in the glue plus flap group, a significant difference that favoured the flap only technique. It was also noted that Fibrin glue and advancement flap procedures report low incontinence rates. In the review of literature of non-randomised trials, most trials on fibrin glue indicate good healing in simple fistulae with low incontinence rates. **AUTHORS' CONCLUSIONS:** There are very few randomized controlled trials comparing the various modalities of surgery for fistula in ano. While post operative pain, time to healing and discharge from hospital affect quality of life, recurrence and incontinence are the most important. As it turns out, there seems to be no major difference between the various techniques used as far as recurrence rates are concerned. The use of Fibrin glue and advancement flaps are associated with low incontinence rates. There is a crying need for well powered, well conducted randomised controlled trials comparing various modes of treatment of fistula in ano. Newer operations like the anal fistula plug and the LIFT procedure need to be evaluated by randomised clinical trials.



Jadhav MP, Bamba A, Shinde VM, Gogtay N, Kshirsagar NA, Bichile LS, Mathai D, Sharma A, Varma S, Digumarathi R.

Liposomal amphotericin B (Fungisome) for the treatment of cryptococcal meningitis in HIV/AIDS patients in India: a multicentric, randomized controlled trial.

J Postgrad Med. 2010 Apr-Jun;56(2):71-5.

Department of Medicine and Infectious Disease, Christian Medical College, Vellore, Tamil Nadu, India

BACKGROUND: There is need to investigate the use of liposomal amphotericin B in cryptococcal meningitis in India. **AIMS :** To compare the efficacy, safety, duration of treatment and cost of two doses of liposomal amphotericin B (Amp B) (Fungisome) in cryptococcal meningitis in HIV/AIDS patients. **SETTINGS AND DESIGN:** Prospective, randomized, multicenter study in tertiary care hospitals across India. **MATERIALS AND METHODS:** Adult patients with culture-proven cryptococcal meningitis with HIV/AIDS were randomized to receive either 1 (Group A) or 3 mg/kg/day of Fungisome (Group B). Clinical efficacy and tolerability, laboratory evaluations and mycological response were assessed daily, twice weekly and weekly respectively. The patients were assessed at four and eight-week follow-up. **STATISTICS:** We calculated average and standard deviation for the various parameters. **RESULTS:** The time to show clinical response was 13.66 days (1 mg) and 9.55 days (3 mg). In Group B (n=6 complete response), 50% patients responded within one week by microbial conversion, 83% in two weeks and 100% in three weeks. Patients with 1 mg dose (n=4 complete response), none showed microbial conversion within one week, 75% responded in two weeks, whereas one patient took four weeks. The

average duration of treatment was 36.5+/-14.4 and 26.5+/-5.89 (S.D.) days in 1 and 3 mg/kg/day respectively. Drug was tolerated with little renal, hepatic or hematological toxicity. The cost was found to be 3.81 lacs and 1.74 lacs with 3mg/kg/day and 1mg/kg/day respectively. **CONCLUSION:** Higher dose showed better efficacy and quicker microbial conversion of Cerebrospinal fluid (CSF) (cerebrospinal fluid) than 1 mg/kg/day. It shortened the duration of treatment in days by 27% while drug cost almost doubled (Clinical trial registration number: ISRCTN 52812742).



James P, Gupta R, Christopher DJ, Balamugesh T.

Evaluation of the diagnostic yield and safety of closed pleural biopsy in the diagnosis of pleural effusion.

Indian J Tuberc. 2010 Jan;57(1):19-24.

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

AIM: To assess the diagnostic yield and safety of closed pleural biopsy in patients with pleural effusion. **METHODS:** In all, 48 consecutive cases of pleural effusion were evaluated with complete pleural fluid biochemical and microbiological analysis, cytology, routine bacterial and mycobacterial cultures. In all these 48 cases of pleural effusion closed pleural biopsy was done with tru-cut biopsy needle and biopsy samples were sent for histopathology and mycobacterial culture. **RESULTS:** Out of 48 cases, main causes of pleural effusion were Tuberculosis in 21(43.8%) cases, Malignancy in 14 (29.2%) cases, paramalignant effusion in six (12.5%) cases, Empyema in three (6.3%) cases, transudative effusion in three (6.3%) cases and parapneumonic effusion in one (1.9%) case. Diagnostic yield of closed pleural biopsy was 62.2% in cases of all exudative pleural effusion, 76.2% in cases of tubercular pleural effusion and 85.7% in cases of malignant pleural effusion. There was no incidence of post pleural biopsy pneumothorax or hemothorax, underlining the safety of pleural biopsy procedure. **CONCLUSION:** Closed pleural biopsy provides the highest diagnostic yield in cases of pleural tuberculosis and malignancy, the two most important causes of exudative pleural effusion. In view of low cost, easy availability and very low complication rates, it is a very important diagnostic tool in the hands of a trained pulmonary physician in India.



John J, Muliyl J, Balraj V.

Screening for hypertension among older adults: a primary care “high risk” approach.

Indian J Community Med. 2010 Jan;35(1):67-9.

Department of Community Health, Christian Medical College, Vellore - 632 002, India.

BACKGROUND: Recommendations for early detection and management of elevated blood pressure through opportunistic clinic-based screening may be inadequate for the rural population

in India as access to health facilities is limited. **MATERIALS AND METHODS:** Sixteen Health Aides (trained primary care workers) were trained to measure blood pressure using a standardized training procedure. Six of those assessed competent in initial evaluation were allotted a stratified random sample of about 150 persons each, 50 years or over, in the village under their care to measure blood pressures during their regular scheduled visits. **RESULTS:** 14/16 of the health aides (83%) met the stipulated criteria for the simulation study using a module from British Hypertension Society. In the field survey of 920 individuals where 20% of the population was evaluated by a blinded investigator, the weighted Kappa for agreement, using normal, pre-hypertension and hypertension as categories, ranged between 62% and 89%. Only 75/286 (25%) of those detected to be hypertensive knew their status prior to the study. All those detected with hypertension were referred to a physician at a referral facility. 70% of those referred were evaluated at the referral facility and 64% of them initiated on treatment for hypertension within 3 months. **CONCLUSION:** Using primary care workers to screen for hypertension through the model suggested here will ensure that the population over 50 years of age will be screened once every 2 years without burdening the worker. This screening process will enable the health system to identify and cater to needs of this vulnerable population.



John TJ, Moorthy M.

2009 pandemic influenza in India.

Indian Pediatr. 2010 Jan 7;47(1):25-31.

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

Pandemic-09-H1N1 virus caused the pandemic starting in the second quarter of 2009. The world was prepared to face the pandemic since it was anticipated for over one decade. Most countries, including India, had made detailed pandemic preparedness plans well ahead of its actual occurrence. The infection rapidly spread to the whole country within 2-3 months. The national tactics were to slow down its importation through international air travelers and to slow down its spread in cities and major towns. More than 75% of all infected persons were urban dwellers, suggesting that efforts were concentrated in urban communities. In general the illness of pandemic influenza has been similar to endemic/seasonal influenza; however, there is insufficient epidemiological and clinical data on the latter. We hope that the unprecedented experience of managing the pandemic will encourage the Government of India to plan to confront endemic/seasonal influenza more systematically. The pandemic seems to have reached a peak in September/October and has been on the decline since then.



Kamath MS, Aleyamma TK, Muthukumar K, Kumar RM, George K.

A rare case report: ovarian heterotopic pregnancy after in vitro fertilization.

Fertil Steril. 2010 Mar 31. [Epub ahead of print]

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

OBJECTIVE: To report a case of ovarian heterotopic pregnancy after an IVF cycle. **DESIGN:** Case report. **SETTING:** Reproductive medicine unit, Christian Medical College Hospital, Vellore, India. **PATIENT(S):** A woman with an ovarian heterotopic pregnancy. **INTERVENTION(S):** Laparoscopic removal of ovarian ectopic pregnancy. **MAIN OUTCOME MEASURE(S):** Early detection and successful treatment of heterotopic pregnancy. **RESULT(S):** Successful laparoscopic management of ovarian pregnancy resulting in a single viable ongoing intrauterine pregnancy. **CONCLUSION(S):** Clinicians need to be aware of such rare and potentially fatal presentations after IVF, because early diagnosis and management in these cases can yield a favorable outcome.



Kannangai R, Abraham AM, Sankar S, Sridharan G.

Nanotechnology tools for single-virus particle detection.

Indian J Med Microbiol. 2010 Apr-Jun;28(2):95-9.

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

The development and potential application of nanotechnology tools for single-virus particle detection by emergent nanotechnology is likely to revolutionize diagnosis and determining treatment endpoints for life threatening virus infections. Direct detection of biological macromolecules using semiconducting nanowires or carbon nanotubes for electrical field change measurements is a milestone application in this field. The promise of selective detection at a single particle level (stochastic sensing) with nanowire or nanotube field-effect transistor-based devices is a major breakthrough for outbreak situations, where a rapid and specific detection of the viral agent allows intervention at public health level. The same technology would be eminently suitable for bedside diagnosis and therapeutic intervention.



Kannangai R, Nair SC, Sridharan G, Prasannakumar S, Daniel D.

Frequency of HIV type 2 infections among blood donor population from India: a 10-year experience.

Indian J Med Microbiol. 2010 Apr-Jun;28(2):111-3.

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

PURPOSE: In India, HIV-2 epidemic is alongside with HIV-1. Blood banks are introducing nucleic acid testing (NAT) for screening. The limitation of NAT systems is the inability to detect HIV-2. **MATERIALS AND METHOD:** An analysis of HIV screening of a blood bank at a tertiary care center from 1998 to 2007 was carried out. **RESULTS:** A total of 175026 donors were screened by serological assays and 789 were reactive for HIV antibody. Only 478 (61%) were confirmed positive by Western blot/immunoblot. There were 465 (97.2%) donations positive

for HIV-1, 6 (1.3%) for HIV-2 (monotypic infection) and 7 (1.5%) for HIV-1 and HIV-2 (dual infection). **CONCLUSION:** We show the presence of HIV-2 infection among the blood donors and the need for incorporating HIV-2 detection also in the NAT systems.



Kannangai R, Sachithanandham J, Kandathil AJ, Ebenezer DL, Danda D, Vasuki Z, Thomas N, Vasan SK, Sridharan G

Immune responses to Epstein-Barr virus in individuals with systemic and organ specific autoimmune disorders.

Indian J Med Microbiol. 2010 Apr-Jun;28(2):120-3

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

PURPOSE: Autoimmune diseases usually manifest in genetically predisposed individuals following an environmental trigger. There are several viral infections including Epstein-Barr virus (EBV) implicated in the pathogenesis of autoimmune disorders. The aim of this study was to look at the antibody pattern to EBV proteins in the plasma of both systemic and organ specific autoimmune disorders, estimate pro-inflammatory plasma cytokines (IL-8 and TNF-alpha) among these autoimmune patients and compare the observations with those in normal healthy controls.

MATERIALS AND METHODS: Samples from 44 rheumatoid arthritis patients, 25 Hashimoto's thyroiditis patients, appropriately age and sex matched healthy controls were tested for EBV IgM antibodies by an immunoblot assay and two cytokines (IL-8 and TNF-alpha) by commercial assays. **RESULTS:** Among the rheumatoid arthritis patients, 23 (52%) were positive for EBNA1 antibody, while 13 (52%) of the Hashimoto's thyroiditis patients and 12 (30%) of the healthy controls showed similar bands. The intensity of the bands was high in the autoimmune patients when compared to the bands seen in control samples. The difference in the EBNA1 reactivity between rheumatoid arthritis patients and controls were significant ($P = 0.038$). There was a significant difference in the IgM reactivity to VCAp19 protein between patients and controls ($P = 0.011$). **CONCLUSION:** Our study showed an increased EBV activation among the autoimmune patient groups compared to the normal healthy controls. Further studies are required to delineate the association between the aetiology of autoimmune disorders and EBV.



Kenchaiah BK, Kumar S, Tharyan P.

Atypical anti-psychotics in delusional parasitosis: a retrospective case series of 20 patients.

Int J Dermatol. 2010 Jan;49(1):95-100.

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

BACKGROUND: Delusional Parasitosis (DP) is a relatively uncommon condition wherein there is a fixed belief that one is infested with living organisms despite a lack of medical evidence of such infestation. Pimozide has been mooted as specific for the treatment of this condition. Atypical anti-psychotics have received attention in recent years. **METHODS:** We describe the clinical features and treatment responses in a retrospective review of 20 cases treated at this department

over a 5 year period, and selectively review the literature. **RESULTS:** The majority were treated with atypical anti-psychotics and all subjects who followed up showed varying degrees of clinical improvement irrespective of the anti-psychotic used. **CONCLUSION:** The evidence for pimozide as first line drug in DP is limited to one small, non-randomized placebo-controlled trial. DP responds well to most anti-psychotics. Prospective randomized trials are needed to clarify optimal treatment of this relatively rare but debilitating condition.



Krishnamoorthy S, Kumar S, Kekre N.

Hematuria: An uncommon presentation of Glanzmann's thrombasthenia-Lessons learnt.

Indian J Urol. 2010 Jan;26(1):115-7

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

A 55-year-old man with Glanzmann's thrombasthenia had recurrent episodes of gross painless hematuria for the past 30 years. His last episode of hematuria occurred a month ago, associated with pain in the right loin and was diagnosed to have a right mid-ureteric calculus. Under adequate platelet cover, he underwent right ureteroscopy. Postoperatively, he had persistent significant hematuria that did not improve despite repeated platelet transfusions. Factor VIIa was also transfused, without much benefit. A ureteroscopy was done, which identified bleeding from within the renal pelvis. CT angiogram confirmed the rupture of an artery supplying the interpole segment of the right kidney. Bleeding settled after angioembolization. Indiscriminate use of platelet transfusions would result in a state of platelet refractoriness. It is also important to suspect an iatrogenic cause for any complication that occurs after a surgical procedure, even if there could be an underlying medical etiology that can be attributed to the development of such complication.



Livingstone RS, Pradip J, Dinakran PM, Srikanth B

Radiation doses during chest examinations using dose modulation techniques in multislice CT scanner.

Indian J Radiol Imaging. 2010 May;20(2):154-7.

Department of Radiology, Christian Medical College, Vellore - 632 004, TN, India.

OBJECTIVE: To evaluate the radiation dose and image quality using a manual protocol and dose modulation techniques in a 6-slice CT scanner. **MATERIALS AND METHODS:** Two hundred and twenty-one patients who underwent contrast-enhanced CT of the chest were included in the study. For the manual protocol settings, constant tube potential (kV) and tube current-time product (mAs) of 140 kV and 120 mAs, respectively, were used. The angular and z-axis dose modulation techniques utilized a constant tube potential of 140 kV; mAs values were automatically selected by the machine. Effective doses were calculated using dose-length product (DLP) values and the image quality was assessed using the signal-to-noise (SNR) ratio values. **RESULTS:** Mean effective

doses using manual protocol for patients of weights 40-60 kg, 61-80 kg, and 81 kg and above were 8.58 mSv, 8.54 mSv, and 9.07 mSv, respectively. Mean effective doses using z-axis dose modulation for patients of weights 40-60 kg, 61-80 kg, and 81 kg and above were 4.95 mSv, 6.87 mSv, and 10.24 mSv, respectively. The SNR at the region of the liver for patients of body weight of 40-60 kg was 5.1 H, 6.2 H, and 8.8 H for manual, angular, and z-axis dose modulation, respectively. **CONCLUSION:** Dose reduction of up to 15% was achieved using angular dose modulation and of up to 42% using z-axis dose modulation, with acceptable diagnostic image quality compared to the manual protocol.



Macaden AS, Chandler BJ, Chandler C, Berry A.

Sustaining employment after vocational rehabilitation in acquired brain injury.

Disabil Rehabil. 2010;32(14):1140-7.

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

PURPOSE: To explore factors affecting sustaining employment in people with acquired brain injury (ABI). **METHOD:** A multiple case study approach using semi-structured interviews in eight cases (29 individuals). Each case included an individual with ABI, a family member, a job coach and a co-worker (triangulation). The eight individuals with ABI had completed vocational rehabilitation and were purposely selected based on whether they had sustained employment (4) or not (4). **RESULTS:** Similarity between pre-injury work or leisure interest and post-injury work, unconditional motivation, insight and the ability to cope with cognitive and behavioural sequelae were beneficial in sustaining employment. Post-injury instances of poor cognitive or behavioural function did not necessarily affect sustained employment. The vocational rehabilitation programme was beneficial in building up confidence, providing continued follow up and providing co-worker 'twins' in the work place. Employers with a personal experience of disability helped individuals with ABI to sustain employment. **CONCLUSIONS:** Similarities between pre-injury work or leisure interests and post-injury work improved motivation. Factors associated with sustained employment were insightful, unconditional, internal motivation providing an ability to cope, confidence provided by ongoing vocational rehabilitation support through job coaches, supportive co-workers and employers with a personal experience of disability. People with ABI can be outstanding employees.



Mahasuar R, Majhi P, Ravan JR.

Euprolactinemic galactorrhoea associated with use of imipramine and escitalopram in a postmenopausal woman.

Gen Hosp Psychiatry. 2010 May-Jun;32(3):341.e11-3. Epub 2009 Aug 27.

Department of Psychiatry, Christian Medical College and Hospital, Vellore, Tamilnadu 632004, India.

Hormonal side effects of antidepressants are infrequent, and galactorrhea is seldom mentioned among tricyclic antidepressant (TCA) and selective serotonin reuptake inhibitor (SSRI)-related side effects. Antidepressants can directly stimulate postsynaptic 5-HT receptors in the hypothalamus or indirectly inhibit the tuberoinfundibular dopaminergic neurons through 5-HT, which may increase prolactin levels and later cause galactorrhea. We describe a case of euprolactinemic galactorrhea in a postmenopausal woman, induced by imipramine and escitalopram. This report highlights the presence of unidentified novel mechanisms of antidepressant-induced galactorrhea and other possible contributors.



Mammen T, Keshava S, Eapen CE, Moses V, Babu NR, Kurien G, Chandy G.
Intrahepatic collateral recanalization in symptomatic Budd-Chiari syndrome: a single-center experience.

J Vasc Interv Radiol. 2010 Jul;21(7):1119-24. Epub 2010 May 26.

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

The authors present a single-institutional experience with intrahepatic collateral vessel recanalization as a treatment option in symptomatic Budd-Chiari syndrome (BCS). Over a period of 26 months, this procedure was performed in four symptomatic patients in whom standard hepatic vein recanalization was not feasible or had failed, with a follow-up duration ranging from 7 to 44 months. Based on these cases, intrahepatic collateral vessel recanalization is a promising treatment option in suitable patients with symptomatic BCS and is deserving of further study.



Manoranjitham SD, Rajkumar AP, Thangadurai P, Prasad J, Jayakaran R, Jacob KS.
Risk factors for suicide in rural south India.

Br J Psychiatry. 2010 Jan;196(1):26-30.

Department of Psychiatric Nursing, Christian Medical College, Vellore, India.

BACKGROUND: The relative contributions of psychosocial stress and psychiatric morbidity to suicide are a subject of debate. **AIMS:** To determine major risk factors for suicide in rural south India. **METHOD:** We used a matched case-control design and psychological autopsy to assess 100 consecutive suicides and 100 living controls matched for age, gender and neighbourhood. **RESULTS:** Thirty-seven (37%) of those who died by suicide had a DSM-III-R psychiatric diagnosis. Alcohol dependence (16%) and adjustment disorders (15%) were the most common categories. The prevalence rates for schizophrenia, major depressive episode and dysthymia were 2% each. Ongoing stress and chronic pain heightened the risk of suicide. Living alone and a break in a steady relationship within the past year were also significantly associated with suicide. **CONCLUSIONS:** Psychosocial stress and social isolation, rather than psychiatric morbidity, are risk factors for suicide in rural south India.



Mathew AJ, Wann VC, Abraham DT, Jacob PM, Selvan BS, Ramakrishna BS, Nair AN
The effect of butyrate on the healing of colonic anastomoses in rats.

J Invest Surg. 2010 Apr;23(2):101-4.

Department of General Surgery Unit VI, CMC Hospital, Vellore, Tamil Nadu, India.

BACKGROUND: Butyrate, a short-chain fatty acid (SCFA) formed by the fermentation of complex carbohydrates by the bacteria in the colon, is the main source of nutrition for colonocytes. The aim of this experiment was to investigate the effect of butyrate on the healing of colonic anastomosis in a rat model. **MATERIALS AND METHODS:** Forty male Wistar rats were fed a fibre-free diet for 2 days. They then underwent laparotomy, transection, and anastomosis of both left and right colon, with a defunctioning caecostomy. The animals were then randomly assigned to receive butyrate or saline enemas from the third postoperative day and underwent another laparotomy on the seventh postoperative day when the bursting pressures of both anastomoses were measured. **RESULTS:** Out of the 40 rats, 23 were available for the final data analysis. The mechanical strength of the anastomosis was measured by the bursting wall tension (BWT), which was calculated from the bursting pressure and the anastomotic circumference. The anastomoses in the butyrate arm showed a significantly higher BWT for both the right (48.9 vs 64.71 dyne¹⁰⁽⁻³⁾/cm, p value .04) and the left (51.44 vs 72.38 dyne 10(-3)/cm, p value .01). **CONCLUSION:** This experiment suggests that butyrate has a significant role in increasing the mechanical strength of colonic anastomoses in rats.



Mathew BS, Fleming DH, Annapandian VM, Prasanna S, Prasanna CG, Chandy SJ, John GT
A reliable limited sampling strategy for the estimation of mycophenolic acid area under the concentration time curve in adult renal transplant patients in the stable posttransplant period.

Ther Drug Monit. 2010 Apr;32(2):136-40.

Clinical Pharmacology Unit, Christian Medical College, Vellore, Tamil Nadu, India.

In renal transplant patients, there is an established relationship between mycophenolate area under the curve and clinical outcome. The authors have developed and validated a limited sampling strategy to estimate mycophenolic acid area under the curve to 12 hours (MPA AUC₀₋₁₂) in a stable renal transplant Indian population prescribed a formulation of mycophenolate mofetil (Mofilet) along with prednisolone and tacrolimus. Intensive pharmacokinetic sampling was performed in 29 patients to measure mycophenolate concentration from trough to 12 hours postdose. Subsets of different timed concentrations against total measured 12-hour area under the curve were analyzed by linear regression. Three models were identified and linear regression analysis done. After all subset regression analysis, three, four, and five time point limited sampling strategies (LSS) were developed having correlation coefficients above 0.92. Validation of the models was performed using the jackknife method and their predictive performances were tested. After validation, the correlation coefficients for all three models were above 0.901. The five-point LSS had the best predictive performance with a bias (95% confidence interval) of 0.67% (-3.45 to 4.79) and mean precision 7.73%. In all patients except one, the five-point LSS estimation for total area under the

curve was within +/- 20% of the total measured AUC0-12. Trough concentration had a significant correlation with AUC0-12 ($r = 0.69$). However, if dosing in routine clinical practice was adjusted based only on trough concentration, 41% of our patients would require a different dose compared with monitoring using AUC0-12. The five-point LSS uses half-hourly samples from trough to 1.5 hour postdose with an additional sample at 3 hours. Ninety-three percent of our patients had a C_{max} within 1.5 hour and inclusion of all the time points up to 1.5 hour gave a better estimate of AUC0-12. This model simplifies area under the curve measurement with high precision in stable adult renal transplant patients.



Mathew BS, Fleming DH, Prasanna S, Basu G, Chandy SJ, John GT.

Mycophenolic Acid estimation by pooled sampling: a novel strategy.

Ther Drug Monit. 2010 Apr;32(2):141-4.

Clinical Pharmacology Unit, Christian Medical College, Vellore, Tamil Nadu, India.

The aim of the study was to determine the reliability of estimating area under the curve from 0 to 6 hours (AUC0-6) of mycophenolic acid (MPA) by pooling the blood samples from different sampling time points. Eighty 6-hour concentration-time profiles were obtained from 68 patients on mycophenolate mofetil and the MPA AUC0-6 was calculated. In the pooled strategy, each of the equally spaced time point samples was pooled into two samples. Two rectangles were created instead of multiple trapezoids and the sum of their areas equal to the MPA AUC0-6. The linear correlation (r), intraclass correlation, bias, and precision were calculated between the pooled MPA AUC0-6 and the MPA AUC0-6 derived from measurements at different time points. Pharmacokinetic profiles of an additional 20 patients were obtained to study the possibility of using fewer time points to create a single pooled sample to obtain MPA AUC0-6. The linear correlation (r) and intraclass correlation between pooled and measured MPA AUC0-6 was 0.982 and 0.979, respectively. There was a highly significant correlation (r) of 0.978 between the pooled versus measured for both MPA AUC0-3 and MPA AUC3-6. The mean bias and precision (95% confidence interval) for pooled with total measured MPA AUC0-6 was -6.4% (-7.8% to -4.94%) and 7.37% (6.21%-8.54%), respectively. The pooled sample approach using only five time points to estimate MPA AUC0-6 had an unacceptable bias and precision. Pooling 10 samples to a set of two samples gave a highly accurate measure of MPA AUC0-6. The advantages for a central laboratory are the high throughput of samples and the transportation of only two specimens from other centers, all of which leads to a reduction in cost. This approach is extremely useful for studies aimed at examining the bioavailability of mycophenolate mofetil in different ethnic populations within India.



Mathew LG, Pulimood S, Thomas M, Acharya MA, Raj PM, Mathews MS

Disseminated protothecosis.

Indian J Pediatr. 2010 Feb;77(2):198-9.

Department of Child Health, Christian Medical College, Vellore, South India, India.

Here is presented, a rare case of disseminated protothecosis in a 10-year-old boy with combined immunodeficiency, hitherto unreported from India. Even though it is difficult to diagnose clinically, observation of the sporangiospores within the sporangium in culture gives the accurate laboratory identification of *Prototheca* spp. In this patient, failure to eradicate the infection with amphotericin B and recurrence with olecranon bursitis along with skin lesions and splenomegaly was observed. Disseminated protothecosis in a child with combined immunodeficiency and failure to eradicate the infection with amphotericin B is reported.



Mathews V, Nair SC, David S, Viswabandya A, Srivastava A.

Management of hemophilia in patients with inhibitors: the perspective from developing countries.

Semin Thromb Hemost. 2009 Nov;35(8):820-6. Epub 2010 Feb 18.

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

Data are limited on inhibitors in people with hemophilia (PWH) in developing countries. There is a perception that the overall prevalence of inhibitors, ranging from 7 to 19% in different reports, may be lower in these countries as compared with that reported from developed countries. This is possible given the fact that most patients are treated after 2 years of age with plasma-derived clotting factor concentrates. Whether genetic or other environmental factors also contribute to this needs further evaluation. There is a need to develop laboratory infrastructure and establish quality control programs for laboratory tests for inhibitors in developing countries. Management options vary widely given the socioeconomic diversity among these countries. Significant individualization of approach to management is therefore required depending on the available resources, particularly with regard to the use of bypassing agents. The limited data on immune tolerance induction with some low-dose regimens deserve further evaluation. Even in resource-constrained environments, education and a policy of systematic screening of patients associated with judicious use of bypassing agents can significantly improve the care of PWH who develop inhibitors.



Merritta C, Cherian B, Macaden AS, John JA.

Measurement of physical performance and objective fatigability in people with mild-to-moderate traumatic brain injury.

Int J Rehabil Res. 2010 Jun;33(2):109-14.

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

The aims of this study were to objectively measure the physical performance and physical endurance of patients with traumatic brain injury with minimization of cognitive and psychological fatigue, and to compare the physical performance of brain injured patients with that of healthy

controls. This was a nonrandomized partially blinded controlled study. The study setting was the Outpatient Multidisciplinary Brain Injury Clinic in the Department of Physical Medicine and Rehabilitation of a tertiary care university teaching hospital. Participants included an experimental group that comprised independently ambulant men (age 18-55 years) with mild-to-moderate traumatic brain injury (n = 24) who complained of greater fatigue than before their injury and an age-matched and sex-matched control group (n = 24). The intervention included the Six-Minute Walk Test. The primary outcome measures were the Six-Minute Walk Distance, the Fatigue Severity Scale, Addenbrooke's Cognitive Examination, and the Fatigue Visual Numeric Scale; the secondary outcome measures were the Physiological Cost Index of Walking and the Borg Scale of Perceived Exertion. The Six-Minute Walk Distance of the experimental group (452.33+/-68.816) when compared with that of the control group (518.08+/-92.114) was reduced by 12.7 and 30.5%, respectively, when compared with the predicted Six-Minute Walking Distance (650.04+/-79.142) for the same age and sex. The mean Fatigue Severity Scale values were 2.51 and 1.62 for the experimental and control groups, respectively. The mean Addenbrooke's Cognitive Examination Score for the patients was 85.5+/-7.265. In conclusion, the Six-Minute Walk Test is useful in segregating physical fatigue from cognitive and psychological aspects of fatigue when cognitive and psychological dimensions are known. The Six-Minute Walk Test can be used as a tool for exercise intensity prescription in men with mild-to-moderate brain injury, to avoid the deleterious effects of fatigue.



Michael JS, Daley P, Kalaiselvan S, Latha A, Vijayakumar J, Mathai D, John KR, Pai M.

Diagnostic accuracy of the microscopic observation drug susceptibility assay: a pilot study from India.

Int J Tuberc Lung Dis. 2010 Apr;14(4):482-8.

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

SETTING: The microscopic observation drug susceptibility (MODS) assay is a rapid, sensitive, low-cost liquid culture technique. **OBJECTIVE:** To establish the accuracy of MODS for the detection of active pulmonary tuberculosis (TB), and to document the costs and challenges of setting up this assay in a low-income setting. **DESIGN:** Prospective blinded pilot study of 200 adult TB suspects at a tertiary referral hospital in India. Reference standard included culture (Löwenstein-Jensen and automated liquid culture) and clinical diagnosis. **RESULTS:** Patients were mostly male (n = 122, 61.1%) and out-patients (n = 184, 92.0%), with a mean age of 40.4 years (standard deviation 16.2). Seventeen (8.5%) were human immunodeficiency virus infected and 47 (23.5%) were reference culture-positive. Compared to reference culture, MODS was 78.9% sensitive (95%CI 62.2-90.0) and 96.7% specific (95%CI 92.0-98.8). Clinical assessment suggested that MODS was false-negative in 3/8 reference culture-positive MODS-negatives and true-positive in 4/6 reference culture-negative MODS-positives. MODS was faster than solid (P < 0.001) and liquid culture (P = 0.088), and cheaper than both. **CONCLUSION:** MODS may be a good alternative to automated liquid culture, but there were several challenges in setting up the assay. Prior training and validation, setup costs and inability to rule out cross-contamination need to be taken into account before the test can be established.



Mittal R, Jesudason MR, Nayak S.

Selective histopathology in cholecystectomy for gallstone disease.

Indian J Gastroenterol. 2010 Jan;29(1):26-30. Epub 2010 Apr 6.

Department of Surgery Unit 5, Christian Medical College and Hospital, Vellore, Tamil Nadu, 632 004, India.

Comment in: Indian J Gastroenterol. 2010 Jan;29(1):3-7.

BACKGROUND: Incidental gallbladder cancer is found in upto 1% of cholecystectomy specimens for gallstone disease. Currently, in our institution, all gallbladder specimens are sent for routine histopathology, to rule out incidental gallbladder carcinoma. This study was aimed at assessing the need for routine histopathology of gallbladder specimens after cholecystectomy for gallstone disease. **METHODS:** Hospital records of all patients undergoing cholecystectomy for gallstone disease over a ten-year period, between 1998 and 2007, in a single surgical unit were reviewed. **RESULTS:** A total of 1312 patients underwent cholecystectomy for gallstone disease. Gallbladder carcinoma was detected in 13 patients. Macroscopic abnormalities of the gallbladder were found in all the 13 patients. In patients with a macroscopically normal gallbladder, there were no cases of gallbladder carcinoma. **CONCLUSION:** Gallbladder carcinoma is associated with macroscopic abnormalities in all cases. Therefore histopathology should be restricted to only those specimens which reveal a macroscopic abnormality. This would identify all cases of incidental gallbladder carcinoma, at the same time decreasing cost and pathological work load.



Moses V, Peter JV.

Acute intentional toxicity: endosulfan and other organochlorines.

Clin Toxicol (Phila). 2010 Jun 23. [Epub ahead of print]

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

Introduction. Organochlorine pesticides continue to be used in several developing countries despite concerns regarding their toxicity profile. Endosulfan is an organochlorine recognized as an important agent of acute toxicity. **Methods.** In this retrospective study, the clinical features, course, and outcomes among patients with acute endosulfan poisoning requiring admission to the hospital during an 8-year period (1999-2007) were reviewed. **Results.** Among 34 patients hospitalized during this study period for alleged organochlorine poisoning, 16 patients with endosulfan poisoning were identified. The majority (75%) received initial treatment at a primary or secondary center. Neurological toxicity predominated, particularly low sensorium (81%) and generalized seizures (75%), including status epilepticus (33%). Other features observed included hepatic transaminase elevation, azotemia, metabolic acidosis, and leukocytosis. Mechanical ventilation was required in 69% and vasoactive agents in 19%. In-hospital mortality was 19%. There were no gross neurological sequelae at discharge. In three other patients who presented with organochlorine poisoning, the compounds ingested were lindane, endrin, and dicofol (n = 1 each). The course and outcomes in these patients were unremarkable and all three patients survived. **Conclusions.** Endosulfan is capable of high lethality and significant morbidity. The commonest manifestations are neurological

although other organ dysfunction also occurs. In the absence of effective antidotes, restriction of its availability, along with prompt treatment of toxicity, including preemptive anticonvulsant therapy are suggested.



Mukha RP, Kumar S, Kekre NS.

Maximal androgen blockade for advanced prostate cancer.

Indian J Urol. 2010 Jan;26(1):133-8.

Department of Urology, Christian Medical College Vellore, Vellore - 632 004, India.

Prostate cancer has now become one of the leading types of cancer in urban India. It is now the third most common cancer in Delhi. As we advance in health care with the resultant increase in longevity, we will be seeing more of advanced carcinoma prostate. Since the early 1980.s, there have been many trials on MAB. However, the question remains whether these agents actually make a difference? The role of MAB is probably limited to the prevention of the beta are reaction in patients on LHRH agonists. The non steroidal antiandrogens have a marginal benefit of increased overall survival by approximately 3% to 5% at 5 ve years. There may be a role for MAB in patients with metastatic carcinoma of prostate, low volume metastases, patients with M 1 disease with absence of metastases in the skull, ribs, long bones, and soft tissues excluding lymph nodes.



Nampoothiri K, Chrispal A, Begum A, Jasmine S, Gopinath KG, Zachariah A

A clinical study of renal tubular dysfunction in Cleistanthus collinus (Oduvanthalai) poisoning.

Clin Toxicol (Phila). 2010 Mar;48(3):193-7.

Department of Medicine Unit 1, Christian Medical College, Vellore, Tamil Nadu, India.

INTRODUCTION: Self-poisoning through the ingestion of Oduvanthalai is common in South India. Mortality may occur because of arrhythmias, renal failure, shock, and respiratory distress. The mechanisms of toxicity are unclear. This prospective, clinical study was designed to assess renal tubular dysfunction because of Oduvanthalai poisoning. **METHODS:** Thirty-two consecutive patients admitted with Oduvanthalai poisoning at a tertiary care hospital in South India, from June 2007 to August 2009 (26 months), were evaluated through history, physical examination, and laboratory studies. Following an interim analysis, additional studies of renal tubular function were performed on a subcohort of eight patients. These included the following: (1) urinary pH, daily serum, and urine anion gap; (2) 24-h urine protein and potassium; and (3) assessment of urine hexosaminidase and amino acid levels. **RESULTS:** Metabolic acidosis (100%), which persisted at discharge (65.6%), hypokalemia (62.5%), and renal failure (15.6%), was apparent in the total cohort. Tests of renal tubular function on the subcohort revealed a normal anion gap, hyperchloremic, metabolic acidosis of renal etiology, defective urinary

acidification, and hypokalemia with kaliuresis, indicative of distal renal tubular acidosis in six patients. Urinary hexosaminidase and amino acid levels, markers of proximal tubular dysfunction, were elevated in seven and two patients, respectively. **CONCLUSIONS:** Distal renal tubular acidosis is an important feature of Oduvanthalai poisoning. Proximal tubular injury and, in more severe forms, global tubular dysfunction with diminished glomerular filtration rate may occur.



Natarajan SK, Thangaraj KR, Eapen CE, Ramachandran A, Mukhopadhyaya A, Mathai M, Seshadri L, Peedikayil A, Ramakrishna B, Balasubramanian KA

Liver injury in acute fatty liver of pregnancy: possible link to placental mitochondrial dysfunction and oxidative stress.

Hepatology. 2010 Jan;51(1):191-200.

The Wellcome Trust Research Laboratory, Department of Gastrointestinal Sciences, Vellore, India.

Acute fatty liver of pregnancy (AFLP) is a rare disorder which is fatal if not recognized and treated early. Delivery of the fetoplacental unit results in dramatic improvement in maternal liver function, suggesting a role for the placenta. However, the mechanisms by which defects in the fetus or placenta lead to maternal liver damage are not well understood and form the focus of this study. Placenta and serum were obtained at delivery from patients with AFLP, and placental mitochondria and peroxisomes were isolated. Placental mitochondrial function, oxidative stress, and fatty acid composition as well as serum antioxidants, oxidative and nitrosative stress markers, and fatty acid analysis were carried out. Hepatocytes in culture were used to evaluate cell death, mitochondrial function, and lipid accumulation on exposure to fatty acids. Oxidative stress was evident in placental mitochondria and peroxisomes of patients with AFLP, accompanied by compromised mitochondrial function. Increased levels of arachidonic acid were also seen in AFLP placenta when compared to control. Patients with AFLP also had a significant increase in oxidative and nitrosative stress markers in serum, along with decreased antioxidant levels and elevated levels of arachidonic acid. These levels of arachidonic acid were capable of inducing oxidative stress in hepatocyte mitochondria accompanied by induction of apoptosis. Exposure to arachidonic acid also resulted in increased lipid deposition in hepatocytes. **CONCLUSION:** Oxidative stress in placental mitochondria and peroxisomes is accompanied by accumulation of toxic mediators such as arachidonic acid, which may play a causative role in maternal liver damage seen in AFLP.



Nithyananth M, Cherian VM, Jepeganatham TS.

Reconstruction of traumatic medial malleolus loss: A case report.

Foot Ankle Surg. 2010 Jun;16(2):e37-9.

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

We describe the reconstruction of the medial malleolus in a severe open ankle injury with iliac crest bone graft and sural artery flap in a young adult. At two years follow-up he had a good outcome with a painless, stable ankle with nearly full plantarflexion but restricted dorsiflexion.



Paul TV, Asha HS, Thomas N, Seshadri MS, Rupali P, Abraham OC, Pulimood SA, Jose A
Hypovitaminosis D and Bone Mineral Density in HIV infected Indian Men with or without antiretroviral therapy.

Endocr Pract. 2010 Feb 11:1-21. [Epub ahead of print]

Department of Endocrinology, Diabetes & Metabolism, Christian Medical College, Vellore - 632 004.

Objectives: To study the vitamin D status and bone mineral density (BMD) in HIV infected men in a tertiary care center from Southern India. **Methods:** A cross sectional study of 35 HIV infected men on highly active anti retroviral therapy (HAART) (Group 1) compared with 35 age and BMI matched HIV positive (ART naïve) (Group 2) and 35 negative (Group 3) controls. **Results:** A significantly greater proportion ($P=0.002$) of patients (74%) on the HAART group had vitamin D deficiency (<20 ng/ml) when compared to the other two groups (37% in each group). The mean intact PTH level was higher ($P<0.001$) and the mean duration of sunlight exposure was lower ($P=0.001$) in the HAART group than in the other 2 groups. Following logistic regression analysis, HAART therapy was significantly associated with vitamin D deficiency. The BMD in the femoral neck was significantly lower in subjects with HIV infection on HAART therapy when compared to the other 2 groups ($P=0.006$). Following multivariate logistic regression, older age, lower BMI and higher PTH emerged as factors significantly associated with decreased BMD. **Conclusions:** A significant proportion of patients on HAART therapy had vitamin D deficiency. The secondary hyperparathyroidism probably due to vitamin D deficiency is an important contributory factor for the observed changes in BMD. Vitamin D deficiency observed in this group is probably multi-factorial and further research is required to determine whether the effect of HAART on vitamin D metabolism is an additional causative factor and the benefit of vitamin D supplementation in these patients.



Perakath B, Keighley MR.

Peritonitis following stapling of a flush ileostomy.

Tech Coloproctol. 2010 Jun;14(2):185-6. Epub 2010 Apr 1.

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

Peritonitis following staple stabilization of a flush ileostomy has not yet been reported in the literature. We report a case of iatrogenic injury to a loop of the ileum in an unrecognized parastomal hernia which caused peritonitis after stapling of a flush ileostomy.



Peter JV, Jerobin J, Nair A, Bennett A.

Is there a relationship between the WHO hazard classification of organophosphate pesticide and outcomes in suicidal human poisoning with commercial organophosphate formulations?

Regul Toxicol Pharmacol. 2010 Jun;57(1):99-102. Epub 2010 Jan 25.

Department of Medical Intensive Care, Christian Medical College and Hospital, Vellore 632 004, Tamil Nadu, India.

Comment in: Regul Toxicol Pharmacol. 2010 Jul-Aug;57(2-3):338; author reply 339-40.

The WHO classification of pesticides by hazard is based primarily on the acute oral and dermal toxicity to rats. In several Asian countries there is no legislation against the sale of Class I insecticides. We evaluated if there was an association between the WHO hazard Class I, II or III organophosphate compound and outcomes in human poisoning. Two-hundred and fifty-one patients with mean (SD) age of 30.4 (11.8) years, admitted with symptomatic poisoning and treated with atropine and supportive care, were followed up until death or hospital discharge. The admission pseudocholinesterase level of 818.8 (1368) IU/L indicated significant suppression of cholinesterase activity. Class I compounds were ingested by 126, Class II by 113 and Class III by 12 patients. The hospital mortality rate was 16.7%, 5.3% and 0% with Class I, II and III organophosphate compounds, respectively ($P=0.01$). Ventilatory requirements were higher with Class I compared with Class II poisoning (77.0% vs. 54.9%, $P<0.001$). Patients with Class I poisoning needed mechanical ventilation for a longer period (10.55 (7.4) vs. 7.0 (5.2) days, $P=0.002$). The linear relationship between the WHO hazard class and mortality in acute organophosphate poisoning mandates the restriction of the sale of organophosphate compounds associated with higher lethality amongst humans.



Prabhakaran SS, Dhanasekar KR, Thomas E, Jose R, Peedicayil J, Samuel P

Inhibition of isolated human myometrium contractility by minoxidil and reversal by glibenclamide.

Methods Find Exp Clin Pharmacol. 2010 Mar;32(2):97-100.

Department of Pharmacology and Clinical Pharmacology, Christian Medical College, Vellore, India.

This study investigated the ability of the antihypertensive drug minoxidil to inhibit potassium chloride (KCl)-induced contractility of the isolated human myometrium. Twelve strips of myometrium obtained from 12 patients who underwent hysterectomy were triggered to contract with 55 mM KCl before and after incubation with 3 concentrations (1, 3 and 10 microM) of minoxidil. The percent inhibition by minoxidil on the extent of contraction, and the area under the contractile curve of KCl-induced contraction of the myometrial strips was determined. Furthermore, the effect of 10 microM glibenclamide on the inhibition generated by 3 microM minoxidil on KCl-induced contractility was studied. It was found that minoxidil produced a concentration-dependent inhibition of KCl-induced contractility of the myometrium and that glibenclamide reversed this inhibitory effect. These results suggest that the inhibitory effect of

minoxidil on isolated human myometrium contractility may prove useful in clinical conditions requiring relaxation of the myometrium.



Prabhakaran V, Jayaraman T, Rajshekhar V, Oommen A.

Neurocysticercosis, IgG immunoglobulins, and nitric oxide.

Parasitol Res. 2010 May;106(6):1287-91. Epub 2010 Feb 27. Department of Neurological Sciences, Christian Medical College, Vellore, Tamilnadu, India.

This study evaluated the role of parasite load and nitric oxide on IgG levels in neurocysticercosis. Total serum IgG, IgG antibodies specific for cysticercus antigens, and nitric oxide were compared between 85 neurocysticercosis patients, 65 with solitary cysts and 20 with multiple cysts, and 13 normal healthy controls. Sixty-six percent of patients were seropositive for cysticercus IgG antibodies. Among seropositive patients, IgG levels did not differ between those infected with multiple or solitary cysts whose serum nitric oxide levels were low (<40 nmol/ml). Among seropositive solitary cyst infected patients, IgG levels were significantly higher in those whose serum nitric oxide was low compared to those with high nitric oxide levels ($p < 0.001$). IgG levels were significantly higher in patients with multiple compared to single cyst infections among those negative for cysticercus antibodies ($p < 0.001$). Parasite load and nitric oxide modulated IgG production in neurocysticercosis. IgG levels were not determined by the number of infecting cysts in seropositive patients who did not mount a nitric oxide response. IgG production correlated to parasite load in patients negative for cysticercus antibodies.



Prince Christopher R H, David KV, John SM, Sankarapandian V.

Antibiotic therapy for Shigella dysentery.

Cochrane Database Syst Rev. 2010 Jan 20;(1):CD006784.

Family Medicine, Christian Medical College, Vellore, Tamilnadu, India, 632004.

Update of: Cochrane Database Syst Rev. 2009;(4):CD006784.

BACKGROUND: Shigella dysentery is a relatively common illness and occasionally causes death, worldwide. Mild symptoms are self-limiting but in more severe cases, antibiotics are recommended for cure and preventing relapse. The antibiotics recommended are diverse, have regional differences in sensitivity, and have side effects. **OBJECTIVES:** To evaluate the efficacy and safety of antibiotics for treating Shigella dysentery. **SEARCH STRATEGY:** In June 2009 we identified all relevant trials from the following databases: Cochrane Infectious Diseases Group Specialized Register; Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library 2008, issue 4), MEDLINE, EMBASE, LILACS and the metaRegister of Controlled Trials (mRCT). We also checked conference proceedings for relevant abstracts, and contacted researchers, organizations, and pharmaceutical companies. **SELECTION CRITERIA:** Randomized controlled trials of antibiotics for Shigella dysentery. **DATA**

COLLECTION AND ANALYSIS: Four authors, working in pairs, independently assessed trial eligibility, methodological quality, and extracted data. We calculated risk ratios (RR) with 95% confidence intervals (CI) for dichotomous data, and used the random-effects model for significant heterogeneity. We explored possible sources of heterogeneity, when present, in subgroup analyses of participant age and percentage of participants with confirmed *Shigella* infection. **MAIN RESULTS:** Sixteen trials (1748 participants), spanning four decades and with differing sensitivity to *Shigella* isolates, met the inclusion criteria. Seven were judged to be at risk of bias due to inadequate allocation concealment or blinding, and 12 due to incomplete reporting of outcome data. Limited data from one three-armed trial of people with moderately severe illness suggest that antibiotics reduce the episodes of diarrhoea at follow-up (furazolidone versus no drug RR 0.21, 95% CI 0.09 to 0.48, 73 participants; cotrimoxazole versus no drug RR 0.30, 95% CI 0.15 to 0.59, 76 participants). There was insufficient evidence to consider any class of antibiotic superior in efficacy in treating *Shigella* dysentery, but heterogeneity for some comparisons limits confidence in the results. All the antibiotics studied were safe. There was inadequate evidence regarding the role of antibiotics in preventing relapses. **AUTHORS' CONCLUSIONS:** Antibiotics reduce the duration of *Shigella* dysentery. Regularly updated local or regional antibiotic sensitivity patterns to different species and strains of *Shigella* are required to guide empiric therapy. More trials adhering to standard guidelines are required to evaluate the role of antibiotics in the treatment of severe forms of *Shigella* dysentery and in groups who are at high risk of complications.



Raghupathy P, Antonisamy B, Geethanjali FS, Saperia J, Leary SD, Priya G, Richard J, Barker DJ, Fall CH.

Glucose tolerance, insulin resistance and insulin secretion in young south Indian adults: Relationships to parental size, neonatal size and childhood body mass index.

Diabetes Res Clin Pract. 2010 Feb;87(2):283-92.

Department of Child Health, Christian Medical College, Vellore, India.

OBJECTIVE: To study the relationship of newborn size and post-natal growth to glucose intolerance in south Indian adults. **RESEARCH DESIGN AND METHODS:** 2218 men and women (mean age 28 years) were studied from a population-based birth cohort born in a large town and adjacent rural villages. The prevalence of adult diabetes mellitus [DM] and impaired glucose tolerance [IGT], and insulin resistance and insulin secretion (calculated) were examined in relation to BMI and height at birth, and in infancy, childhood and adolescence and changes in BMI and height between these stages. **RESULTS:** Sixty-two (2.8%) subjects had Type 2 diabetes (DM) and 362 (16.3%) had impaired glucose tolerance (IGT). IGT and DM combined (IGT/DM) and insulin resistance were associated with low childhood body mass index (BMI) ($p < 0.001$ for both) and above-average BMI gain between childhood or adolescence and adult life ($p < 0.001$ for both). There were no direct associations between birthweight or infant size and IGT/DM; however, after adjusting for adult BMI, lower birthweight was associated with an increased risk. **CONCLUSIONS:** The occurrence of IGT and Type 2 DM is associated with thinness at birth and in childhood followed by accelerated BMI gain through adolescence.



Rajaian S, Gopalakrishnan G, Kekre NS.

Auto amputation of penis due to advanced penile carcinoma.

Urology. 2010 Feb;75(2):253-4.

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

A middle-aged man presented with progressively enlarging ulcer on the tip of penis over a year's duration and sloughing of whole penis subsequently. Examination revealed complete loss of penis and purulent discharge at its base. Biopsy of the base of the penis confirmed penile carcinoma. Imaging studies revealed extensive metastatic lesions. Palliative care was given, but he succumbed later. In this era of advanced medical care, symptoms of penile cancer are still being ignored and have led to autoamputation of penis.



Rajasekar R, Lakshmi KM, George B, Viswabandya A, Thirugnanam R, Abraham A, Chandy M, Srivastava A, Mathews V.

Dendritic cell count in the graft predicts relapse in patients with hematologic malignancies undergoing an HLA-matched related allogeneic peripheral blood stem cell transplant.

Biol Blood Marrow Transplant. 2010 Jun;16(6):854-60. Epub 2010 Feb 4.

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

We investigated the impact of the number of infused and reconstituted immunocompetent cells including dendritic cells (DCs) on clinical outcome of patients with hematologic malignancies undergoing an allogeneic peripheral blood stem cell transplantation. Sixty-nine consecutive patients with hematologic malignancies were included in the analysis. The median age of the cohort was 32 years (range: 2-62 years) and there were 39 (57%) males. Twenty-one (30%) patients relapsed with a cumulative incidence of 44 % +/- 14% at a median follow up of 28 months. On a multivariate analysis, a high plasmacytoid dendritic cell (PC) content in the graft was associated with higher risk of relapse. The patients were further categorized based on the median PC counts in the graft as high ($> \text{ or } = 2.3 \times 10^6/\text{kg}$) and low ($< 2.3 \times 10^6/\text{kg}$) groups. The baseline characteristics of these 2 groups were comparable. The group that had a high PC content in the graft had significantly higher risk of relapse and lower overall survival (OS) and event-free survival (EFS). Our data suggests that PC content in the graft predicts clinical outcomes such as relapse and survival in patients with hematologic malignancies undergoing an allogeneic HLA matched related peripheral blood stem cell transplantation. There is potential for pretransplant manipulation of this cellular subset in the graft.



Rajshekhhar V.

Surgical management of neurocysticercosis.

Int J Surg. 2010;8(2):100-4.

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

Neurocysticercosis (NCC) is caused by the larval form of the pork tapeworm *Taenia solium* and is the commonest parasitic infestation of the central nervous system. NCC is usually managed medically but in some instances surgery is required. Magnetic resonance imaging (MRI) and computed tomography (CT) are often able to provide the diagnosis of NCC in most patients with intraventricular and parenchymal cysts but in patients with hydrocephalus without any cysts, the diagnosis is confirmed by the presence of cysticercal antibodies in the serum. Surgery is usually recommended for intraventricular cysts, hydrocephalus, large cisternal cysts, large parenchymal cysts and when the diagnosis is not certain on imaging studies. For intraventricular cysts, endoscopic surgery is the procedure of choice as it is minimally invasive. For incompletely excised cysts and cysts or granulomas in locations such as the spinal cord, medical treatment with steroids and albendazole is recommended. Hydrocephalus is treated with a ventriculo-peritoneal shunt but shunts in these patients suffer from frequent obstructions and require multiple revisions. The outcome for patients with intraventricular and parenchymal cysts is usually good but for those with hydrocephalus associated with cisternal or racemose cysts and with cysticercotic meningitis, the mortality is high.



Ramadass B, Chittaranjan S, Subramanian V, Ramakrishna BS.

Fecal polymerase chain reaction for *Mycobacterium tuberculosis* IS6110 to distinguish Crohn's disease from intestinal tuberculosis.

Indian J Gastroenterol. 2010 Jun 25. [Epub ahead of print]

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

BACKGROUND: We have previously shown that amplification of *Mycobacterium tuberculosis* specific DNA (TB PCR) from feces reliably diagnosed intestinal tuberculosis. This study was undertaken to determine how well this test would distinguish intestinal tuberculosis from Crohn's disease in a country endemic for tuberculosis. **METHODS:** Consecutive patients with diagnoses of Crohn's disease and intestinal tuberculosis were enrolled, and the diagnoses confirmed by follow up. DNA was extracted from fecal samples and subjected to polymerase chain reaction TB PCR for IS6110 sequence which is specific for *M. tuberculosis*. **RESULTS:** Twenty one of 24 patients with intestinal tuberculosis and 5 of 44 patients with Crohn's disease tested positive by TB PCR. The sensitivity, specificity, positive predictive and negative predictive values for TB PCR in distinguishing tuberculosis from Crohn's disease were 0.79 (95% confidence interval 0.57-0.92), 0.88 (0.75-0.96), 0.79 (0.57-0.92) and 0.88 (0.75-0.96), respectively. A combination of fecal TB PCR with mycobacterial culture of mucosal biopsy specimens identified 23 of 24 (96.2%) of patients with intestinal TB, with sensitivity, specificity, positive predictive and negative predictive values (95% CI) of 0.95 (0.78-0.99), 0.88 (0.75-0.96), 0.82 (0.63-0.93) and 0.97 (0.86-0.99), respectively. **CONCLUSION:** Fecal TB PCR is a good screening test to distinguish intestinal tuberculosis from Crohn's disease.



Ramya I, Mathews KP, Pichamuthu K, Keshava SN, Balamugesh T, Ramamani M, Surekha V, Mammen T

Endotracheal tuberculous stenosis: ventilation rescue and bronchography guided stenting.
Indian J Chest Dis Allied Sci. 2010 Jan-Mar;52(1):55-8.

Department of Medicine and Geriatrics, Christian Medical College and Hospital, Vellore, India.

We present the case of a 16-year-old female patient who presented with dyspnoea, cough and noisy breathing that progressed further in hospital with the development of stridor and severe respiratory compromise requiring mechanical ventilatory support. Investigations were consistent with a diagnosis of endotracheal tuberculosis with tracheal and bronchial stenosis. Despite adequate anti-tuberculous therapy and ventilation the patient had high airway pressures, low tidal volumes and hypercapnia, which prevented weaning from mechanical ventilation. Balloon dilatation and stenting of the 4.5cm long, 2.3mm diameter stenotic tracheal segment was performed under radiological guidance. The patient was weaned successfully from the ventilator post-procedure. This report illustrates the successful management of an uncommon presentation of a common disease with modern endoscopic therapy.



Rupa V, Jacob M, Mathews MS, Seshadri MS.

A prospective, randomised, placebo-controlled trial of postoperative oral steroid in allergic fungal sinusitis.

Eur Arch Otorhinolaryngol. 2010 Feb;267(2):233-8.

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

The aim of this study is to determine the effectiveness of postoperative oral steroid in controlling disease in patients with allergic fungal sinusitis (AFS). The study design includes prospective, randomised, double blind, placebo-controlled trial using oral prednisolone. Twenty-four patients diagnosed with AFS underwent sinus surgery (endoscopic sinus surgery with or without open surgery) to completely excise disease. Patients were randomised to receive either oral steroid (n = 12) or placebo (n = 12) soon after surgery. All patients were also administered itraconazole and steroid nasal spray in the postoperative period. Subjective evaluation of symptom relief and objective evaluation by rigid nasal endoscopy at 6 and 12 weeks following surgery was performed. After 12 weeks, the code was broken and the two groups of patients were identified to note their response to treatment. At 6 weeks, complete relief of preoperative symptoms was obtained in eight patients who had received oral steroid and none who had received placebo (p = 0.001). Partial relief of preoperative symptoms was obtained in four who had received oral steroid and eight who had received placebo. Nasal endoscopy revealed that 8 of 12 patients who had received oral steroid and 1 patient who had received placebo were disease free (p = 0.009). At 12 weeks, complete symptom relief was obtained by all patients who received oral steroid but only one who received placebo (p = 0.0001). Nasal endoscopy at 12 weeks revealed that all 12 patients who had received oral steroid and only 1 patient (the same patient) who had received placebo were disease free (p = 0.0001). In conclusion, postoperative oral steroid in a tapering dose produces significant subjective and objective improvement of patients with AFS. It is also

effective in preventing early recurrence. Inclusion of post operative oral steroid therapy for at least 12 weeks is recommended in all patients who undergo excisive surgery for AFS.



Russell PS, Nair MK.

Strengthening the Paediatricians Project 1: The need, content and process of a workshop to address the Priority Mental Health Disorders of adolescence in countries with low human resource for health.

Asia Pac Fam Med. 2010 Feb 18;9(1):4.

Child and Adolescent Psychiatry Unit, Department of Psychiatry, Christian Medical College, Vellore 632 002, India.

ABSTRACT: OBJECTIVE: World Health Organization has identified Priority Mental Health Disorders (PMHD) of adolescence. To effectively address these disorders at the primary care level paediatricians have to be trained in the low-income countries, which often have paucity of mental health resources. We studied: (1) the need of psychiatric training required among paediatricians; (2) if the content and process of the model workshop suits them to identify and treat these disorders. **METHODS:** Forty-eight paediatricians completed evaluation questionnaire at the end of a 3-day workshop on adolescent psychiatry. They participated in a focused group discussion addressing the areas in psychiatry that needs to be strengthened in these workshops, the changes in the content and process of the workshop to bolster their learning. Qualitative and descriptive analyses were appropriately used. **RESULTS:** Training in adolescent psychiatry was considered necessary among the paediatricians at zonal level frequently to develop their private practice, treat psychiatric disorders confidently, make correct referrals, and learn about counselling. Prioritizing training from under and postgraduate training, integrate psychiatry training with conference, conducting special workshops or Continuing Medical Education were suggested as ways of inculcating adolescent psychiatry proficiency. Mental status examination, psychopathology and management of the PMHD were considered by the respondents as important content that need to be addressed in the program but aspects of behavioural problems and developmental disabilities were also identified as areas of focus to gain knowledge and skill. Appropriate group size, flexibility in management decisions to fit the diverse clinical practice-settings was appreciated. Lack of skills in giving clinical reasoning in relation to PMHD, time management and feedback to individuals were identified as required components in the collaborative effort of this manner. Providing delegates with basic information on adolescent psychiatry prior to the workshop was suggested to make the workshop more valuable. **CONCLUSIONS:** There is a need to expand training for paediatricians from various backgrounds in adolescent psychiatry to strengthen their clinical skills to address the PMHD at the primary-care level. The evaluation suggests that the design and collaborative approach evident in this programme have merit as a model for training paediatricians in adolescent psychiatry in countries with low human resource for health.



Russell PS, Nair MK.

Strengthening the Paediatricians Project 2: The effectiveness of a workshop to address the Priority Mental Health Disorders of adolescence in low-health related human resource countries.

Asia Pac Fam Med. 2010 Feb 18;9(1):3.

Child and Adolescent Psychiatry Unit, Department of Psychiatry, Christian Medical College, Vellore 632 002, Southern India, India.

ABSTRACT: BACKGROUND: Paediatricians can be empowered to address the Priority Mental Health Disorders at primary care level. To evaluate the effectiveness of a collaborative workshop in enhancing the adolescent psychiatry knowledge among paediatricians. **METHODS:** A 3-day, 27-hours workshop was held for paediatricians from different regions of India under the auspices of the National Adolescent Paediatric Task Force of the Indian Academy of Paediatrics. A 5-item pretest-posttest questionnaire was developed and administered at the beginning and end of the workshop to evaluate the participants' knowledge acquisition in adolescent psychiatry. Bivariate and multivariate analyses were performed on an intention-to-participate basis. **RESULTS:** Forty-eight paediatricians completed the questionnaire. There was significant enhancement of the knowledge in understanding the phenomenology, identifying the psychopathology, diagnosing common mental disorder and selecting the psychotropic medication in the bivariate analysis. When the possible confounders of level of training in paediatrics and number of years spent as paediatrician were controlled, in addition to the above areas of adolescent psychiatry, the diagnostic ability involving multiple psychological concepts also gained significance. However, both in the bivariate and multivariate analyses, the ability to refer to appropriate psychotherapy remained unchanged after the workshop. **CONCLUSIONS:** This workshop was effective in enhancing the adolescent psychiatry knowledge of paediatricians. Such workshops could strengthen paediatricians in addressing the priority mental health disorders at the primary-care level in countries with low-human resource for health as advocated by the World Health Organization. However, it remains to be seen if this acquisition of adolescent psychiatry knowledge results in enhancing their adolescent psychiatry practice.



Russell PS, Daniel A, Russell S, Mammen P, Abel JS, Raj LE, Shankar SR, Thomas N.

Diagnostic accuracy, reliability and validity of Childhood Autism Rating Scale in India.

World J Pediatr. 2010 May;6(2):141-7.

Autism Clinic, Child & Adolescent Psychiatry Unit, Department of Psychiatry, Christian Medical College, Vellore, 632 002, Southern India.

BACKGROUND: Since there is no established measure for autism in India, we evaluated the diagnostic accuracy, reliability and validity of Childhood Autism Rating Scale (CARS). **METHODS:** Children and adolescents suspected of having autism were identified from the unit's database. Scale and item level scores of CARS were collected and analyzed. Sensitivity, specificity, likelihood ratios and predictive values for various CARS cut-off scores were calculated. Test-retest reliability and inter-rater reliability of CARS were examined. The

dichotomized CARS score was correlated with the ICD-10 clinical diagnosis of autism to establish the criterion validity of CARS as a measure of autism. Convergent and divergent validity was calculated. The factor structure of CARS was demonstrated by principal components analysis. RESULTS: A CARS score of ≥ 33 (sensitivity = 81.4%, specificity = 78.6%; area under the curve = 81%) was suggested for diagnostic use in Indian populations. The inter-rater reliability (ICC=0.74) and test-retest reliability (ICC=0.81) for CARS were good. Besides the adequate face and content validity, CARS demonstrated good internal consistency (Cronbach's alpha=0.79) and item-total correlation. There was moderate convergent validity with Binet-Kamat Test of Intelligence or Gessell's Developmental Schedule ($r=0.42$; $P=0.01$), divergent validity ($r=-0.18$; $P=0.4$) with ADD-H Comprehensive Teacher Rating Scale, and high concordance rate with the reference standard, ICD-10 diagnosis (82.52%; Cohen's kappa=0.40, $P=0.001$) in classifying autism. A 5-factor structure explained 65.34% of variance. CONCLUSION: The CARS has strong psychometric properties and is now available for clinical and research work in India.



Sajith KG, Chacko A, Dutta AK.

Recurrent Acute Pancreatitis: Clinical Profile and an Approach to Diagnosis.

Dig Dis Sci. 2010 Mar 16. [Epub ahead of print]

Department of Gastrointestinal Sciences, Christian Medical College, Vellore, Tamil Nadu, 632 004, India.

BACKGROUND AND AIMS: Though recurrent acute pancreatitis is often seen in clinical practice, there are few comprehensive articles on this entity. The aim of this study therefore was to assess the etiological and clinical profile as well as diagnostic yield of non-invasive and invasive tests in this group of patients. **METHODS:** All patients with recurrent acute pancreatitis seen from 2002 to 2007 were included in the study, retrospectively. Clinical information, investigation, and treatment data were collected for all patients by a standardized review of medical charts. Diagnostic tests were grouped into level one (non-invasive) and level two (invasive) tests and their yield was assessed. Comparison was made between the group with known etiology and idiopathic group to look for significant differences. **RESULTS:** A total of 188 patients with recurrent acute pancreatitis were seen during the study period. Common etiological factors were biliary disease (37%), pancreas divisum (8.5%) and alcohol (6.4%). Multiple etiologies were seen in 7% of cases, and no cause was found in 32.4%. The diagnostic yield of level-one investigation (non-invasive) was 29.3%. Level-two tests (invasive) identified presumptive etiologies in 38.3% of cases. Complications developed in 12.2% and there was no mortality. Clinical features and complications were similar in the idiopathic group and those with known etiology. **CONCLUSIONS:** Etiological diagnosis was obtained in 67.6% of patients after comprehensive diagnostic work up. Diagnosis in the majority of patients could only be reached after invasive tests (bile crystal analysis, EUS, ERCP). Early diagnosis and etiology-based therapy is the key to optimum patient outcome.



Sarawagi R, Keshava SN, Surendrababu NR, Zachariah UG, Eapen EC.

Budd-Chiari Syndrome Complicating Hydatid Cyst of the Liver Managed by Venoplasty and Stenting.

Cardiovasc Intervent Radiol. 2010 Mar 24. [Epub ahead of print]

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

Budd-Chiari syndrome (BCS) and portal hypertension is an uncommon complication of hydatid cyst of the liver. Previous reports describe cyst excision or portosystemic shunt surgery for such patients. Here we present a case of hydatid cyst of the liver with BCS that was treated successfully with hepatic venoplasty and transjugular stent placement.



Sarkar R, Sowmyanarayanan TV, Samuel P, Singh AS, Bose A, Muliyl J, Kang G.

Comparison of group counseling with individual counseling in the comprehension of informed consent: a randomized controlled trial.

BMC Med Ethics. 2010 May 14;11:8.

Department of Gastrointestinal Sciences, Christian Medical College, Vellore - 632 004, Tamil Nadu, India.

BACKGROUND: Studies on different methods to supplement the traditional informed consent process have generated conflicting results. This study was designed to evaluate whether participants who received group counseling prior to administration of informed consent understood the key components of the study and the consent better than those who received individual counseling, based on the hypothesis that group counseling would foster discussion among potential participants and enhance their understanding of the informed consent. **METHODS:** Parents of children participating in a trial of nutritional supplementation were randomized to receive either group counseling or individual counseling prior to administration of the informed consent. To assess the participant's comprehension, a structured questionnaire was administered approximately 48-72 hours afterwards by interviewers who were blinded to the allocation group of the respondents. **RESULTS:** A total of 128 parents were recruited and follow up was established with 118 (90.2%) for the study. All respondents were aware of their child's participation in a research study and the details of sample collection. However, their understanding of study purpose, randomization and withdrawal was poor. There was no difference in comprehension of key elements of the informed consent between the intervention and control arm. **CONCLUSIONS:** The results suggest that the group counseling might not influence the overall comprehension of the informed consent process. Further research is required to devise better ways of improving participants' understanding of randomization in clinical trials.



Singh G, Cherian VT, Thomas BP.

Low-concentration, continuous brachial plexus block in the management of Purple Glove Syndrome: a case report.

J Med Case Reports. 2010 Feb 10;4:48.

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

ABSTRACT: INTRODUCTION: Purple Glove Syndrome is a devastating complication of intravenous phenytoin administration. Adequate analgesia and preservation of limb movement for physiotherapy are the two essential components of management. **CASE PRESENTATION:** A 26-year-old Tamil woman from India developed Purple Glove Syndrome after intravenous administration of phenytoin. She was managed conservatively by limb elevation, physiotherapy and oral antibiotics. A 20G intravenous cannula was inserted into the sheath of her brachial plexus and a continuous infusion of bupivacaine at a low concentration (0.1%) with fentanyl (2 mug/ml) at a rate of 1 to 2 ml/hr was given. She had adequate analgesia with preserved motor function which helped in physiotherapy and functional recovery of the hand in a month. **CONCLUSION:** A continuous blockade of the brachial plexus with a low concentration of bupivacaine and fentanyl helps to alleviate the vasospasm and the pain while preserving the motor function for the patient to perform active movements of the finger and hand.



Sophia A, Isaac R, Rebekah G, Brahmadathan K, Rupa V.

Risk factors for otitis media among preschool rural Indian children.

Int J Pediatr Otorhinolaryngol. 2010 Jun;74(6):677-83. Epub 2010 Apr 22.

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

OBJECTIVE: To establish the role of various risk factors for otitis media among preschool, rural Indian children. **METHODS:** A cross sectional study of 800 children was undertaken to determine the prevalence of otitis media. Thereafter, using a case control study design, all the cases and an equal number of controls were compared in terms of various common risk factors for otitis media. The 13 risk factors studied were age, sex, socioeconomic status (SES), nutritional status, balwadi attendance, duration of breast feeding, passive smoking, exposure to household smoke, persistent rhinorrhoea, positive throat culture, snoring, seasonal rhinitis and allergic rhinitis. Bivariate association between these risk factors and otitis media was studied using chi-square test of proportions. Multivariate logistic regression analysis was done by including the variables which were significant at $p=0.35$ in the bivariate analysis. **RESULTS:** From the cross sectional study, the prevalence of otitis media was found to be 8.6%, roughly half the prevalence obtained 10 years previously from the same region. Otitis media with effusion (OME) was the commonest manifestation of otitis media (6%) with 3.8% having bilateral disease. Ear wax was seen in 27.5% of subjects. Eighteen (2.3%) children failed the screening audiometry test set at 40 dB HL. Sociodemographic factors among cases and controls were comparable. The prime risk factors for otitis media identified by bivariate analysis included persistent rhinorrhoea, snoring and seasonal rhinitis. On multivariate logistic regression analysis, persistent rhinorrhoea ($p<0.01$, O.R.=7.56, 95% C.I. 2.73 - 20.92), snoring ($p=0.01$, O.R.=4.89, 95% C.I. 1.32 - 18.17), seasonal rhinitis ($p=0.02$,

OR=5.93,95% CI=1.33-26.51) and passive smoking (p=0.04, O.R.=3.29, 95% C.I. 1.05-10.33) were found to be important risk factors for otitis media. Age, sex, SES, parental education, seasonal or allergic rhinitis, inadequate breast feeding and exposure to household smoke were not significant risk factors. **CONCLUSIONS:** Otitis media continues to have a high prevalence among South Indian children. Persistent rhinorrhea, snoring, seasonal rhinitis and passive smoking are the chief risk factors for the disease. Measures to reduce the prevalence of otitis media by addressing these risk factors are urgently required.



Srinivas B, Joseph V, Chacko G, Rajshekhar V.

Extradural developmental dural root sleeve cyst presenting as a lumbar paraspinal mass with renal compression in an infant.

J Neurosurg Pediatr. 2010 Jun;5(6):586-90.

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

Spinal extradural cysts do not normally present as a visible paraspinal mass or cause compression of the abdominal organs. The authors describe the case of a 9-month-old boy with multiple spinal extradural cysts. The largest of these cysts was along the right L-2 nerve root with significant extraspinal extension resulting in a visible slow-growing swelling in the right paraspinal region and radiological evidence of compression of the right kidney with hydronephrosis. Another large cyst along the left T-12 root caused radiologically evident compression of the left kidney but to a lesser degree. The patient also had monoparesis of the left lower limb and phenotypic features of Noonan syndrome. The authors performed marsupialization of the cysts, as well as repair of the fistula between the subarachnoid space and the cyst on the right side along the L-2 root and on the left side along the T-12 root. At 1-year follow-up, there was no paraspinal mass and the lower limbs exhibited normal power. Magnetic resonance imaging confirmed marked reduction in the size of the cysts and relief of the renal compression. To the authors' knowledge, their patient is the youngest reported in literature to have a spinal extradural cyst and also the first with the cyst presenting as a paraspinal mass.



Subramanian V, Raju RS, Vyas FL, Joseph P, Sitaram V

Delayed jejunal perforation following blunt abdominal trauma.

Ann R Coll Surg Engl. 2010 Mar;92(2):W23-4.

Department of General Surgery Unit IV, Christian Medical College, Ida Scudder Road, Vellore, Tamil Nadu, India.

Jejunal perforation is a known complication of abdominal trauma. We report two cases of jejunal perforation presenting nearly 2 months following blunt injury to the abdomen and discuss possible mechanisms for delayed small bowel perforation.



Surendrababu NR, Keshava SN, Eapen CE, Zachariah UG.

Transjugular intrahepatic portocaval shunt placed through the strut of an inferior vena cava stent in a patient with Budd-Chiari syndrome: a technical modification.

Br J Radiol. 2010 Jan;83(985):e22-4.

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

Transjugular intrahepatic portocaval shunt (TIPS) is performed in patients with symptomatic Budd-Chiari syndrome (BCS) who do not have repairable hepatic veins. We report the case of a patient who had an inferior vena cava (IVC) stent placed previously as part of the management for BCS, and who subsequently required TIPS. The TIPS tract was created through the strut of the previously placed IVC stent; the TIPS stent was placed after dilatation of the liver parenchyma as well as the strut of the IVC stent. This novel technique of “strutplasty” of a previously placed stent as part of TIPS has not been reported in the literature.



Thangakunam B, Christopher DJ, James P, Gupta R.

Semi-rigid thoracoscopy: initial experience from a tertiary care hospital.

Indian J Chest Dis Allied Sci. 2010 Jan-Mar;52(1):25-7.

Department of Pulmonary Medicine, Christian Medical College and Hospital, Vellore, India.

BACKGROUND: Thoracoscopy is usually carried out using rigid metallic instruments. Recently, video flex-rigid or semi-rigid thoroscopes have been introduced. These have the advantage of easy maneuverability, although the biopsy samples are smaller as compared to those with rigid thoracoscopy. We have looked at the usefulness of flex rigid thoracoscope in the diagnosis and treatment of pleural diseases, remained undiagnosed after thoracentesis and closed biopsy. **METHODS:** Retrospective analysis of data of patients who underwent thoracoscopy for the evaluation of pleural disease. **RESULTS:** Thoracoscopy was done in 21 patients using a flex-rigid thoracoscope in our institution. The indication was pleural effusion with inconclusive or negative pleural fluid cytology and blind pleural biopsy in 18 of the 21 patients. Thoracoscopic biopsy was positive in 12 of the 18 patients (66.7%). Of the six who had a negative biopsy, the procedure indirectly helped in patient management in five. There were no significant procedure-related complications. **CONCLUSION:** Thoracoscopy with flex-rigid thoracoscope is a useful diagnostic tool in the evaluation of pleural effusions with negative blind pleural biopsy and cytology.



Thomas M, George R, Thomas M

Linear epidermolytic acanthoma of vulva: an unusual presentation.

Indian J Dermatol Venereol Leprol. 2010 Jan-Feb;76(1):49-51.

Department of Dermatology, Venereology and Leprosy, Christian Medical College and Hospital, Vellore, India.

Epidermolytic acanthoma (EA) is a rare benign tumor that shows epidermolytic hyperkeratosis (EH) on histopathology. It can occur in a solitary or disseminated form. This condition needs to be distinguished from other hereditary or acquired conditions that may show EH. We diagnosed an unusual case of EA of the vulva presenting in a linear pattern in a 50-year-old lady based on the clinical features and typical histopathological findings and stress the importance of considering epidermolytic acanthoma in the differential diagnosis of verrucous lesions of the genitalia.



Thomas M, Peter JV, Williams A, Job V, George R.

Systemic inflammatory response syndrome in diseases of the skin.

Postgrad Med J. 2010 Feb;86(1012):83-8.

Department of Dermatology, Venereology & Leprosy, Christian Medical College & Hospital, Vellore, India.

BACKGROUND: A number of dermatological conditions present with features of systemic inflammatory response syndrome (SIRS). This study evaluated the incidence and outcome of SIRS in patients with dermatological diseases. **STUDY DESIGN:** Prospective cohort study. **RESULTS:** Patients admitted to a university hospital with a skin disease and fulfilling at least two SIRS criteria were included. The primary outcome measure was mortality. Secondary outcomes included incidence of multiple organ dysfunction syndrome (MODS), sepsis, severe sepsis and shock. Over 14 months, 2765 inpatients with skin related problems were examined. These included 721 patients admitted directly to the dermatology ward and 2044 patients referred from other departments within the hospital, with cutaneous manifestations. The incidence of SIRS in this cohort was 2.4% (n=67). The mean (SD) age was 32.6 (19.7) years with a male:female ratio of 1.2:1. Cutaneous adverse drug reaction (CADR) was the most common cause of SIRS (35.8%). During hospitalisation, 37 patients (55.2%) developed sepsis, 23 (34.4%) MODS, 15 (22.4%) severe sepsis and 6 (9%) shock. Methicillin sensitive Staphylococcus aureus was the most common skin isolate (41.4%) and Enterococcus the most common blood isolate. Overall mortality was 15% (10/67). Older age, low albumin, MODS, severe sepsis and shock were associated with an increased risk of death (p<0.03). Positive blood cultures, liver or lung involvement were also significantly associated with increased mortality (p<0.01). **CONCLUSION:** The incidence of SIRS was low in dermatological diseases. In this cohort, CADR was the most common cause of SIRS. Patients who developed sepsis or MODS had a poor outcome.



Thomas SG, Daniel RT, Chacko AG, Thomas M, Russell PS.

Cognitive changes following surgery in intractable hemispheric and sub-hemispheric pediatric epilepsy.

Childs Nerv Syst. 2010 Aug;26(8):1067-73. Epub 2010 Feb 24.

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

OBJECTIVES: The objectives were to study the short and longitudinal changes in the cognitive skills of children with intractable epilepsy after hemispheric/sub-hemispheric epilepsy surgery. **METHODS:** Sixteen patients underwent surgery from September 2005 until March 2009. They underwent detailed presurgical evaluation of their cognitive skills and were repeated annually for 3 years. **RESULTS:** Their mean age was 6.6 years. Epilepsy was due to Rasmussen's encephalitis (n = 9), Infantile hemiplegia seizure syndrome (n = 2), hemimegalencephaly (n = 2), and Sturge Weber syndrome (n = 3). Fourteen (87.5%) patients underwent peri-insular hemispherotomy and two (12.5%) underwent peri-insular posterior quadrantectomy. The mental and social age, gross motor, fine motor, adaptive, and personal social skills showed a steady increase after surgery ($p < 0.05$). Language showed positive gains irrespective of the side and etiology of the lesion ($p = 0.003$). However, intelligence quotient (IQ) remained static on follow-up. Patients with acquired pathology gained more in their mental age, language, and conceptual thinking. Age of seizure onset and duration of seizures prior to surgery were predictive variables of postoperative cognitive skills. **CONCLUSIONS:** There are short- and long-term gains in the cognitive skills of children with intractable epilepsy after hemispherotomy and posterior quadrantectomy that was better in those patients with acquired diseases. Age of seizure onset and duration of seizures prior to surgery were independent variables that predicted the postoperative outcome.



Varughese S, Sundaram M, Basu G, Tamilarasi V, John GT.

Percutaneous continuous ambulatory peritoneal dialysis (CAPD) catheter insertion—a preferred option for developing countries.

Trop Doct. 2010 Apr;40(2):104-5.

Department of Nephrology, Christian Medical College, Vellore 632004, Tamil Nadu, India.

Continuous ambulatory peritoneal dialysis (CAPD) as a modality of renal replacement therapy in patients with chronic kidney disease stage 5 (CKD 5) has the advantage of being a home-based therapy and is a preferred option in patients with inadequate access to haemodialysis and transplantation facilities and in those infected with HIV and other blood-borne viruses. While open surgical CAPD catheter placement has been the conventional mainstay of access placement, percutaneous techniques are being increasingly used with similar success rates. We report our experience over the past two years with blind insertion of the swan neck percutaneous double-cuffed Tenckhoff CAPD catheter using a trocar. There was considerable decrease in hospital stay and surgical costs. There was only one major complication of injury to the jejunal mesenteric artery requiring emergency laparotomy in one patient. In three patients, drain of peritoneal fluid was inadequate, presumably due to omental wrapping around the in-dwelling catheter, and required surgical removal of the omentum.



Mahasuar R, Kuruvilla A, Jacob K.

Palatal tremor after lithium and carbamazepine use: a case report.

J Med Case Reports. 2010 Jun 11;4:176.

Department of Psychiatry, Christian Medical College, Vellore 632002, India.

INTRODUCTION: Palatal tremor, characterized by rhythmic contractions of the soft palate, can occur secondary to pathology in the dentato-rubro-olivary pathway, or in the absence of such structural lesions. Its pathogenesis is only partially understood. We describe a case of probable drug-induced palatal tremor. **CASE PRESENTATION:** A 27-year-old Indian man had taken carbamazepine and lithium for 7 years for the treatment of a manic episode. He presented with a one-year history of bilateral rhythmic oscillations of his soft palate and tremors of his tongue. There were no other abnormalities detected from his examination or after detailed investigation. **CONCLUSION:** Palatal tremors may result from medication used in the treatment of psychiatric disorders.



Koshy CG, Eapen CE, Lakshminarayan R.

Transvenous embolization to treat uncontrolled hemobilia and peritoneal bleeding after transjugular liver biopsy.

Cardiovasc Intervent Radiol. 2010 Jun;33(3):624-6. Epub 2009 May 30.

Department of Radiology, Christian Medical College, Vellore, Tamil Nadu 632004, India.

Hemobilia is one of the complications that can occur after a transjugular liver biopsy. Various treatment options have been described for the management of this condition, including transarterial embolization and open surgery. We describe a patient who developed uncontrolled hemobilia after a transjugular liver biopsy that required a transvenous approach for embolization and treatment purposes.



Cherian RS, Keshava SN, George O, Joseph E.

Cervical aortic arch in a patient with Turner syndrome.

Diagn Interv Radiol. 2010 Jun;16(2):132-3. Epub 2009 Oct 19.

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

We report a case of a young girl with Turner syndrome presenting with a pulsatile left-sided supraclavicular swelling since birth, which proved to be the rare anomaly of a cervical aortic arch. Though elongation of the transverse aortic arch is well known in Turner syndrome, to the best of our knowledge, a cervical aortic arch has not been described in the literature.



Fletcher GJ, Gnanamony M, David J, Ismail AM, Subramani T, Abraham P.

Do we need an 'in-house' neutralization assay for confirmation of hepatitis B surface antigen? Answers from a tertiary care hospital in India.

J Gastroenterol Hepatol. 2010 May;25(5):942-5. Epub 2009 Nov 19.

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

BACKGROUND AND AIMS: Hepatitis B surface antigen (HBsAg) is an important serological marker for diagnosis of hepatitis B virus (HBV) infection. Commercial kits for detection of HBsAg emphasize confirmation by neutralization assays. In this study, we have standardized an 'in-house' neutralization test for HBsAg confirmation. **METHODS:** Among 6684 HBsAg-positive samples, 615 were subjected to an 'in-house' HBsAg neutralization test (NT). Of these, 91 (100%) high-reactive samples (optical density [OD] 1.000-3.000) and 286 (93%) of 289 low-reactive samples (OD < 1.000) were neutralized, and 235 (100%) grey-zone reactive samples were 'in-house' NT negative. Eighty-four samples of varying reactivities that were tested by the 'in-house' NT were compared with a commercial NT (AxSYM, Abbott). **RESULTS:** The 'in-house' NT showed an excellent agreement ($\kappa = 0.83$, $P < 0.001$) with the commercial confirmatory assay. The sensitivity, specificity, positive and negative predictive values were 90%, 94%, 96% and 87%, respectively. **CONCLUSION:** The enzyme immunoassay-based 'in-house' HBsAg neutralization assay is a feasible alternative to the commercial HBsAg confirmatory assay. This technique is easily adaptable, cost-effective and reliable for the confirmation of HBsAg in a low resource setting, enhancing the overall quality of HBsAg screening.



Aaron S, Alexander M, Maya T, Mathew V, Goyal M.

Treatment of acute ischemic stroke: Awareness among general practitioners.

Neurol India. 2010 May-Jun;58(3):441-2.

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

For promptly referral of a patient with acute ischemic stroke (AIS) for possible thrombolysis, general practitioners (GPs) need to be equipped with the advanced knowledge of AIS treatment. We assessed the knowledge regarding treatment of AIS among GPs practicing in and around a quaternary care teaching hospital in south India. A total of 109 GPs who attend to medical emergencies were interviewed using a standard questionnaire. Of the 109 GPs interviewed, 54% felt that tissue plasminogen activator (tPA) can be used in the treating AIS, but only 24% had chosen tPA as the best treatment option and 22% opted for other agents like citicholine or edavarone. Only 17% were aware that tPA should be given within 3h. and 35% felt that intra-arterial thrombolysis as a treatment option.. Only 30% felt the need for good sugar control and 37% wanted aggressive lowering of blood pressure. Majority of GPs are not clear about beneficial effects of thrombolysis and are not updated regarding BP and sugar control in the setting of AIS.



Leena RV, Shyamkumar NK.

Glove perforations during interventional radiological procedures.

Cardiovasc Intervent Radiol. 2010 Apr;33(2):375-8. Epub 2009 Oct 1.

Department of Radiodiagnosis, Christian Medical College, Vellore, Tamil Nadu, 632004, India.

Intact surgical gloves are essential to avoid contact with blood and other body fluids. The objective of this study was to estimate the incidence of glove perforations during interventional radiological procedures. In this study, a total of 758 gloves used in 94 interventional radiological procedures were examined for perforations. Eleven perforations were encountered, only one of which was of occult type. No significant difference in the frequency of glove perforation was found between the categories with varying time duration.



Vivek R, Chandy GM, Brown DW, Kang G.

Seroprevalence of IgG antibodies to hepatitis E in urban and rural southern India.

Trans R Soc Trop Med Hyg. 2010 Apr;104(4):307-8. Epub 2009 Sep 2.

Department of Gastrointestinal Sciences, Christian Medical College, Vellore, Tamil Nadu 632004, India.

Hepatitis E virus (HEV) is an important cause of sporadic and epidemic hepatitis E infection in northern India. Sera, collected from different age groups in rural (n=1144) and urban (n=1135) areas using a probability proportional to size survey, were tested using an ELISA for IgG antibodies. Antibodies increased with age in both populations, but the urban population had higher exposure in all age groups (Mann-Whitney U test, P<0.001 for all age groups except children <5 years). These results indicate that urban populations with higher density and common water supplies may be at greater risk of hepatitis E. Copyright 2009 Royal Society of Tropical Medicine and Hygiene. Published by Elsevier Ltd. All rights reserved.



Sureka J, Sarawagi R, Eapen A, Keshava SN, Vedantam R.

Skull base hydatid cyst with intracranial extension presenting as vocal cord palsy: a case report.

Br J Radiol. 2010 Mar;83(987):e67-9.

Christian Medical College, Vellore, Tamilnadu, India.

Hydatid disease of the skull base is extremely rare, and intracranial extension of hydatid cysts through the skull base is even rarer. We report an interesting case of a 42-year-old man who presented with features of right vocal cord palsy. The diagnosis of hydatid cyst was made based on his history and on pre-operative MRI and was confirmed by surgery and histopathological examination.



Mukhopadhyaya I, Anbu D, Iturriza-Gomara M, Gray JJ, Brown DW, Kavanagh O, Estes MK, Kang G.

Anti-VP6 IgG antibodies against group A and group C rotaviruses in South India.

Epidemiol Infect. 2010 Mar;138(3):442-7. Epub 2009 Sep 2.

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

In an epidemiological survey from South India, 936 serum samples were tested for IgG against recombinant baculovirus-expressed VP6 proteins from human group A and group C rotaviruses. The overall seroprevalence for group A was 100% and for group C was 25.32% (95% CI 22.64-28.21). The lowest seroprevalence for group C was in children aged <10 years (16.79%). An age-related rise in seroprevalence in group C, but not group A, suggests different patterns of exposure. Seroprevalence was similar in rural and urban subjects, unlike the higher prevalence in rural subjects in studies elsewhere.



Balamurugan R, George G, Kabeerdoss J, Hepsiba J, Chandragunasekaran AM, Ramakrishna BS.

Quantitative differences in intestinal *Faecalibacterium prausnitzii* in obese Indian children.

Br J Nutr. 2010 Feb;103(3):335-8. Epub 2009 Oct 23.

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

Gut bacteria contribute to energy conservation in man through their ability to ferment unabsorbed carbohydrate. The present study examined the composition of predominant faecal microbiota in obese and non-obese children. The participants (n 28) aged 11-14 years provided fresh faecal samples and completed a dietary survey consisting of 24 h diet recall and a FFQ of commonly used foods taken over the previous 3 months. Faecal bacteria were quantitated by real-time PCR using primers targeted at 16S rDNA. Of the participants, fifteen (seven female) were obese, with median BMI-for-age at the 99th percentile (range 97 to >99) while thirteen participants (seven female) were normal weight, with median BMI-for age being at the 50th percentile (range 1-85). Consumption of energy, carbohydrates, fat and protein was not significantly different between the obese and non-obese participants. There was no significant difference between the two groups in faecal levels of *Bacteroides-Prevotella*, *Bifidobacterium* species, *Lactobacillus acidophilus* group or *Eubacterium rectale*. Levels of *Faecalibacterium prausnitzii* were significantly higher in obese children than in non-obese participants ($P = 0.0253$). We concluded that the finding of increased numbers of *F. prausnitzii* in the faeces of obese children in south India adds to the growing information on alterations in faecal microbiota in obesity.



Viswanathan S, Moses PD, Varkki S, Russell PS, Brahmadathan KN.

Association between neuropsychiatric morbidity and streptococcal infections in children.

Indian Pediatr. 2010 Feb 7;47(2):168-70. Epub 2009 Apr 15.

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

We conducted a case control study to study the association between neuropsychiatric morbidity and group A streptococcal infections in children. Twenty two cases of neuropsychiatric morbidity were compared with 64 controls. Fourteen (63.6%) of the 22 cases were positive for ASO and/or ADNB while 21 of the 64 controls (32.8%) were positive for either or both antibodies (OR = 3.428; CI: 1.15-10.18; P=0.026). We conclude that there is a statistically significant association between neuropsychiatric morbidity and streptococcal infection in children.



Bhagat SK, Gopalakrishnan G, Kekre NS, Chacko NK, Kumar S, Manipadam MT, Samuel P.

Factors predicting inguinal node metastasis in squamous cell cancer of penis.

World J Urol. 2010 Feb;28(1):93-8. Epub 2009 Jun 2.

Department of Urology, Christian Medical College, Vellore 632004, India.

PURPOSE: To identify factors predicting the risk of inguinal metastasis in squamous cell carcinoma of the penis. The therapeutic advantages of early lymphadenectomy in squamous cell carcinoma of the penis must be counterbalanced against its post-operative morbidity. Loss to follow up is a major problem in developing countries. Generating a nomogram based on clinical lymph node status and histopathological findings in the primary tumor could facilitate clinical decision making in the management of penile cancer. **METHODS:** We prospectively studied 106 patients with penile squamous cell cancer treated from September 2001 to August 2007 at our institution. All patients were offered lymphadenectomy (LAD). A multivariate logistic regression model was used to develop a nomogram. We highlight the problems of loss to follow up in these patients. **RESULTS:** Of 53 who opted for LAD, 22 had nodal metastasis. The presence of high grade (P = 0.004), lymphovascular invasion (LVI) (P = 0.01) and palpable inguinal lymph nodes (P = 0.05) were the strongest predictors of metastasis. Of 51 who refused LAD, 22 were lost to follow up. Out of these, 16 were at high risk and 9 of them came back with inoperable fungating nodes. A nomogram predicting the risk of lymph node metastasis showed a bias corrected good concordance index (0.74) and good calibration. **CONCLUSIONS:** High grade and LVI in the tumor along with clinical stage of the inguinal nodes were the strongest predictors of metastasis. These features helped us to develop a nomogram to predict and to identify patients at risk of nodal metastasis.



Warier A, Gunawathi S, Venkatesh, John KR, Bose A.

T-cell assay as a diagnostic tool for tuberculosis.

Indian Pediatr. 2010 Jan 7;47(1):90-2. Epub 2009 Apr 15.

Department of Child Health, Low Cost Effective Care Unit and Department of Community Health, Christian Medical College, Vellore, India.

This study aimed to estimate the specificity and sensitivity of a whole blood IFN γ assay (ELISPOT) test for diagnosis in childhood tuberculosis. 96 patients, less than 18 years of age, diagnosed and commenced on antitubercular therapy were enrolled and tested. 47 age and sex matched controls were also tested. 23 tests were deemed invalid and analysis done on the remainder. The sensitivity was 53.3% in confirmed cases and less in other groups. The specificity was high at 97.9%. This test can be an useful aid in the diagnosis of tuberculosis.



Savarimuthu RJ, Ezhilarasu P, Charles H, Antonisamy B, Kurian S, Jacob KS.

Post-partum depression in the community: a qualitative study from rural South India.

Int J Soc Psychiatry. 2010 Jan;56(1):94-102. Epub 2009 Nov 11.

Department of Psychiatric Nursing, College of Nursing, Christian Medical College, Vellore, India.

BACKGROUND: Post-partum depression, although heterogeneous, is often considered a medical disease when viewed from the biomedical perspective. However, recent reports from the Indian subcontinent have documented psychosocial causal factors. **METHOD:** This study employed qualitative methodology in a representative sample of women in rural South India. Women in the post-partum period were assessed using the Tamil versions of the Short Explanatory Model Interview, the Edinburgh Postnatal Depression Scale and a semi-structured interview to diagnose ICD 10 depression. Socio-demographic and clinical details were also recorded. **RESULTS:** Some 137 women were recruited and assessed, of these, 26.3% were diagnosed to have post-partum depression. The following factors were associated with post-partum depression after adjusting for age and education: age less than 20 or over 30 years, schooling less than five years, thoughts of aborting current pregnancy, unhappy marriage, physical abuse during current pregnancy and after childbirth, husband's use of alcohol, girl child delivered in the absence of living boys and a preference for a boy, low birth weight, and a family history of depression. Post-partum depression was also associated with an increased number of causal models of illness, a number of non-medical models, treatment models and non-medical treatment models. **CONCLUSION:** Many social and cultural factors have a major impact on post-partum depression. Post-partum depression, when viewed from a biomedical framework, fails to acknowledge the role of context in the production of emotional distress in the post-partum period.



Chrispal A, Mathews KP, Surekha V.

The clinical profile and association of delirium in geriatric patients with hip fractures in a tertiary care hospital in India.

J Assoc Physicians India. 2010 Jan;58:15-9.

Department of Medicine Unit 2, Christian Medical College and Hospital, Vellore 632004, Tamil Nadu, India.

INTRODUCTION: Delirium is common in hospitalized geriatric patients with hip fractures. A number of peri-operative predisposing and postoperative precipitating factors have been identified in Western literature but data regarding this problem within the Indian context is scarce. **METHOD:** The objectives of the study were to ascertain the incidence of delirium in geriatric patients admitted for the treatment of hip fractures in the Department of Orthopaedics of a tertiary care referral centre in South India, to delineate their clinical profile and identify probable contributing factors for development of delirium in this group of patients. The study was a prospective, cohort study design that was conducted on patients above the age of 60 years, admitted to the orthopaedic ward with hip fracture and who underwent hip surgery. A total of 81 patients were recruited from May 1st 2004 to April 30th 2005 (total duration of one year). **RESULTS:** Of the 81 patients 17 (21%) of the patients developed post-operative delirium. On multivariate analysis the presence of underlying dementia (OR 16.97), duration of surgery > 2.5 hrs (OR 8.23) and preoperative packed cell volume < 25 (OR 8.07) were found to be independent predisposing risk factors that were associated with the development of postoperative delirium. Postoperative infections, metabolic abnormalities and vascular events were found to be important detected medical causes for precipitating post-operative delirium. Patients who had delirium had longer hospital stays and poor ambulation at discharge. **CONCLUSIONS:** Delirium in geriatric patients undergoing hip fracture surgery results in poor postoperative outcomes and increased cost. The etiology of delirium is multi-factorial. A number of potentially modifiable factors have been identified as risk factors for delirium. Appropriate intervention strategies involving physicians and geriatricians need to be implemented within the Indian context to reduce the incidence of delirium.



Nambi GI, Jacob J, Gupta AK.

Monofocal maxillary fibrous dysplasia with orbital, nasal and oral obstruction.

J Plast Reconstr Aesthet Surg. 2010 Jan;63(1):e16-8. Epub 2009 Jun 18.

Department of Plastic and Reconstructive Surgery, Christian Medical College, Vellore, 632004 Tamil Nadu, India.

Fibrous dysplasia is a condition characterised by excessive proliferation of bone-forming mesenchymal cells. Although a variety of causative factors are described, the exact aetiology is yet to be fully known. The maxilla is the most commonly affected facial bone, with facial asymmetry being the usual complaint. Surgery is the treatment of choice with two available options, namely, conservative bone shaving and radical excision and reconstruction. We describe the case of a 25-year-old male who presented with a giant monofocal fibrous dysplasia of the

left maxilla with facial asymmetry, including obstruction of the left orbit, nasal and left half of the oral cavities and was treated with conservative surgery. Copyright (c) 2009 British Association of Plastic, Reconstructive and Aesthetic Surgeons. Published by Elsevier Ltd. All rights reserved.



Santoshi JA, Pallapati SC, Thomas BP.

Haematogenous pseudomonas osteomyelitis of the hamate—treatment by radical debridement and bone grafting.

J Plast Reconstr Aesthet Surg. 2010 Jan;63(1):189-90. Epub 2008 Nov 28.

Dr Paul Brand Centre for Hand Surgery, Christian Medical College, Vellore 632004, Tamil Nadu, India.

A case of isolated chronic osteomyelitis of the hamate bone in a 13-year-old boy, who presented with a sinus on the dorsum of the hand, is reported. Radiological examination revealed multiple marginal and intra-osseous lytic areas with sclerotic rims in the hamate and at the fourth and fifth metacarpal bases. He was treated with excision of the sinus, curettage of the hamate lesion and hamato-metacarpal fusion which provided satisfactory control of infection while salvaging the function of the affected hand. Copyright (c) 2008 British Association of Plastic, Reconstructive and Aesthetic Surgeons. Published by Elsevier Ltd. All rights reserved.



Chrispal A, Rajan SJ, Sathyendra S.

The clinical profile and predictors of mortality in patients with melioidosis in South India.

Trop Doct. 2010 Jan;40(1):36-8. Epub 2009 Oct 22.

Department of Medicine Unit 2, Christian Medical College, Vellore 632004, India.

Melioidosis is an underdiagnosed and underreported disease in India with protean clinical manifestations. Mortality in this study population was 17%. The predominant risk factor for melioidosis was diabetes mellitus. Multifocal disease was present in 66% and pulmonary involvement in 61% of patients. In a country like India where the conditions are conducive for endemic melioidosis and due to the clinical similarity of melioidosis to diseases like tuberculosis, it is essential for clinicians to have a high degree of suspicion and pursue suitable diagnostic strategies for melioidosis in the appropriate clinical setting.



Chatterjee P, Eapen A, Perakath B, Singh A.

Radiologic and Pathological Correlation of Staging of Rectal Cancer with 3 Tesla Magnetic Resonance Imaging.

Can Assoc Radiol J. 2010 Jun 28.

Department of Radiodiagnosis and Imaging, Christian Medical College, Tamil Nadu, India.

PURPOSE: To assess the sensitivity and specificity of 3 Tesla magnetic resonance imaging (MRI) in the prediction of extramural spread and metastatic adenopathy in rectal carcinoma. **MATERIALS AND METHODS:** This was a prospective cohort study that included forty consecutive patients with rectal carcinoma from the Department of Colorectal Surgery. Three Tesla (3T) MRI was performed on these patients after a 4-hour fast and cleansing water enema. T1-weighted and T2-weighted images were obtained with high-resolution images T2-weighted sequences through the pelvis. Sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) of 3T MRI for prediction of metastatic adenopathy and extramural spread were calculated. The TNM staging based on MRI was compared with histopathology of the resected specimen (taken as the criterion standard). **RESULTS:** In our study, sensitivity, specificity, PPV, and NPV of 3T MRI for prediction of metastatic adenopathy were 100%, 78.3%, 77.3%, and 100%, respectively. Sensitivity, specificity, PPV, and NPV of 3T MRI for prediction of extramural tumour spread were 100% and 20%, 89.7% and 100%, respectively (ie, prediction of stages T3 and above). **CONCLUSION:** MRI allows accurate measurement of the depth of extramural tumour spread. In the assessment of metastatic adenopathy, however, MRI has a low specificity. This study shows that MRI is unlikely to miss any significant parameter in staging of rectal carcinoma. However, it has a tendency to overstage extramural spread of tumour. Copyright © 2010 Canadian Association of Radiologists. Published by Elsevier Inc. All rights reserved.



Gnanamony M, Peedicayil A, Subhashini J, Ram TS, Rajasekar A, Gravitt P, Abraham P.
Detection and quantitation of HPV 16 and 18 in plasma of Indian women with cervical cancer.

Gynecol Oncol. 2010 Mar;116(3):447-51. Epub 2009 Nov 17.

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

OBJECTIVE: HPV infection is a necessary but insufficient cause of cervical cancer. The significance of HPV DNA in blood however is debatable because of variable detection rates due to the differences in the methodology used. The aim of this study was to detect and quantitate HPV 16 and 18 plasma viremia in women with cervical neoplasia. **METHODS:** HPV DNA was detected in cervical tissue using consensus PGM1 primers and genotyped using reverse line blot hybridization. HPV 16 and 18 quantitation in tissue and detection and quantitation in plasma was performed using sensitive real time PCRs targeting E6/E7 region of HPV 16/18 genome respectively. Results were correlated with viral loads in corresponding tissue and with clinical disease stage. **RESULTS:** Viremia was detected in 56.4% of HPV 16 positive women and 20% of HPV 18 positive women. The prevalence of HPV 16 DNA in plasma increased with advancing disease stage ($p=0.001$), although HPV 16 absolute plasma viral load was not significantly associated with advancing disease stage ($p=0.281$). There was no correlation between absolute plasma viral load and viral load in corresponding cervical tissue (Spearman's $\rho=0.184$, $p=0.187$). The prevalence of HPV 18 viremia and absolute HPV 18 plasma viral load were not associated with advancing disease stage ($p=0.620$, $p=0.508$). **CONCLUSION:** The presence of HPV 16 in plasma is a marker of advancing cervical disease.



Dutta AK, Chacko A, Avinash B.

Suboptimal performance of IgG anti-tissue transglutaminase in the diagnosis of celiac disease in a tropical country.

Dig Dis Sci. 2010 Mar;55(3):698-702.

Department of Gastrointestinal Sciences, Christian Medical College, Tamil Nadu, India.

Serological tests using human IgA-anti-tTG have been reported to have high sensitivity and specificity in diagnosis of celiac disease. There is a paucity of data on the use of human IgG-anti-tTG in diagnosis of celiac disease. Ninety-two patients with clinical suspicion of celiac disease who underwent duodenal mucosal biopsy and celiac serology using human IgG-anti-tTG were included in this retrospective study. Diagnostic accuracy of human recombinant IgG-anti-tTG serological test for celiac disease was evaluated. Indications for celiac serological testing were diarrhea (92.3%), hypoalbuminemia (39.1%), and anemia (35.9%). Eighteen patients were diagnosed with having celiac disease and 14 (77.8%) of them were IgG-anti-tTG positive. Of the remaining 74 patients, eight (10.8%) were false-positive for IgG-anti-tTG. Sensitivity, specificity, PPV, NPV, and diagnostic accuracy of IgG-anti-tTG in celiac disease were 77.8, 89.1, 63.6, 94.2, and 87%, respectively. Human IgG-anti-tTG alone does not perform well as a diagnostic tool for celiac disease. The utility of anti-endomysial antibodies in a similar clinical setting needs to be evaluated.



Firth J, Balraj V, Muliyl J, Roy S, Rani LM, Chandresekhar R, Kang G.

Point-of-use interventions to decrease contamination of drinking water: a randomized, controlled pilot study on efficacy, effectiveness, and acceptability of closed containers, *Moringa oleifera*, and in-home chlorination in rural South India.

Am J Trop Med Hyg. 2010 May;82(5):759-65.

Warren Alpert School of Medicine at Brown University, Providence, Rhode Island, USA.

To assess water contamination and the relative effectiveness of three options for point-of-use water treatment in South India, we conducted a 6-month randomized, controlled intervention trial using chlorine, *Moringa oleifera* seeds, a closed valved container, and controls. One hundred twenty-six families participated. Approximately 70% of public drinking water sources had thermotolerant coliform counts > 100/100 mL. Neither *M. oleifera* seeds nor containers reduced coliform counts in water samples from participants' homes. Chlorine reduced thermotolerant coliform counts to potable levels, but was less acceptable to participants. Laboratory testing of *M. oleifera* seeds in water from the village confirmed the lack of reduction in coliform counts, in contrast to the improvement seen with *Escherichia coli* seeded distilled water. This discrepancy merits further study, as *M. oleifera* was effective in reducing coliform counts in other studies and compliance with *Moringa* use in this study was high.



Ajjampur SS, Liakath FB, Kannan A, Rajendran P, Sarkar R, Moses PD, Simon A, Agarwal I, Mathew A, O'Connor R, Ward H, Kang G.

Multisite study of cryptosporidiosis in children with diarrhea in India.

J Clin Microbiol. 2010 Jun;48(6):2075-81.

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

Cryptosporidium spp., a common cause of diarrhea in children, were investigated in the first multisite study in India. Diarrheal stools from hospitalized children aged <5 years from Delhi, Trichy, and Vellore were analyzed by microscopy, PCR-restriction fragment length polymorphism (RFLP), and/or sequencing at the small-subunit (SSU) rRNA and Cpgp40/15 loci for species determination and subgenotyping, respectively. Seventy of 2,579 (2.7%) children, 75% of whom were <2 years old, had cryptosporidial diarrhea as determined by microscopy. Genotyping and subgenotyping showed that Cryptosporidium hominis was the most commonly identified species (59/67 children), and subgenotypes Ie, Ia, Ib, and Id were common in all centers. A novel C. parvum subgenotype, IIn, was identified in Vellore. Meteorological analysis revealed a higher rate of cryptosporidial positivity during hotter and drier weather in Delhi.



Amitha Vikrama KS, Keshava SN, Surendrababu NR, Moses V, Joseph P, Vyas F, Sitaram V
Jejunal access loop cholangiogram and intervention using image guided access.

J Med Imaging Radiat Oncol. 2010 Feb;54(1):5-8.

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

Jejunal access loop is fashioned in patients who undergo Roux en Y hepaticojejunostomy and biliary intervention is anticipated on follow up. Post-operative study of the biliary tree through the access loop is usually done under fluoroscopic guidance. We present a series of 20 access loop cholangiograms performed in our institution between August 2004 and November 2008. We aimed to evaluate the safety and efficacy of the procedure and to highlight the role of CT guidance in procuring access. Access loop was accessed using CT (n = 13), ultrasound (n = 3) or fluoroscopic guidance (n = 4). Fluoroscopy was used for performing cholangiograms and interventions. Twelve studies had balloon plasty of the stricture at anastomotic site or high up in the hepatic ducts. Seven studies showed normal cholangiogram. Plasty was unsuccessful in one study. Technical success in accessing the jejunal access loop was 100%; in cannulation of anastomotic site and balloon plasty it was 95%. One case required two attempts. Procedure-related complications were not seen. All patients who underwent balloon plasty of the stricture were doing well for variable lengths of time. Access loop cholangiogram and interventions are safe and effective. CT guidance in locating/procuring the access loop is a good technique.



Abstracts Not Available

George R.

Life's lessons lost...and learned.

J Clin Oncol. 2010 Apr 1;28(10):1806-7. Epub 2010 Feb 1.

Palliative Care Unit, Christian Medical College, Ida Scudder Rd, Vellore 632004, India.



Kang G

HPV vaccines: separating real hope from drug company hype.

Indian J Med Ethics. 2010 Jan-Mar;7(1):56-7

Department of Gastrointestinal Sciences, Christian Medical College, Vellore, Tamil Nadu 632004, India.



Koshy AK, Simon EG, Keshava SN

Education and Imaging. Gastrointestinal: aortoenteric fistula.

J Gastroenterol Hepatol. 2010 May;25(5):1014.

Christian Medical College, Vellore, Tamil Nadu, India.



Krishnan V, Amritanand R, Sundararaj GD.

Methicillin-resistant Staphylococcus aureus as a cause of lumbar facet joint septic arthritis: a report of two cases.

J Bone Joint Surg Am. 2010 Feb;92(2):465-8.

Spinal Disorders Services, Department of Orthopaedics Unit 1, Christian Medical College, Vellore, Tamil Nadu-632004, India.



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Bronchiolitis obliterans organising pneumonia in systemic lupus erythematosus with anti-phospholipid antibody syndrome—an unusual presentation.

Clin Respir J. 2010 Apr;4(2):125-6.

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



Nambi GI, Beck B, Gupta AK.

An unusual cause of lagophthalmos.

Oman J Ophthalmol. 2010 Jan;3(1):32-3.

Department of Plastic and Reconstructive Surgery, Christian Medical College, Vellore, Tamilnadu, India.



Ninan S, Jeslin L, Saravanan P, Kumar K.

Succinylcholine relaxant: Anaesthesiologist not relaxed!

Indian J Anaesth. 2010 Jan;54(1):71-2.

Department of Anesthesia and Critical Care, Christian Medical College and Hospital, Vellore-632 004, India.



Padhan P, Danda D

Parkinsonism mimicking rheumatoid arthritis.

J Rheumatol. 2010 Jun;37(6):1266.

Department of Clinical Immunology and Rheumatology, Christian Medical College, Vellore, 632004 India.



Padhy D, Madhuri V, Pulimood SA, Danda S, Walter NM, Wang LL.

Metatarsal osteosarcoma in Rothmund-Thomson syndrome: a case report.

J Bone Joint Surg Am. 2010 Mar;92(3):726-30.

Department of Paediatric Orthopaedics, Christian Medical College, Vellore, India.



Peter D, Thomas M, Mathews M

Ulcer over chin in an immunocompromised individual.

Am J Trop Med Hyg. 2010 Jun;82(6):979.

Department of Dermatology, Christian Medical College, Vellore 632004, Tamil Nadu, India.



Prithishkumar IJ, Kanakasabapathy I.

Agenesis of the left lobe of liver - A rare anomaly with associated hepatic arterial variations.

Clin Anat. 2010 Jan 28. [Epub ahead of print]

Department of Anatomy, Christian Medical College, Vellore, Tamilnadu, India.



Raychaudhury T, George R.

Popping papules over the feet.

Indian J Dermatol Venereol Leprol. 2010 May-Jun;76(3):308.

Department of Dermatology, Venereology and Leprosy Unit I and Paediatric Dermatology, Christian Medical College and Hospital, Vellore, TamilNadu, India.



Simon E, Joseph AJ, Choudhrie L, Eapen A, Vyas F, Sitaram V, Ramakrishna BS, Chacko A.

Intraductal papillary mucinous neoplasm of the pancreas.

Indian J Gastroenterol. 2010 Jan;29(1):40.

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



Tharyan P.

Don't just do it, do it right: evidence for better health in low and middle income countries.

Ceylon Med J. 2010 Mar;55(1):1-4.

South Asian Cochrane Network and Centre, Christian Medical College, Vellore, Tamil Nadu, India.



Gopichandran V, Luke DM, Vinodhini R, Rau R, Savitha M.S, Mohan VR, Singh D, Kurian S, Jacob KS.

Psycho-socio-economic stress as a risk factor for preterm labour: A community-based, case-control Study From Rural South India

Nat Med J India. 2010 May - June; 23(3): 184-185

Department of Community Health, Christian Medical College, Vellore

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



George K, Kamath MS, Aleyamma TK.

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Fertil Steril. 2010 Aug;94(3):e50. Epub 2010 Jun 23.

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