



CHRISTIAN MEDICAL COLLEGE, VELLORE

CMC RESEARCH DIGEST

VOLUME 1, ISSUE 2 (APRIL-JUNE), 2007

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EDITORIAL

The second issue of *CMC Research Digest* carries more citations and abstracts (where available or provided) of peer reviewed publications be the faculty, staff and students of the institution.

In addition, in this issue, we introduce the '**Alumni Corner**' illustrating the work of CMC alumni. Prof. T Jacob John, Retired Professor of Microbiology and former Head of Virology at CMC, provides a fascinating account of a well conducted scientific investigation into a 'mystery disease' that claimed the lives of many young children in some districts of western Uttar Pradesh. Prof. John and colleagues investigated

this mystery outbreak using sound epidemiological techniques and described its pathology and causative associations. Three peer-reviewed publications were followed by media and other educational preventive campaigns that is likely to save lives from this preventable disease. Kudos to Prof. John and colleagues for advancing our scientific understanding and sharing their efforts with us.

We welcome other such descriptions of published work done by our alumni around the world, that would highlight the contributions of alumni and would disseminate

these results.

In this issue, we also describe one of the initiatives that the Office of Research is undertaking to improve the ethical conduct of research in CMC; providing training and certification to faculty on research ethics and Good Clinical Practice Guidelines.

Thank you to all who sent us feedback on the design and content of the last issue of the Digest; we remain open to suggestions and advice that will enable us to make this effort more relevant and useful to all alumni.

Prathap Tharyan

Additional Vice Principal
(Research).

Basic Sciences/ Diagnostics

Jacob M, Foster R, Sigthorsson G, Simpson R, Bjarnason I.

Role of bile in pathogenesis of indomethacin-induced enteropathy.

***Arch Toxicol.* 2007 Apr;81(4):291-8. Epub 2006 Dec 7.**

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

Ingestion of non-steroidal anti-inflammatory drugs (NSAIDs) causes an enteropathy. The pathogenesis involves biochemical initiation of intestinal mucosal damage due to NSAID-induced inhibition of cyclooxygenase and the topical effects of these drugs. These effects lead to increased intestinal permeability and inflammation. Luminal bile acids play a controversial role in the damage produced by these drugs. The aim of this study was to determine the role of bile in producing the enteropathy caused by indomethacin, an NSAID commonly used in toxicity studies. Sprague-Dawley rats were subjected to bile duct ligation. Twenty-four hours later, they were dosed with indomethacin. Intestinal Permeability ((⁵¹Cr)-EDTA) and inflammation (faecal calprotectin) were measured in the animals at various time periods after the dose. Intestinal permeability was significantly higher in rats 1-6 h after dosing with indomethacin, but not at 24-29 h or day 4, when compared with corresponding values for control animals. Excretion of faecal calprotectin was elevated in the indomethacin-treated rats. The drug-treated animals showed no evidence of ulceration when they were sacrificed 29 h or a week after the dose of indomethacin. Bile acids per se did not affect intestinal permeability or faecal excretion of calprotectin, when given along with indomethacin or its vehicle. We conclude that macroscopic small bowel damage does not occur with indomethacin if bile is excluded, despite the induction of permeability and inflammation. This study highlights the importance of luminal factors, such as bile, in producing indomethacin-induced ulceration in the rat small intestine.

Cross-sectional study

Kannangai R, Vivekanandan P, Martinez-Murillo F, Choti M, Torbenson M.

Fibrolamellar carcinomas show overexpression of genes in the RAS, MAPK, PIK3, and xenobiotic degradation pathways.

***Hum Pathol.* 2007 Apr;38(4):639-44.**

Department of Clinical Virology, Christian Medical College, Vellore.

Fibrolamellar carcinomas (FLC) are a rare type of primary hepatocellular carcinoma found in younger individuals. FLC are known to have relatively few consistent chromosomal alterations, although a gain of chromosome 1q has been reported. The gene expression of 4 FLC (2 primary FLC and 2 metastatic deposits) were studied using Affymetrix DNA microarray technology (Santa Clara, CA). Selected genes were confirmed by real-time polymerase chain reaction. Relatively few genes were significantly overexpressed-447 genes, case 1; 1298 genes, case

2-corresponding to approximately 0.8% and 2.3%, respectively, of the 56000 transcripts present in the arrays. Of these, 155 genes were overexpressed simultaneously by both tumors. The number of significantly overexpressed genes more than doubled in the 2 metastatic deposits (2777 and 2855 genes compared with 1298 in the primary tumor). Proteins involved in the RAS, MAPK, PIK3, and xenobiotic degradation pathways were commonly overexpressed. Because chromosome 1q is thought to contain an important oncogene, additional attention was focused on this region. Of 114 total genes found overexpressed in common among all primary and metastatic tumors, 11 of 114 genes were located on chromosome 1q: ARF1, CD46, CNIH4, ENSA, FH, NICE-3, PSMB4, RGS2, RGS5, TIMM17A, and UFC1. Primary FLC show overexpression of genes involved in the RAS, MAPK, PIK3, and xenobiotic degradation pathways. Eleven common genes were consistently over-expressed on chromosome 1q among all tumors and metastases and warrant further study as potential oncogenes.

Cross sectional study

Mammen J, Nair SC, Srivastava A.

External quality assessment scheme for hemostasis in India.

***Semin Thromb Hemost.* 2007 Apr;33(3):265-72.**

Department of Clinical Pathology and Blood Bank, Christian Medical College, Vellore, India.

Regular participation in an external quality assessment scheme (EQAS) is critical for ensuring acceptable laboratory performance. However, participation in such programs is uncommon for laboratories performing tests of hemostasis in developing countries. There are several reasons, including lack of awareness of its significance, absence of locally administered and easily accessible programs, and costs associated with some of the international schemes. To address this problem, we initiated an EQAS for hemostasis in India in the year 2000. This initially was limited to approximately 25 laboratories associated with the chapters of the Hemophilia Federation (India), with samples and analysis of results supported by United Kingdom National External Quality Assessment Scheme. This was converted to a national program in 2003, in association with the Indian Society of Haematology and Transfusion Medicine. Local manufacture of survey samples began in 2004, along with analysis of results. Currently, more than 100 laboratories are registered in the program. They receive samples three times a year for the following tests: prothrombin time, activated partial thromboplastin time, and factor assays. Some surveys also include samples for fibrinogen and von Willebrand factor assays. In recent surveys, 60 to 95% of laboratories had their clotting times and 57 to 77% of laboratories had their factor assays within consensus. The program has helped identify causes of unacceptable performance. The challenges ahead are to increase participation, improve reporting of results, and provide individualized support to laboratories to improve performance when necessary.

Report

Monica B, Ramani S, Banerjee I, Primrose B, Iturriza-Gomara M, Gallimore CI, Brown DW, M F, Moses PD, Gray JJ, Kang G.

Human caliciviruses in symptomatic and asymptomatic infections in children in Vellore, South India.

J Med Virol. 2007 May;79(5):544-51.

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

Pediatric gastroenteritis is a major cause of childhood morbidity and mortality worldwide, especially in developing countries. It has been increasingly recognised that human caliciviruses (HuCV), comprising noroviruses (NoV), and sapoviruses (SaV), are important in both outbreak and non-outbreak settings. This study aimed to characterise caliciviruses detected in the faeces of hospitalized children and children in the community in India. This study examined 350 faecal samples from children presenting to the hospital with acute gastroenteritis and 673 samples collected from children in the community, 500 from children with diarrhea, and 173 samples from children without diarrhea. Strain characterization was performed by reverse transcription-polymerase chain reaction (RT-PCR) and partial sequencing of the gene encoding the RNA-dependent RNA polymerase (RdRp) and/or a region spanning the open reading frames (ORFs) 1 and 2 (ORF1/ORF2) junction. A total of 68 of 350 specimens (19.4%) from hospitalized children were positive, and SaV and NoV accounted for 5.1 and 15.1% of the infections, respectively. Mixed infections of HuCVs with other enteric pathogens were seen in 9.4% of the total children tested. Sixty-eight out of 673 (10.1%) samples collected from children in the community were positive for caliciviruses, and SaV and NoV accounted for 3.4 and 6.6% of the infections. In the community cohort 55/500 (11%) and 13/173 (7.5%) were from symptomatic and asymptomatic children, respectively, and SaVs accounted for 17/500 (3.4%) and NoVs for 38/500 (7.6%) of the symptomatic infections. This is the first report of genotyping of circulating caliciviruses in both hospital and community in India and has increased the evidence for the role of these viruses in pediatric gastroenteritis in India.

Comparative Study

Prabhakaran V, Rajshekhar V, Murrell KD, Oommen A.

Conformation-sensitive immunoassays improve the serodiagnosis of solitary cysticercus granuloma in Indian patients.

Trans R Soc Trop Med Hyg. 2007 Jun;101(6):570-7. Epub 2006 Dec 13.

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

Neurocysticercosis (NCC), infection of the central nervous system with larva of *Taenia solium*, presents in over 60% of patients in India as a solitary cysticercus granuloma (SCG). The low cyst number in these patients frequently results in an insignificant humoral response.

Consequently, serological tests for patients with SCG must consider the detection of low antibody levels. Lentil lectin-specific *T. solium* glycoproteins of molecular weights 50, 38, 24, 18, 14 and 13 kDa are specific antigens for cysticercus antibodies in serological tests for NCC, however they do not detect antibodies in 40% of patients with SCG. To improve this rate of detection, the conformations of these protein antigens were altered to unmask additional epitopes available for antibody binding. Secondary structures of the proteins induced by reduction of disulfide bonds led to the loss of conformational epitopes necessary for cysticercus antibody recognition. Urea-induced tertiary conformations of the antigenic proteins led to the detection of antibodies in 46% of 60 patients with SCG who were serologically negative on immunoblots when the antigens were used in quaternary conformation. Conformation-sensitive immunoassays show potential for serodiagnosis of patients with SCG.

Review

Santhanam S, Venkatraman A, Ramakrishna BS.

Impairment of mitochondrial acetoacetyl CoA thiolase activity in the colonic mucosa of patients with ulcerative colitis.

Gut. 2007 May 4; [Epub ahead of print]

Christian Medical College, Vellore, Tamil Nadu, India

Background & AIMS: Butyrate oxidation by colonocytes is impaired in ulcerative colitis (UC). This study examined the activity of enzymes involved in butyrate oxidation in UC.

METHODS: Activities of mitochondrial acetoacetyl CoA thiolase, crotonase and beta-hydroxy butyryl CoA dehydrogenase were estimated spectrophotometrically in rectosigmoid mucosal biopsies from patients with UC, Crohn's colitis, and control subjects undergoing colonoscopy for colon cancer or rectal bleeding.

RESULTS: Activity of mitochondrial acetoacetyl CoA thiolase was decreased by 80% in UC (3.4 +/- 0.58 micromol/min/g wet wt, n=30) compared to control (16.9 +/- 3.5, n=18) and to Crohn's colitis (17.6 +/- 3.1, n=12) (P<0.0001). The activity of two other mitochondrial butyrate oxidation enzymes - crotonase and beta-hydroxy butyryl CoA-dehydrogenase - as well as of cytoplasmic thiolase was normal in UC. Mitochondrial thiolase activity in UC did not correlate with clinical, endoscopic or histological indices of disease severity. Mitochondrial thiolase activity was reduced in the normal right colon mucosa of patients with left-sided ulcerative colitis. Enzyme kinetic studies revealed lowered Vmax, suggesting inhibition at a site distinct from the catalytic site. Reduced thiolase activity in UC was returned to normal by exposure to 0.3mM beta-mercaptoethanol, a reductant. Using normal colon mucosal biopsies redox modulation of thiolase activity by hydrogen peroxide, a mitochondrial oxidant, could be shown. A significant increase in hydrogen peroxide formation was observed in UC biopsies.

CONCLUSION: A defect of mitochondrial acetoacetyl CoA thiolase occurs in UC. Increased reactive oxygen species generation in mitochondria of epithelial cells in UC may underlie this defect.

Comparative Study

Ramakrishna BS.

The normal bacterial flora of the human intestine and its regulation.

J Clin Gastroenterol. 2007 May-Jun;41 Suppl 1:S2-6.

Christian Medical College, Vellore, Tamil Nadu, India.

The gastrointestinal tract, and the colon in particular, is host to a number of bacteria that reside within its lumen. In health, greater than 90% of this flora is composed of anaerobes, whereas facultative anaerobes and aerobes are present in smaller numbers. The recent development of molecular methods to quantify these bacteria provides powerful tools to study the influence of these organisms on bowel function. These studies indicate that about 75% of fecal bacteria can be characterized, and belong to the 3 dominant groups-the Clostridium coccoides-Eubacterium rectale group, Clostridium leptum group, and Bacteroides-Prevotella group. The development and maturation of the enteric flora, and also the diversity of the flora, is reviewed. Multiple factors regulate the population number of these bacteria, including gastric acidity, intestinal transit, dietary factors, antibiotic use, and bacterial interactions with other bacteria and with the epithelium. Anaerobic bacteria in the intestine change the redox status of the colon; they also produce molecules such as short chain fatty acids, which influence colonic epithelial and mucosal physiology in many ways. New knowledge suggests that these bacteria exert effects on host immunity, which extend well beyond the intestine.

Review

Articles with no abstracts

Abraham P

GB virus C / hepatitis G virus - its role in human disease

Indian J Med Res. 2007 Jun;125(6):717-9

Department of Virology, Christian Medical College, Vellore

Bhaskar A, Tharion E, Devasahayam SR.

Computer-based inexpensive surface electromyography recording for a student laboratory.

Adv Physiol Educ. 2007 Jun;31(2):242-3.

Department of Physiology, Christian Medical College, Vellore, Tamil Nadu, India

Peedicayil J, Subbanna PK.

Revisiting the methylation hypothesis for the psychoses.

Med Hypotheses. 2007;68(3):721. Epub 2006 Oct 2.

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

Subbanna PK, Prasanna CG, Gunale BK.

Investigation on pharmacokinetics of mycophenolic acid in Chinese adult renal transplant patients.

Br J Clin Pharmacol. 2007 Aug;64(2):245. Epub 2007 Apr 10.

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

Subbanna PK.

Mesenchymal stem cells for treating GVHD: in-vivo fate and optimal dose.

Med Hypotheses. 2007;69(2):469-70. Epub 2007 Feb 26.

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

Epidemiology /Public health

Bose A, Dubey AP, Gandhi D, Pandit A, Raghu MB, Raghupathy P, Rao MI, Verghese VP, Datta SK, Bock HL.

Safety and Reactogenicity of a low dose Diphtheria Tetanus Acellular Pertussis Vaccine (Boostrix™) in Pre-school Indian Children.

Indian Pediatr. 2007 Jun 7;44(6):421-424.

Department of Community Health, Christian Medical College, Vellore; Maulana Azad Medical College and Associated Lok Nayak Hospital, New Delhi; Department of Pediatrics, Medical College and Sir Sayaji Rao General (SSG) Hospital, Baroda, Gujarat;

Department of Pediatrics, KEM Hospital Research Center, Sardar Moodliar Road, Rasta Peth, Pune; Department of Pediatrics, Sri Ramchandra Medical College and Research Institute, Porur, Chennai; Department of Child Health and Christian Medical College Vellore; Department of Pediatrics, Institute of Child Health, Niloufer Hospital Hyderabad and; GlaxoSmithKline Biologicals, Rixensart, Belgium. Correspondence to: Sanjoy K. Datta, Director Clinical R and D and Medical Affairs Biologicals South Asia, GlaxoSmithKline Biologicals, Rue de l'Institut 89, 1330 Rixensart, Belgium.

OBJECTIVE: To evaluate the safety and reactogenicity of a reduced-antigen-content combined Diphtheria Tetanus Acellular Pertussis (dTpa) vaccine in Indian preschool children.

METHODS: GlaxoSmithKline Biologicals combination dTpa vaccine was administered as a single booster dose to 347 children aged 46 years in seven centers across India. All children were subsequently followed up for two weeks for safety and reactogenicity assessment.

RESULTS: A total of 345 subjects completed the study and two subjects were lost to follow-up. One serious adverse event (head injury) unrelated to vaccination was reported. Otherwise, all subjects were in good health throughout the study period. Three subjects (0.9%) reported transient general symptoms (such as irritability and drowsiness), which prevented normal activity. Pain at injection site, swelling and redness was reported in 31.1%, 18.2% and 8.9% subjects respectively. Five subjects (1.4%) reported severe pain preventing normal movement. This resolved within 48 hours in all cases. There were no other severe local reactions including large injection site reactions.

CONCLUSION: The reduced antigen content combined dTpa vaccine is safe and well tolerated in Indian pre-school children.

Cohort study

Ramani S, Kang G.

Burden of disease & molecular epidemiology of group A rotavirus infections in India.

Indian J Med Res. 2007 May; 125(5):619-32.

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

Rotavirus is the major cause of severe dehydrating diarrhoea in young children worldwide. Considerable research has been carried out on rotavirus disease in India. This review collated data from 46 epidemiological studies to determine rotavirus positivity rates and genotypes of infecting rotavirus strains from various settings in India. Studies on diarrhoea presenting to hospitals, neonatal rotavirus infections, symptomatic and asymptomatic infections in the community and nosocomial enteric infections were included. Rotavirus positivity rates varied greatly between different settings - diarrhoea hospitalizations (20%), neonatal infections (35%), symptomatic and asymptomatic infections in the community (15.1% and 6.3% respectively) and nosocomial enteric infections (22.5%). Among diarrhea hospitalizations, the commonest G types were G1 and G2 while commonest P types were P[8], P[6] and P[4].

Region specific neonatal infections by bovine human reassortants have been reported, in addition to several recently described unusual strains, which may be evidence of zoonotic infection and/or reassortment. The emergence of several new strains highlights the need for intensive strain surveillance before and after the introduction of a new vaccine.

Review

Articles with no abstracts

George K.

Investigating outbreaks of uncertain aetiologies.

Indian J Med Res. 2007 Apr;125(4):505-7.

Community Health Department Christian Medical College Vellore 632002, India

Gladstone BP, Iturriza-Gomara M, Ramani S, Monica B, Banerjee I, Brown DW, Gray JJ, Muliyl J, Kang G.

Polymerase chain reaction in the detection of an 'outbreak' of asymptomatic viral infections in a community birth cohort in south India.

Epidemiol Infect. 2007 May 24;:1-7. [Epub ahead of print]

Clinical: Observational Studies

Bahuleyan B, Rao A, Chacko AG, Daniel RT.

Supracerebellar arachnoid cyst - A rare cause of acquired Chiari I malformation.

J Clin Neurosci. 2007 Sep;14(9):895-8. Epub 2007 Jun 27.

Christian Medical College, Department of Neurological Sciences, Ida Scudder Road, Vellore, Tamil Nadu 632004, India.

Chiari I malformation (CM) associated with a cervico-thoracic syrinx due to supracerebellar arachnoid cyst has not been reported in the literature. We report such a case, managed by fenestration of the arachnoid cyst and foramen magnum decompression (FMD), aiming to reduce the inferiorly directed pressure on the cerebellum and eliminate the craniospinal pressure dissociation respectively. Imaging done post-operatively showed upward displacement of the cerebellar tonsils with a decompressed craniovertebral junction and disappearance of the syrinx.

Case Report

Basker M, Agarwal I, Bendon KS

Congenital nephrotic syndrome-a treatable cause.

Ann Trop Paediatr. 2007 Mar;27(1):87-90.

Department of Child Health Unit II, Christian Medical College and Hospital, Vellore, India.

A 27-day-old infant from a tribal area presented with congenital nephrotic syndrome (CNS). The presence of clinical features of syphilis, proven syphilis in the mother and complete recovery following penicillin therapy confirmed a diagnosis of congenital syphilis. In developing countries, treatable causes of CNS such as syphilis need to be considered in infants presenting with nephrotic syndrome.

Case report

Chacko B, George JT, Neelakantan N, Korula A, Chakko JK.

Outcomes of renal transplantation in patients with immunoglobulin A nephropathy in India.

J Postgrad Med. 2007 Apr-Jun;53(2):92-5.

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

BACKGROUND: There is a paucity of data on the course of renal transplant in patients with immunoglobulin A (IgA) nephropathy (IgAN) from India. While the natural history of IgAN in the Indian context is rapidly progressive, the post-transplant course remains speculative. **AIM:** To study the graft survival in renal transplant recipients whose native kidney disease was IgAN and the incidence and correlates of recurrent disease.

SETTINGS AND DESIGNS: Retrospective case control study from a Nephrology unit of a large tertiary care center.

MATERIALS AND METHODS: The outcomes of 56 transplant patients (58 grafts) with biopsy-proven IgAN and of 116 patients without IgAN or diabetic nephropathy, transplanted during the same period were analyzed. Correlates of biopsy-confirmed recurrent disease were determined.

STATISTICAL ANALYSIS: Means were analyzed by Student's t test and Mann-Whitney test; proportions were determined by Chi-square analysis and graft survival curves were generated using the Kaplan-Meier.

RESULTS: Five-year graft survival for IgA patients was not significantly different from that in the reference group (90% and 79%, $P = 0.6$). During a mean follow-up of 42 months (range, 1-144), 28 event graft biopsies were required in 20 grafts of IgAN. Histological recurrence was diagnosed in five of the 20 available biopsies (25%) after a mean duration of 28 months. Recurrence did not correlate with donor status, HLA B35 and A2, recipient age, gender or immuno

suppression.

CONCLUSIONS: Renal transplantation is an appropriate treatment modality for IgA nephropathy patients with end-stage renal disease in India, despite the potential for recurrent disease. The posttransplant course is an indolent one when compared to the malignant pre transplant phase.

Case Control Study

Chacko G, Chacko AG, Dunham CP, Judkins AR, Biegel JA, Perry A.

Atypical teratoid/rhabdoid tumor arising in the setting of a pleomorphic xanthoastrocytoma

J Neurooncol. 2007 Sep;84(2):217-22. Epub 2007 Apr 13.

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

We present a case of a 23-year-old man with a tumor containing glial and rhabdoid elements where the former had features of a pleomorphic xanthoastrocytoma (PXA) and the latter had the immunophenotype and genetic profile of an atypical rhabdoid/teratoid tumor. The patient presented with a short history of raised intracranial pressure with rapid deterioration in sensorium. He had a poor outcome despite surgery and radiotherapy. We report this case because of its unusual presentation in adulthood and its occurrence in association with a PXA. We speculate that the PXA was a quiescent tumor and that the secondary genetic alterations, including inactivation of the INI1 gene led to clinical progression.

Case Report

David D, George IA, Peter JV.

Toxicology of the newer neonicotinoid insecticides: imidacloprid poisoning in a Human.

Clin Toxicol (Phila). 2007 Jun-Aug;45(5):485-6.

Division of Medicine, Christian Medical College & Hospital, Tamil Nadu, India.

Imidacloprid, a potent neonicotinoid insecticide, is currently one of the best selling insecticides. We report a patient with clinical toxicity due to the ingestion of imidacloprid in a deliberate suicide attempt. The structure and mode of action of imidacloprid are discussed.

Case Report

George B, Mathews V, Viswabandya A, Kavitha ML, Srivastava A, Chandy M.

Fludarabine and cyclophosphamide based reduced intensity conditioning (RIC) regimens

regimens reduce rejection and improve outcome in Indian patients undergoing allogeneic stem cell transplantation for severe aplastic anemia.

Bone Marrow Transplant. 2007 Jul;40(1):13-8. Epub 2007 Apr 23.

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

Thirty-five patients (25 men and 10 women) with a median age of 20 years with severe aplastic anaemia (SAA) underwent HLA identical stem cell transplantation (HSCT) using a combination of fludarabine and cyclophosphamide +/- anti-thymocyte globulin between 2004 and 2006. Cyclosporine and mini methotrexate were used as GVHD prophylaxis. Graft source included peripheral blood stem cells (28) or G-CSF stimulated bone marrow (7). Two patients expired < 7 days post-HSCT while 32 (91.5%) patients engrafted with a median neutrophil and platelet engraftment time of 12 days each. Three patients (8.5%) developed veno-occlusive disease while acute GVHD occurred in 29% of evaluable patients, with chronic GVHD in 32%. At a mean follow-up of 22 months, 29 (82.8%) are alive and well. When compared with 26 patients previously transplanted using Cy200/antilymphocyte globulin, there was faster neutrophil engraftment (12 vs 16 days; $P = 0.002$) with significantly lower rejection rates (2.9 vs 30.7%; $P = 0.003$) and a superior event-free (82.8 vs 38.4%; $P = 0.001$) and overall survival (82.8 vs 46.1%; $P = 0.005$). A combination of fludarabine with cyclophosphamide +/- anti-thymocyte globulin reduces rejection and improves overall and event-free survival in Indian patients undergoing HSCT for severe aplastic anaemia.

Case Series

Jacob JJ, Jose J, John B.

Intracardiac blood-filled cysts of the heart: a rare cause of embolic stroke.

Singapore Med J. 2007 May;48(5):e125-6.

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

Intracardiac blood cysts are thin-walled congenital cysts located in the endocardium and are seen predominantly in infants. They are rare in adults and are typically asymptomatic. However, complications such as valve dysfunction and left ventricular outflow tract obstruction have been reported in adults. We report a 42-year-old woman who developed an embolic stroke in association with intracardiac blood cysts. To the best of our knowledge, this is the first case report of intracardiac blood cysts manifesting as an embolic stroke.

Case Report

Jacob KS, Kumar PS, Gayathri K, Abraham S, Prince MJ.

The diagnosis of dementia in the community.

Int Psychogeriatr. 2007 Aug;19(4):669-78. Epub 2007 Apr 16.

Departments of Psychiatry and Community Health, Christian Medical College, Vellore, India; Institute of Psychiatry, London, UK.

BACKGROUND: Different interview schedules and diagnostic criteria for dementia have contributed to differing incidence and prevalence rates.

AIM: This study aimed to examine the effect of different diagnostic criteria on the prevalence of dementia in the community. **Methods:** Some 1000 subjects (> 65 years) were recruited in Kaniyambadi Block, Vellore, India, using a one-stage assessment procedure.

RESULT: The prevalence of dementia by Diagnostic and Statistical Manual IV standard, the Community Screening instrument for Dementia DF Score, the education adjusted 10/66 Dementia Research Group criteria, and the Geriatric Mental State was 0.8%, 6.2%, 10.6%, 63.2% respectively.

CONCLUSION: Differences in information, interview schedules, diagnostic criteria and settings contribute to variation in identification of people with dementia. Minor variations in criteria have a significant impact on diagnosis. The assessment of the clinical state is influenced by education, level of baseline function, impairment in current functioning, life style and demands on the person, tolerance of impairment and expectation by relatives and by differences between patients attending hospitals and those living in the community. The variation in rates demands a debate on the criteria for dementia in the community in general and for less literate populations in particular.

Cross sectional study

Jacob JJ, John M, Thomas M, Thomas N, Nair

Plasmacytoma mimicking mediastinal parathyroid tumour in a patient with primary hyperparathyroidism.

Asian J Surg. 2007 Apr;30(2):147-50.

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

The association of monoclonal gammopathies with primary hyperparathyroidism is well documented. Many case reports have documented the coexistence of primary hyperparathyroidism and multiple myeloma. The cause of this relationship is not known. We report the case of a 49-year-old gentleman who was treated for primary hyperparathyroidism. His initial preoperative nuclear scan had shown persistent activity and retention of tracer in the retrosternal region in addition to the discrete hot spot in the region of the lower pole of the left lobe of the thyroid. During surgery, the enlarged left inferior parathyroid gland was removed. In addition, the retrosternal area was also explored and found to be normal. Ten months later, he developed a mass in the region of the manubrium sternii which was proven to be a plasmacytoma. We review the literature for similar cases and suggest hypotheses for a possible association. In conclusion, coexisting plasma cell dyscrasias including plasmacytoma should be considered in patients with primary hyperparathyroidism.

Case report

Joseph R, Chacko B, Manipadam MT, Sureka J, Cherian VK, John GT.

Pulmonary lymphomatoid granulomatosis in a renal allograft recipient.

***Transpl Infect Dis.* 2007 May 19; [Epub ahead of print]**

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

Lymphomatoid granulomatosis (LYG) is a rare multisystemic angiocentric lympho - proliferative disease, which can masquerade as necrotic tissue. There is a paucity of reports of LYG in renal transplant recipients. Herein, we describe LYG in a 56-year-old renal allograft recipient 11 years after transplantation, on azathioprine and prednisolone maintenance immunosuppression, presenting to us with fever, weight loss, and nodular and patchy opacities in both lung fields. Initial percutaneous samples showed necrotic tissue while open biopsy revealed characteristic histopathology with evidence of Epstein-Barr virus. We have reviewed the radiological and pathological findings, and discussed clinical features, differential diagnosis, and treatment of LYG.

Case Report

Kurien M, Thomas K, Ahuja RC, Patel A, Shyla PR, Wig N, Mangalani M, Sathyanathan, Kasthuri A, Vyas B, Brojen A, Sudarsanam TD, Chaturvedi A, Abraham OC, Tharyan P, Selvaraj KG, Mathew J; IndiaCLEN HIV Screening Study Group. Screening for HIV infection by health professionals in India. *Natl Med J India.* 2007 Mar-Apr;20(2):59-66.

Coordinating Centre, Christian Medical College, Vellore 632004, Tamil Nadu, India.

BACKGROUND: Stigma and discrimination, particularly in access to healthcare, remains a major problem for people Infected with HIV in most parts of India.

METHODS: We did a multicentre study (n = 10) with a cross-sectional survey design using a standardized, interviewer-administered questionnaire. **RESULTS:** A total of 2200 healthcare providers participated. The knowledge, attitude and practice (KAP) related to HIV service delivery were very poor with a mean overall KAP score of only 49.7% (CI: 49.1-50.3). Only 5%, 5% and 1% of the participants scored more than 75% separately for the dimensions of knowledge, attitude and practice, respectively. Only 24.4% and 36.7% of responders knew that HIV screening was not recommended prior to surgery and pre-employment check-up. Many doctors (19.4%) had refused treatment to people living with HIV/AIDS (PLHA) at least some of the time and nearly half (47.2%) identified and labelled them; 23.9% isolated them in separate care areas and 13.3% postponed or changed treatment based on the patient's HIV status. Screening for HIV prior to elective surgery was done by 67% of providers. While 64.7% of responders were aware of the existence of national guidelines on and recommendations for HIV testing, only 38.4% had read the policy document.

CONCLUSION: There is a growing need to provide care, support and treatment to a large number of PLHA. The capacity of healthcare providers must be urgently built up so as to improve their knowledge of and attitude to HIV to enable them to deliver evidence-based and compassionate care to PLHA in various healthcare settings.

Mammen P, Russell S, Russell PS.

Prevalence of eating disorders and psychiatric co morbidity among children and adolescents.

Indian Pediatr. 2007 May;44(5):357-9.

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

There are no prevalence or co-morbidity studies on eating disorders in India. This retrospective chart review studied the prevalence and psychiatric co-morbidity among juveniles with eating disorders. Forty-one cases with ICD 10 diagnosis of eating disorders were identified and analyzed. The prevalence of eating disorders was 1.25% Psychogenic vomiting was the commonest eating disorders and anorexia nervosa the emerging eating disorder. The most common co-morbidities were depression, intellectual disability, and dissociative disorder.

Retrospective study

Mathews V, George B, Deotare U, Lakshmi KM, Viswabandya A, Daniel D, Chandy M, Srivastava A.

A New Stratification Strategy That Identifies a Subset of Class III Patients with an Adverse Prognosis among Children with beta Thalassemia Major Undergoing a Matched Related Allogeneic Stem Cell Transplantation.

Biol Blood Marrow Transplant. 2007 Aug;13(8):889-94. Epub 2007 Jun 22.

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

One hundred ninety patients underwent 197 HLA-matched related allogeneic stem cell transplantation for a diagnosis of beta thalassemia major at our center. The median age (+/-SD) was 7 +/- 4.1 years, and there were 129 (68%) males. Age and liver size as continuous variables were significantly associated with an adverse outcome. Using a receiver operator characteristics curve plot analysis, cutoff values of 7 years and 5 cm for age and liver size, respectively, were associated with the highest likelihood ratio of an adverse impact. On a multivariate analysis age ≥ 7 years and liver size ≥ 5 cm had a significant impact on event free survival (EFS) (relative risk 2.2 and 2.7, P values .014 and .000, respectively). Using these 2 variables, patients were categorized as high risk if they were ≥ 7 years and had a liver size ≥ 5 cm (n = 41; all belonged to Class III). The 5-year EFS and overall survival (OS) in this high-risk group was 23.93 +/- 6.88 and 39.01 +/- 7.96, whereas in the remaining Class III patients (n = 64) it was 70.3 +/- 6.06 and 78.3 +/- 5.5, respectively. This risk stratification identifies a sig-

ing Class III patients (n = 64) it was 70.3 +/- 6.06 and 78.3 +/- 5.5, respectively. This risk stratification identifies a significant subset (39%) of patients among those in Class III who have a poor outcome with a conventional myeloablative allogeneic stem cell transplantation. Patients in this high-risk group would probably benefit from novel therapeutic approaches.

Retrospective study

Mukhopadhy A, Balaji V, Jesudason MV, Amte A, Jeyamani R, Kurian G.

Isolated liver abscesses in melioidosis.

***Indian J Med Microbiol.* 2007 Apr;25(2):150-1.**

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

Melioidosis is a suppurative chronic infection caused by a gram negative bacterium, *Burkholderia pseudomallei*. We report two patients who presented with isolated liver abscesses caused by this pathogen. Both patients presented with high-grade fever and abdominal pain. On examination they were toxic and had tender hepatomegaly. Investigations showed leucocytosis and a shift to the left. Early diagnosis of melioidosis was made by culture and growth of *Burkholderia pseudomallei* from aspirated pus from the abscesses and the patients were treated with ceftazidime and co-trimoxazole. Despite institution of antibiotics both the patients succumbed to their illness. Melioidosis is an emerging infection in the Indian subcontinent and can cause isolated liver abscesses.

Case Reports

Prince M, Ferri CP, Acosta D, Albanese E, Arizaga R, Dewey M, Gavrilova SI, Guerra M, Huang Y, Jacob KS, Krishnamoorthy ES, McKeigue P, Rodrigues JL, Salas A, Sosa AL, Sousa R, Stewart R, Uwakwe R

The protocols for the 10/66 Dementia Research Group population-based research programme..

***BMC Public Health.* 2007;7(1):165 [Epub ahead of print]**

BACKGROUND: Latin America, China and India are experiencing unprecedentedly rapid demographic ageing with an increasing number of people with dementia. The 10/66 Dementia Research Group's title refers to the 66% of people with dementia that live in developing countries and the less than one tenth of population-based research carried out in those settings. This paper describes the protocols for the 10/66 population-based and intervention studies that aim to redress this imbalance.

METHODS/ DESIGN : Cross-sectional comprehensive one phase surveys have been conducted of all residents aged 65 and over of geographically defined catchment areas in ten low and middle income countries (India, China, Nigeria, Cuba, Dominican Republic, Brazil, Venezuela, Mexico, Peru and Argentina), with a sample size of between 1000 and 3000 (generally 2000). Each

of the studies uses the same core minimum data set with cross-culturally validated assessments (dementia diagnosis and subtypes, mental disorders, physical health, anthropometry, demographics, extensive non communicable disease risk factor questionnaires, disability/ functioning, health service utilisation, care arrangements, caregiver strain). Nested within the population based studies is a randomised controlled trial of a caregiver intervention for people with dementia and their families

A follow up of 2.5 to 3.5 years will be conducted in 7 countries (China, Cuba, Dominican Republic, Venezuela, Mexico, Peru and Argentina) to assess risk factors for incident dementia, stroke and all cause and cause-specific mortality; verbal autopsy will be used to identify causes of death.

DISCUSSION: The 10/66 DRG baseline population-based studies are nearly complete. The incidence phase will be completed in 2009. All investigators are committed to establish an anonymised file sharing archive with monitored public access. Our aim is to create an evidence base to empower

Protocol report

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

Belief models in first episode schizophrenia in South India.

***Soc Psychiatry Psychiatr Epidemiol.* 2007 Jul;42(6):446-51. Epub 2007 May 14.**

Institute of Psychiatry, London & Christian Medical College, Vellore, Tamil Nadu, India

BACKGROUND: Existing evidence indicates that dissonance between patients' and professionals' explanatory models affects engagement of patients with psychiatric services in Western and non-Western countries.

AIMS: To assess qualitatively the explanatory models (EMs) of psychosis and their association with clinical variables in a representative sample of first episode patients with schizophrenia in South India.

METHOD: One hundred and thirty one patients with schizophrenia presenting consecutively were assessed. Measures included the patient's explanatory models, and clinician ratings of insight, symptoms of psychosis, and functioning on standard scales.

RESULTS: The majority of patients (70%) considered spiritual and mystical factors as the cause of their predicament; 22% held multiple models of illness. Patients who held a biomedical concept of disease had significantly higher scores on the insight scale compared to those who held non-medical beliefs. Multivariate analyses identified three factors associated with holding of spiritual/mystical models (female sex, low education and visits to traditional healers); and a single factor (high level of insight) for the endorsement of biological model.

CONCLUSIONS: Patients with schizophrenia in this region of India hold a variety of non-medical belief models, which influence patterns of health seeking. Those holding non-medical explanatory models are likely to be rated as having less insight.

Cross sectional study

Selvan CK, Nair A, Paul MJ, Abraham DT, Thomas N, Seshadri MS.

Es13 pheochromocytoma - an analysis of 123 patients.

***ANZ J Surg.* 2007 May;77 Suppl 1:A24.**

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

BACKGROUND: Pheochromocytomas are diagnosed in <1% of patient evaluated for hypertension.

METHODOLOGY: A retrospective analysis of case records of those patients with histopathologically confirmed pheochromocytoma in our hospital from 1976-2006 [30 YEARS] was conducted

RESULT: A total of 123 patients were diagnosed during this period. The median age at presentation was 31 years (range 9-71) with a male to female sex distribution of 75% and 36%. 80% were hypertensive at the time of diagnosis. Headache(84%), palpitations(64%) and sweating(60%) are the most common presenting complaints. Tachycardia [>100 per minute] were seen in 31%. Hypertensive changes in eyes were seen in 87%. In ECG, QTc prolongation in 26%, left ventricular hypertrophy in 30%. Diabetes mellitus/IGT was seen in 35%. Elevated urinary VMA (24 hrs) was seen in 93% when done on 3 consecutive days. MIBG was positive in 85%. Malignant pheochromocytoma was diagnosed by tumour invasion/metastasis seen 10.44%. Extra adrenal pheochromocytoma 18%, followed by bilateral pheochromocytoma in 11%. Hereditary pheochromocytoma in 13% which include 5 with Von Hippel Lindau and 6 with MEN. A median follow-up was 12 months (range 1-204) in which persistent hypertension was seen in 16%. Cholelithiasis in 7%.

CONCLUSION: In our case series the mean age (31 yrs) of presentation seems to be younger compared to other case series. 16% of our patients were asymptomatic at the time of presentation. Urinary VMA was elevated in 93% of patients when done in 3 consecutive samples. Extra adrenal pheo was common in our patients (18%). MIBG was false negative in 15% of those patients with pheochromocytoma.

Case Series

Thomas SG, David JA, Bhattacharji S, Daniel RT

Quantitative gait analysis following hemispherotomy for Rasmussen's Encephalitis

***Journal of Pediatric Neurosciences* 2007 Jan-Jun;Vol 2; 7-9**

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

Peri-insular hemispherotomy is a form of disconnective hemispherectomy involving complete disconnection of all ascending / descending and commissural connections of one hemisphere. We report the case of a seven and a half year old child with intractable epilepsy due to Rasmussen's encephalitis who underwent peri-insular hemispherotomy and achieved complete freedom from seizures. Quantitative gait analysis was used to describe the kinematic and kinetic parameters of gait with surface electromyographs 18 months after surgery. The focus of this paper is highlight the utility of gait analysis following hemiospherotomy with a view to directing

postsurgical motor training and rehabilitation.

Case report

Viswaroop BS, Balaji V, Mathai E, Kekre NS.

Melioidosis presenting as genitourinary infection in two men with diabetes.

***J Postgrad Med.* 2007 Apr-Jun;53(2):108-10.**

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

Melioidosis is an infectious disease caused by *Burkholderia pseudomallei*. It occurs predominantly in tropical regions. The manifestations are protean which include pneumonia, visceral abscesses, septic arthritis, osteomyelitis, acute suppurative and chronic granulomatous lesions with involvement of almost all organ systems. Fulminant sepsis is much more common and is associated with high mortality. Hence prompt recognition and early treatment is warranted. We report unusual presentations of urinary tract melioidosis in two diabetic men.

Case reports

Articles with no abstracts

Jacob JJ, Paul TV.

A man with painless haematuria and hypertension.

***Hong Kong Med J.* 2007 Apr;13(2):162-3.**

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

Peedicayil J.

Epigenetic mechanisms may underlie the increased risk for psychosis among immigrants.

***Med Hypotheses.* 2007 May 16; [Epub ahead of print]**

Department of Pharmacology, Christian Medical College, Vellore 632 002, India.

Shyam Kumar NK, Surendrababu NR, Rajshekhar V.

Co-occurrence of agenesis of internal carotid artery with contralateral arterio venous malformation.

***Neurol India.* 2007 Jan-Mar;55(1):85-6.**

Department of Neurosciences, Christian Medical College, Vellore 632002, Tamil Nadu,

India.

Subbanna Prasanna Kumar T, Chandy Sujith J, Danda Debashish, Mathew Binu S

Correlation between serum methotrexate concentrations and disease remission status in rheumatoid arthritis patients on triple disease-modifying antirheumatic drug therapy.

Indian Journal of Pharmacology. 2007; 39(2): 117-118

Department of Pharmacology and Clinical Pharmacology, Christian Medical College, Vellore - 632 002, India

Department of Rheumatology, Christian Medical College, Vellore - 632 002, India

Thomas AJ, Kekre NS, Alan M. Nieder, Mark S. Solo way and Harry W. Herr.

Should We Abandon the FISH Test?

Eur Urol 2007; 51:1469-71.

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

Clinical: Interventional studies

Bhagat SK, Chacko NK, Kekre NS, Gopalakrishnan G, Antonisamy B, Devasia A.

Is there a role for tamsulosin in shock wave lithotripsy for renal and ureteral calculi?

J Urol. 2007 Jun;177(6):2185-8

Departments of Urology and Biostatistics, Christian Medical College, Ida Scudder Road, Vellore, Tamil Nadu 632004, India

PURPOSE: We evaluated the effect of the alpha-blocker tamsulosin on stone clearance, analgesic requirements and steinstrasse in shock wave lithotripsy for solitary renal and ureteral calculus.

MATERIALS AND METHODS: A prospective, double-blind, randomized placebo controlled study was performed during 1 year involving 60 patients with a solitary renal or ureteral calculus undergoing shock wave lithotripsy. The control group (30) received 0.4 mg tamsulosin and the study group (30) received placebo daily until stone clearance or for a maximum of 30 days. An oral preparation of dextropropoxyphene hydrochloride and acetaminophen was the analgesic used on an on-demand basis. The parameters assessed were stone size, position, clearance time, effect on steinstrasse and analgesic requirement.

RESULTS: The overall clearance rate was 96.6% (28 of 29) in the study group and 79.3% (23 of 29) in the control group ($p = 0.04$). With larger stones 11 to 24 mm the difference in the

clearance rate was significant ($p = 0.03$) but not so with the smaller stones 6 to 10 mm ($p = 0.35$). The average dose of analgesic used was lower with tamsulosin than with controls, without statistical significance. Steinstrasse resolved spontaneously in the tamsulosin group whereas 25% (2 of 8) required intervention in the placebo group. There was no difference between the 2 groups with regard to age, stone size or location.

CONCLUSIONS: The alpha-blocker tamsulosin seemed to facilitate stone clearance, particularly with larger stones during shock wave lithotripsy for renal and ureteral calculus. It also appeared to improve the outcome of steinstrasse. Tamsulosin may have a potential role in routine shock wave lithotripsy.

Randomized Controlled Trial

Bose A, Dubey AP, Gandhi D, Pandit A, Raghu MB, Raghupathy P, Rao MI, Verghese VP, Datta SK, Bock HL

Safety and reactogenicity of a low dose diphtheria tetanus acellular pertussis vaccine (Boostrix) in pre-school Indian children.

Indian Pediatr. 2007 Jun;44(6):421-4.

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

OBJECTIVE: To evaluate the safety and reactogenicity of a reduced-antigen-content combined Diphtheria Tetanus Acellular Pertussis (dTpa) vaccine in Indian preschool children

METHODS: GlaxoSmithKline Biologicals combination dTpa vaccine was administered as a single booster dose to 347 children aged 46 years in seven centers across India. All children were subsequently followed up for two weeks for safety and reactogenicity assessment.

RESULTS: A total of 345 subjects completed the study and two subjects were lost to follow-up. One serious adverse event (head injury) unrelated to vaccination was reported. Otherwise, all subjects were in good health throughout the study period. Three subjects (0.9%) reported transient general symptoms (such as irritability and drowsiness), which prevented normal activity. Pain at injection site, swelling and redness was reported in 31.1%, 18.2% and 8.9% subjects respectively. Five subjects (1.4%) reported severe pain preventing normal movement. This resolved within 48 hours in all cases. There were no other severe local reactions including large injection site reactions.

CONCLUSION: The reduced antigen content combined dTpa vaccine is safe and well tolerated in Indian pre-school children.

Cohort study

Chacko AG, Daniel RT, Chacko G, Babu KS.

Pial and arachnoid welding for restoration of normal cord anatomy after excision of intramedullary spinal cord tumors.

J Clin Neurosci. 2007 Aug;14(8):764-9. Epub 2007 May 25.

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

A significant postoperative problem in patients undergoing excision of intramedullary tumors is painful dysesthesiae, attributed to various causes, including edema, arachnoid scarring and cord tethering. The authors describe a technique of welding the pia and arachnoid after the excision of intramedullary spinal cord tumors used in seven cases. Using a fine bipolar forcep and a low current, the pial edges of the myelotomy were brought together and welded under saline irrigation. A similar method was used for closing the arachnoid while the dura was closed with a running 5-0 vicryl suture. Closing the pia and arachnoid restores normal cord anatomy after tumor excision and may reduce the incidence of postoperative painful dysesthesiae

Case Series

Daniel RT, Meagher-Villemure K, Farmer JP, Andermann F, Villemure JG.

Posterior Quadrantic Epilepsy Surgery: Technical Variants, Surgical Anatomy, and Case Series.

Epilepsia. 2007 Apr 18; [Epub ahead of print]

Department of Neurological Sciences, Christian Medical College, Vellore India

OBJECTIVE: Patients with intractable epilepsy due to extensive lesions involving the posterior quadrant (temporal, parietal, and occipital lobes) form a small subset of epilepsy surgery. This study was done with a view to analyze our experience with this group of patients and to define the changes in the surgical technique over the last 15 years. We also describe the microsurgical technique of the different surgical variants used, along with their functional neuroanatomy.

METHODS: In this series there were 13 patients with a median age of 17 years. All patients had extensive presurgical evaluation that provided concordant evidence localizing the lesion and seizure focus to the posterior quadrant. The objective of the surgery was to eliminate the effect of the epileptogenic tissue and preserve motor and sensory functions.

RESULTS: During the course of this study period of 15 years, the surgical procedure performed evolved toward incorporating more techniques of disconnection and minimizing resection. Three technical variants were thus utilized in this series, namely, (i) anatomical posterior quadrantectomy (APQ), (ii) functional posterior quadrantectomy (FPQ), and (iii) periinsular posterior quadrantectomy (PIPO). After a median follow-up period of 6 years, 12/13 patients had Engel's Class I seizure outcome.

CONCLUSIONS: The results of surgery for posterior quadrantic epilepsy have yielded excellent seizure outcomes in 92% of the patients in the series with no mortality or major morbidity. The incorporation of disconnective techniques in multilobar surgery has maintained the excellent results obtained earlier with resective surgery.

Case Series

Daniel RT, Thomas SG, Thomas M.

Role of surgery in pediatric epilepsy.

***Indian Pediatr.* 2007 Apr;44(4):263-73.**

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

Twenty five percent of patients with intractable epilepsy have surgically remediable epilepsy syndromes. This article reviews the treatment paradigm for pediatric epilepsy and also the indications, methods, and surgical options for the subgroup of patients with surgically remediable epileptic disorders based on our experience in the management of these children. The article also discusses the rationale for offering surgery and the timing of surgery in these patients. The study of surgically remediable epilepsy can best be divided into focal, sub hemispheric, hemispheric and multifocal epileptic syndromes. These syndromes have both acquired and congenital etiologies and can be treated by resective or disconnective surgery. The surgical management of these conditions (with the exception of multifocal epilepsy) provides Engel's Class 1 outcome (complete seizure freedom) in approximately 80% of children. The consequences of seizure freedom leads to a marked improvement in the quality of life of these children. The benefits to society, of allowing a child to grow to adulthood with normal cognition to earn a livelihood and contribute actively to society, cannot be understated.

Review

George R, Jeba J, Leng M, Chacko AG, Tharyan P.

Interventions for the treatment of metastatic extradural spinal cord compression. (Protocol)

Cochrane Database of Systematic Reviews 2007, Issue 3. Art. No.: CD006716. DOI: 10.1002/14651858.CD006716.

Departments of Palliative Care, Neurosurgery, and Prof. BV Moses Centre for Evidence Based health Care, Christian Medical College, Vellore

The objectives are as follows:

Our primary objective is to compare the efficacy and harm of treating extradural spinal cord compression for the following:

different schedules of radiation therapy;

surgery with or without radiation therapy versus radiation therapy alone; .

the administration of high dose corticosteroids (more than 32 mg of dexamethasone equivalent), versus moderate dose (less than 32 mg), or no corticosteroids; with or without surgery or radiotherapy, or both.

Our secondary objectives are:

to compare the adverse effects of surgery, radiotherapy and corticosteroids for metastatic spinal cord compression;

to ascertain if the clinical benefit, if any, is influenced by neurological and oncological factors such as ambulatory status, primary tumour type, duration of cord compression and the presence of visceral metastases, spinal instability or bony collapse.

Systematic Review Protocol

Jacob ME, Abraham VJ, Abraham S, Jacob KS.

The effect of community based daycare on mental health and quality of life of elderly in rural south India: a community intervention study.

***Int J Geriatr Psychiatry.* 2007 May;22(5):445-7**

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

BACKGROUND: Sustainable cost-effective interventions to improve psychiatric morbidity and quality of life among the elderly have not been systematically evaluated in developing countries.

METHOD: The most vulnerable elderly living in Pennathur, Vellore district, India, in terms of socioeconomic status and social supports, were invited to participate in a day-care program. Baseline assessments were done using the Mini Mental Status Examination, the Revised Clinical Interview Schedule and the World Health Organisation Quality of Life- Bref. Follow-up assessment was done at 3 months on subjects who took part and those who refused.

RESULTS AND CONCLUSIONS: Forty-one (16.4%) were invited to take part. Twenty subjects took part in the program while 21 refused. There was a significant reduction in psychiatric morbidity and improvement in quality of life scores at 3 months for subjects who attended the program. The improvement in quality of life persisted after adjusting for gender, socioeconomic status and baseline scores. Costing of the program suggests sustainability.

Cohort study

Jacob JJ, John M, Thomas M, Thomas N, Nair A.

Plasmacytoma mimicking mediastinal parathyroid tumour in a patient with primary hyperparathyroidism.

***Asian J Surg.* 2007 Apr;30(2):147-50.**

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

The association of monoclonal gammopathies with primary hyperparathyroidism is well documented. Many case reports have documented the coexistence of primary hyperparathyroidism and multiple myeloma. The cause of this relationship is not known. We report the case of a 49-year-old gentleman who was treated for primary hyperparathyroidism. His initial preoperative nuclear scan had shown persistent activity and retention of tracer in the retrosternal region in addition to the discrete hot spot in the region of the lower pole of the left lobe of the thyroid.

During surgery, the enlarged left inferior parathyroid gland was removed. In addition, the retrosternal area was also explored and found to be normal. Ten months later, he developed a mass in the region of the manubrium sternii which was proven to be a plasmacytoma. We review the literature for similar cases and suggest hypotheses for a possible association. In conclusion, Coexisting plasma cell dyscrasias including plasmacytoma should be considered in patients with primary hyperparathyroidism.

Case Report

Jeba Jenifer, George Reena

The role of re-irradiation versus chemotherapy in recurrent head and neck cancer

Indian J Palliative Care 2006;12(2):56-64.

Palliative Care Unit, Christian Medical College, Vellore - 632 004, India

Head and neck cancer recurrences after definitive radiotherapy present a difficult therapeutic problem, as only a small proportion of patients have resectable disease. When surgery is not possible, reirradiation might be a feasible option for selected patients, particularly those with favourable prognostic factors such as second primaries, nasopharyngeal or laryngeal tumours or delayed recurrences. Current evidence indicates that in this group of patients reirradiation offers better control rates than palliative chemotherapy. The loco regional control rates of reirradiation without surgery is 20% at five years and 27% at two years. The overall survival rate with reirradiation ranges from 10% to 35% at two years and 0% to 14.6% at five years. The first randomized trial directly comparing chemotherapy with reirradiation is in progress. This article outlines the indications for and results of reirradiation and chemotherapy in post radiotherapy recurrences of head and neck cancer.

Review

Nair A, Abraham DT, Paul MJ, Seshadri MS, Nihal T, Selvan CK.

Es18p role of external radiotherapy in parathyroid carcinoma.

ANZ J Surg. 2007 May;77 Suppl 1:A25.

Christian Medical College, Vellore, Tamil Nadu, India.

INTRODUCTION: Parathyroid carcinoma is a challenging problem to a surgeon and adjuvant radiotherapy is important to reduce the recurrence.

Results: There was a male preponderance. Mean age of presentation was 49 years. The clinical presentation was similar to benign primary hyperparathyroidism except for the presence of palpable nodule in 80% of patients with carcinoma compared to 11% among patients with benign primary hyperparathyroidism. One patient had chronic pancreatitis probably secondary to hyperparathyroidism. All patients had hypercalcaemia with elevated serum PTH levels and no significant difference compared to benign hyperparathyroidism. Surgery was done in all. Local metastasis to the cervical lymph nodes was seen in 33% of patients. The tumors showed a high

predilection to the inferior parathyroid glands. All subjects underwent radiotherapy with cobalt at mean dose of 50 cGy. The mean duration of recurrence was about 2 years. 50% had local recurrence, 2 had recurrent tumor excision including one from vocal cord. Bony metastasis was found in one as evidenced by hot spots in sestamibi scan. 2 of the 6 died, both of them had unrelated disease as cause of death. 1 lost to follow up.

CONCLUSION: Parathyroid carcinoma constitutes around 2-3% of patients. In the presence of a palpable nodule, chance of being malignant should be kept in mind. Recurrence rate can be reduced by post operative external radiotherapy.

Case Series

Ram TS, Ravindran PB, Viswanathan FR, Viswanathan PN, Pavamani SP
Extracranial doses in stereotactic and conventional radiotherapy for pituitary adenomas.

J Appl Clin Med Phys. 2006 May 25;7(2):96-100.

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

The purpose of this study is to determine the extracranial dose in patients treated for pituitary adenoma with conventional and stereotactic radiotherapy (SRT). Twelve patients receiving treatment with radiation for pituitary adenoma were selected. Six patients underwent SRT, and six patients underwent conventional radiotherapy. Extracranial doses were measured with pre-irradiation annealed lithium fluoride thermoluminescent dosimetry (TLD) chips. The chips were wrapped and placed on the patients' skin, over each eyelid, the thyroid, chest, and scrotum for males and over the suprapubic region for females. Postradiation annealing was done, and the TLDs were read in a TLD reader system. The results were analyzed using the Wilcoxon matched-pairs signed rank test by SPSS, version 6.01. The doses to the thyroid, center, and gonads were significantly higher (74.62 +/- 9.12 mrad, 65.42 +/- 9.35 mrad, and 58.42 +/- 5.36 mrad, respectively) in patients receiving SRT than in conventional radiotherapy portals (69.45 +/- 21.19 mrad, 38.33 +/- 19.44 mrad, and 31.41 +/- 18.25 mrad). But the average doses to the right eye (84.84 +/- 8.80 mrad) and to the left eye (85.68 +/- 5.82 mrad) in the stereotactic group were less when compared with the patients treated with conventional radiotherapy, who received 127.5 +/- 37.90 mrad and 117.29 +/- 34.01 mrad, respectively. In conclusion, SRT is definitely superior to conventional radiotherapy as far as dose to the surrounding normal structures is concerned. The higher extracranial doses in SRT seem to be within the acceptable range; however, the clinical significance of this is still unclear and needs longer followup.

Comparative study

Sanjeev Suresh W, M.S. Roy Thankachen, Madhu Andrew Philip,

Surgical Outcome Of Thymectomy for Myasthenia Gravis

Ind J Thorac Cardiovas Surg 2007 23:171-175.

Department of Thoracic and Cardiovascular Surgery, Christian Medical College, Vellore

ABSTRACT

Medical treatment for myasthenia gravis involves use of anticholinestrase agents, immunosuppressive drugs, plasmapheresis and steroids. However, these agents result in a complete clinical remission rate as low as 15%. As a consequence, Thymectomy preferably by transsternal approach has become the increasingly accepted procedure for myasthenia gravis, with reported clinical remission rates as high as 80%. 57 patients diagnosed with myasthenia gravis underwent thymectomy at the Christian Medical College & Hospital, Vellore from January 1994 to December 2003. The aim of this study was to determine the outcome for myasthenia gravis after thymectomy. Our results indicated that female sex had a better overall prognosis, Ossermann stage, I, IIA, & III was associated with higher incidence of complete clinical remission and the response to thymectomy decreased with increasing Ossermann stage. Post operative medication requirement reduced significantly as compared to the preoperative requirement. Age, duration of disease and histological character of the thymus were not found to be of prognostic value. We therefore conclude that trans-sternal thymectomy was found to be beneficial to all patients of mild to moderate myasthenia gravis, with 70.2% patients showing improvement postoperatively. We also advocate thymectomy for ocular myasthenia gravis.

Retrospective study

Singh IR, Ravindran BP, Ayyangar KM.

Adaptation of telecobalt unit for stereotactic irradiation

***Med Dosim.* 2007 Spring;32(1):52-8.**

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

We investigated the feasibility of using an isocentric telecobalt unit for advanced treatment techniques, such as stereotactic radiotherapy. To adapt the telecobalt unit (Th780 C) for stereotactic irradiation, collimator inserts of various sizes, collimator mount, and a couch mount suitable for the telecobalt unit were developed, and the characteristics of the narrow beams of Cobalt-60 (^{60}Co) were studied. Comparative study was carried out between the stereotactic radiotherapy plans of 6 MV and ^{60}Co beams using a 3-dimensional (3D) treatment planning system. The beam penumbra of ^{60}Co beams was found to be larger than those of 6 MV beams. The dose-volume histograms (DVH) obtained from the ^{60}Co beam plan were comparable to those obtained from the 6 MV plan. The DVH of nontarget tissue obtained from the plans of the 2 beams were found to be in good agreement to each other. The difference in equivalent fall-off distance (EFOD) for all 3 cases was found insignificant; hence, it can be concluded that the fall-off dose in the dose distribution of the ^{60}Co stereotactic plan is as good as that of the 6 MV stereotactic plan. In all 3 cases for which the treatment plans were compared between ^{60}Co and 6 MV beams, it was observed that the fall-off doses outside the target were similar; therefore, considering ^{60}Co with 5-mm margin is a cost effective alternative for the linac-based stereotactic radiotherapy.

Comparative Study

Suganthy J, Rassau M, Koshi R, Battacharjee S.

Bilateral tibial hemimelia I.

Clin Anat. 2007 May;20(4):460-4

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

Congenital absence of tibia is a rare anomaly. We report a case of bilateral tibial hemimelia born to phenotypically normal parents. The two amputated legs with tibial dysplasia obtained from a 3-year-old boy were studied by radiography and anatomical dissection. The radiological evaluation revealed a normal hip joint. The lower end of femur was normal without any bifurcation, shortening or bowing. Fibula was present on both legs and there was no sign of bowing or doubling. Both right and left tibiae were absent. In addition, on the right side, five tarsal bones, two metatarsals and the corresponding digital rays were absent. On the left side, three tarsal bones were absent. Dissection of the amputated segments showed the presence of extensor digitorum longus, peroneus tertius, peroneus longus and brevis, gastrocnemius, and soleus. Following bilateral knee disarticulation the patient was fitted with prosthesis and is doing well.

Case Report

Thomas Stephen, Roy Thankachen, Andrew P Madhu, Nithya Neelakantan, Vinayak Shukla, Roy J Korula.

Surgical Results in Bronchiectasis: Analysis of 149 Patients

Asian Cardiovascular and Thoracic Annals

Cardiothoracic Surgery Unit II & Department of Biostatistics, Christian Medical College, Vellore, India

Bronchiectasis remains a serious problem in developing countries. We reviewed the morbidity, mortality, and functional outcome of surgical treatment for bronchiectasis in our institution. Between 1992 and 2003, 149 patients (105 males, 44 females) underwent pulmonary resection for bronchiectasis. Their mean age was 33.7 years (range, 5–66 years). The indications for surgery were failure of conservative treatment in 59 (40%) patients, recurrent hemoptysis in 53 (36%), bronchial obstruction by a tumor in 9 (6%), and destroyed lung in 28 (19%). Bilateral disease was seen in 24 (16%) patients. Surgical treatment included pneumonectomy in 55 (37%) patients, lobectomy in 55 (37%), bilobectomy in 37 (25%), and lobectomy and/or segmentectomy in 2 (1%). There was one operative death (mortality, 0.67%) and morbidity occurred in 22 (14.8%) patients. Follow-up was complete in 94 patients, for a mean of 4.8 years (range, 3 months to 12 years). After surgery, 51 (34%) patients were asymptomatic. Surgical treatment for bronchiectasis can achieve good results with acceptable morbidity and mortality, not only in localized disease but also in extensive disease, if complete resection can be achieved.

Venkatesan T, Thomas N, Ponniah M, Khan D, Chacko AG, Rajshekhar V.

Oral triiodothyronine in the perioperative management of central hypothyroidism

Singapore Med J. 2007 Jun;48(6):555-8.

Department of Anaesthesia, Christian Medical College Hospital, Vellore, India.

Oral triiodothyronine (T3) has never been described in literature as a major form of perioperative therapy. This series highlights the role of oral triiodothyronine in the perioperative management of patients with overt hypothyroidism for semi-urgent surgeries. We describe 12 patients with central hypothyroidism occurring secondary to pituitary tumours manifesting with severe neurological symptoms that required early surgical intervention. These patients were managed without any significant complications by administering perioperative oral triiodothyronine.

Case Series

ARTICLES WITH NO ABSTRACTS

Bajel A, George B, Mathews V, Viswabandya A, Kavitha ML, Srivastava A, Chandy M.

Adult ALL: treatment outcome and prognostic factors in an Indian population using a modified German ALL (GMALL) protocol.

Leukemia. 2007 Jun 7; [Epub ahead of print]

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

John BV, Jacob M, Abraham OC, Thomas S, Thankachan R, Shukla V.

Aspergilloma in a hydatid cavity.

Trop Doct. 2007 Apr;37(2):112-4.

Department of Medicine, Christian Medical College, Vellore, Tamilnadu 632004, India.

Rajshekhar V. Hughes SS, Pringle T, Phillips F, et al.

Settling of fibula grafts following multilevel anterior cervical corpectomy. A radiographic evaluation.

Spine 2006;31:1911-5. Spine. 2007 Jan 15;32(2):286-7.

Department of Neurological Science, Christian Medical College, Vellore, Tamil Nadu

Rajshekhar V.

Cost of treating patients with solitary cysticercus granulomas.

Neurol India. 2007 Jan-Mar;55(1):42-5.

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

Sister Rosemund, Shakila Murali, Mhoira Leng.

Home care nursing advice for patients with head and neck cancer in India.

Indian J Palliative Care 2006; 12:77-80.

ALUMINI CORNER

A “mystery” disease solved in Uttar Pradesh thanks to a “CMCite”.

Recurrent annual outbreaks of an acute brain disease of young children occur in Saharanpur and adjoining districts of western UP. It has been called “Saharanpur encephalitis” because repeated studies conducted by the National Institute of Virology (Pune) and National Institute of Communicable Diseases (New Delhi) found no evidence of Japanese encephalitis or any other neurotropic viruses. The popular print media perception is a “mystery disease.” The case fatality is around 80%. The estimated annual number of deaths is about 500. For more details do Google search for Saharanpur encephalitis.

As an infectious disease specialist Dr T Jacob John (former Professor and Head of the Departments of Clinical Virology and Clinical Microbiology) realized that it was not “encephalitis” but “encephalopathy”. That distinction, made on clinical grounds and lack of CSF leucocytosis suggested that the disease is most likely non-infectious. He noticed that no “systematic” study had been conducted. So he guided an able and willing pediatrician who runs a hospital in Bijnor. Dr Vipin Vashishtha and Dr John developed strict clinical criteria to include true “cases” and exclude others. Brain tissue and liver tissues were submitted to Dr NC Nayak (former Professor and Head of Pathology in AIIMS). He found no evidence of inflammatory response but he diagnosed a “toxin” disease, most probably a phytotoxin. At his suggestion biopsies of skeletal muscle were also tested with similar findings. Thus, the team described a new disease, namely acute “hepatomyoencephalopathy.”

Dr Vashishtha recruited his childhood friend Dr Amod Kumar (Head of the Community Health Department of St Stephen’s Hospital) and an exhaustive case-control study indicated association of hepatomyoencephalopathy with children eating the raw beans of a weed, *Cassia occidentalis* (locally called *kasondi* in Hindi). Finally another field study confirmed the causative association. There is plenty of information on its toxic effects and on diseases and death caused by its poisoning in large vertebrates, but none in humans. The team waited for three peer-reviewed papers to be published before announcing this finding to the Government Health System, pediatric colleagues, media and the public. All these “partners” are currently involved in public education to inform parents that *kasondi* beans are poisonous. Its prevention costs nothing, simply entails knowledge! The three papers are available on the internet, and the abstracts are reproduced below.

1. Vashishtha VM, Nayak NC, Kumar A, John TJ. Recurrent annual outbreaks of a hepato-myoen- cephalopathy syndrome in children in western Uttar Pradesh, India. Indian J Med Res 2007;125: 523-533

(URL <http://www.icmr.nic.in/ijmr/2007/april/0405.pdf>)

2. Vashishtha VM, Kumar A, John TJ, Nayak NC. *Cassia occidentalis* poisoning as the probable cause of hepatomyoencephalopathy in children in western Uttar Pradesh. *Indian J Med Res* 2007; 125: 767-774

(URL <http://www.icmr.nic.in/ijmr/2007/june/0608.pdf>)

3. Vashishtha VM, Kumar A, John TJ, Nayak, NC. *Cassia occidentalis* poisoning causes fatal coma in children in western Uttar Pradesh. *Indian Pediatr* 2007; 44: 522-525

(URL <http://www.indianpediatrics.net/july2007/522.pdf>)

Vashishtha VM, Kumar A, John TJ, Nayak NC.

***Cassia occidentalis* poisoning as the probable cause of hepatomyoencephalopathy in children in western Uttar Pradesh.**

***Indian J Med Res* 2007; 125: 767-774**

Mangla Hospital, Bijnor (UP); Department of Community Health, St Stephens Hospital, New Delhi; Christian Medical College, Vellore; Sir Ganga Ram Hospital, New Delhi, India

Background & objectives: Recurrent annual outbreaks of acute encephalopathy illness affecting young children have been reported for several years in many districts of western Uttar Pradesh (UP). Our earlier investigations over three consecutive years (2002-2005) proved that these outbreaks were due to a fatal multi-system disease (hepatomyoencephalopathy syndrome) probably caused by some phytotoxin and not due to viral encephalitis as believed so far. We conducted a case-control study to investigate the risk, if any, from various environmental factors and also to identify the putative toxic plant responsible for development of this syndrome.

Methods: Eighteen cases with acute hepatomyoencephalopathy syndrome admitted in 2005 in a secondary care paediatric hospital of Bijnor district of western UP were included in the study. Three age-matched controls were selected for each case. A semi-structured questionnaire was developed and applied to all 18 cases and 54 controls. All interviews were conducted within one week of discharge or death of each case. Quantitative data were analyzed using the relevant established statistical tests.

Results: Parents of 8 (44.4%) cases gave a definite history of their children eating beans of *Cassia occidentalis* weed before falling ill, compared with 3 (5.6% controls), the odds ratio being 12.9 (95% CI 2.6-88.8, $P < 0.001$). History of pica was the other associated factor with the disease, odds ratio 5.20 (95% CI 1.4-19.5, $P < 0.01$). No other factor was found significantly associated with the disease.

Interpretation & conclusions: Consumption of *C. occidentalis* beans probably caused these outbreaks, described earlier as hepatomyoencephalopathy syndrome. Public education has the potential to prevent future outbreaks.

Vashishtha VM, Nayak NC, Kumar A, John TJ.

Recurrent annual outbreaks of a hepato-myo-encephalopathy syndrome in children in western Uttar Pradesh, India.

***Indian J Med Res* 2007;125: 523-533**

Mangla Hospital, Shakti Chowk, Bijnor, Uttar Pradesh, 246 701, India; Department of Community Health, St. Stephens Hospital, Tis Hazari, New Delhi 110054, India; 439, Civil Supplies Godown Lane, Kamalakshipuram, Vellore, (Tamil Nadu) 632 002, India; Department of Pathology, Sir Ganga Ram Hospital, Rajendra Nagar, New Delhi, India

Background & objectives: Outbreaks of an acute encephalopathy syndrome affecting children, with high case-fatality, have been reported in western Uttar Pradesh, India for the last many years. We investigated these cases in Bijnor district and present our findings.

Methods: Fifty five children aged 2-10 yr hospitalized from 2003 to 2005 in Bijnor, Uttar Pradesh, with features of acute encephalopathy were selected by defined clinical criteria. Various laboratory investigations were performed.

Results: The disease had peak incidence in early winter months. Previously healthy, 2-4 yr old rural children (mean age-3.78 yr) of very low socio-economic background were most vulnerable. Almost all had vomiting preceding unconsciousness and a majority had mild fever and abnormal behaviour/agitation. Abnormal posture of trunk and limbs were distinctive features. Fluctuation of blood pressure was seen in three-quarter cases. Serum aminotransferases, creatine phosphokinase and lactic dehydrogenase levels were found markedly raised virtually in all cases in whom the tests were performed. Serum glucose was found low (<50 mg/dl) in 47.3 per cent cases at presentation. Cerebrospinal fluid (CSF) was under normal or low pressure and without pleocytosis in all cases. No microorganism could be isolated from serum, CSF, urine and visceral specimens. Neuroimaging performed in two cases was also normal. Liver biopsy performed in 21 cases showed acute hepatotoxic injury in all with marked hydropic change and perivenular necrosis. Tibial muscle biopsy done in 8 cases showed focal necrosis while brain biopsy taken in 2 cases had mild spongiosis with focal gliosis. Forty two children succumbed to their illness (case fatality 76.4%), most within 72 h of presentation. Survivors did not show any neurological deficit.

Interpretation & conclusion: Our findings showed that the outbreaks were due to a multi-system disease with toxic injury to liver, muscles and brain (hepato-myo-encephalopathy) and not due to viral encephalitis as believed so far. The cause remains unknown but several features suggest the possibility of phytotoxin-induced pathology.

Case Series

Vashishtha VM, Kumar A, John TJ, Nayak, NC.

Cassia occidentalis poisoning causes fatal coma in children in western Uttar Pradesh.

Indian Pediatr

Mangla Hospital, Shakti Chowk, Bijnor, Uttar Pradesh, 246 701, India; Department of Community Health, St. Stephens Hospital, Tis Hazari, New Delhi 110054, India; 439, Civil Supplies Godown Lane, Kamalakshipuram, Vellore, (Tamil Nadu) 632 002, India; Department of Pathology, Sir Ganga Ram Hospital, Rajendra Nagar, New Delhi, India.

We investigated cases of the annual seasonal outbreaks of acute hepato-myo-encephalopathy in young children in western Uttar Pradesh for causal association with *Cassia occidentalis* poisoning, by a prospective survey in 2006. During September-October, homes of 10 consecutive cases were visited and history of eating *Cassia* beans was obtained in all. Nine children died within 4-5 days. There appears to be an etiological association between consumption of *Cassia occidentalis* beans and acute hepato-myo-encephalopathy.

Prospective study

News from the Office of Research

A workshop on ***Contemporary Issues in Research Ethics & Good Clinical Practice (GCP) Guidelines*** for faculty and members of the Ethics Committee of CMC, Vellore was held from February 19-21, 2007 at the Community Health Training Centre. This workshop was organized by the Centralized Research Support and Training (CREST) facility of the institution in collaboration with the Good Clinical Practice Alliance-Europe and the Indian Council of Medical Research (ICMR), and was funded by the Fogarty International Centre/ NIH and the South Asian Cochrane Network. Dr. Nandini Kumar, Dy. Director General of the ICMR and Dr. Francis Crawley, Director General of the GCP Alliance- Europe, were the external faculty. Core intra-mural faculty included Prof. Prathap Tharyan (Additional Vice-Principal, Research), Prof. Gagandeep Kang and Prof. Kuryan George, with additional faculty input from Prof. Jayaprakash Muliyl (Principal), Prof. Mammen Chandy, Prof. Ganesh Gopalakrishnan, Prof. Susan George and Dr. Anna Oomen (Secretary, Animal Ethics Committee).



The workshop format included lectures, group work using case scenarios and presentations of the group discussions. A wide range of issues were covered from historical perspectives; international guidelines and initiatives to improve research ethics; confidentiality; informed consent, especially with vulnerable populations; conflicts of interest and inducement to participation;

stored tissues; ethics of using placebos and evidence-based ethics. A mini-symposium covered the ethics of new technologies, including genetics and stem cell research, assisted reproductive technologies and xeno-transplantation. Dr. Nandini outlined details of the ICMR bioethics initiatives, with a focus on institutional ethics committees and the proposed bill to regulate research and accredit ethics committees. Dr. Francis Crawley led participants through the nuances of the GCP guidelines. After an evaluation, 41 participants were certified in Advanced Ethics and GCP. The workshop was rated highly by all the participants and it is hoped that another workshop would be held later this year to accommodate other members of the faculty who wish to participate, and twice yearly thereafter.

Manuscript writing workshops

In order to help staff and faculty who have completed research projects and have difficulty finding time or resources to write these up for publication, the Office of Research proposes to conduct three day workshops on a regular basis wherein participants will be given deputation leave, protected time, computing facilities, statistical help, mentorship, and other resources to help them write up these projects for publication.

The first such workshop is scheduled for October 3-5, 2007.



A publication of CMC Centralized Research Support & Training (CMC CREST).

Compiled by Anu Sukesh (Office of Research) and Manuelraj (Dodd Library).

For feedback, comments and suggestions, please contact the address below:

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