



CHRISTIAN MEDICAL COLLEGE, VELLORE

CMC RESEARCH DIGEST

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## EDITORIAL

Welcome to the inaugural issue of *CMC Research Digest*.

The office of research at CMC, Vellore has a number of new initiatives to support research at CMC and the *CMC Research Digest* is one of them

A need had been expressed for some time for a mechanism to share and disseminate the research output from CMC Vellore. At present the *CMC Research Bulletin* summarizes post graduate theses and details Fluid Research Fund grants awarded. The *CMC Research Digest* was approved by a recent Senatus resolution as an additional publica-

The *CMC Research Digest* will be a quarterly publication and will contain the citations and abstracts (where available) of relevant publications from peer reviewed journals during that quarter. Publications are retrieved from indexed journals by Dodd Library and from non-indexed journals from submissions by staff and faculty. We do not think that this is, as yet a comprehensive list of publications for the first quarter and we request all staff/faculty from CMC to use the Dodd Library online submission facility to keep us informed of your publications.

I am grateful to Mr. Manuel and Mr. Newton from Dodd Library and to Mrs. Anu Sukesh from the office of research for help in compiling these reports.

In future we hope to include details of conference presentations by CMC faculty and we may even include abstracts of important publications by CMC alumni.

We welcome comments and suggestions to improve the digest; please email us at:

research@cmcvellore.ac.in

Prathap Tharyan

Additional Vice Principal  
(Research)

Christian Medical College,  
Vellore

## Basic Sciences/ Diagnostics

**Anjali , Geethanjali FS, Kumar RS, Seshadri MS.**

**Accuracy of filter paper method for measuring glycated hemoglobin.**

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

***J Assoc Physicians India. 2007 Feb;55:115-9.***

**BACKGROUND AND OBJECTIVES:** Glycated hemoglobin (HbA1c) provides an accurate and reliable method to assess the glycemic control in patients with Diabetes. Its measurement is limited by the inconvenience of sample collection that requires venipuncture, sample handling and storage factors. The aim of this study was to assess the feasibility of using a dried capillary blood spot on a filter paper to estimate HbA1c, to check its stability at room temperature and to compare these values with the venous sample HbA1c by Turbidimetric Inhibition Immunoassay (TINA, Tina-quant HbA1c II).

**METHODS:** Venous blood samples of seventy eight patients with Type 1 or type 2 diabetes, were collected in EDTA containing vacutainers. Stability of HbA1c was studied in capillary blood samples blotted on to Whatman number 1 filter paper and stored at room temperature, for the first 20 patients enrolled in the study. After establishing the stability over a ten day period, HbA1c values obtained on the capillary blood spots were compared with those obtained from the venous blood samples of the remaining 58 patients.

**RESULTS:** Glycated hemoglobin is found to be stable in dried capillary blood spots on filter paper till the 10th day, stored at room temperature. It however, shows an inherent variability of +/- 15%, which falls within the permissible variability (18%) of the quality control material. Seventy nine percent of the capillary HbA1c values were found to fall within this range. With linear regression, we derived the relationship between filter paper and venous HbA1c values. The regression equation was as follows: Cap.HbA1c = 0.95 (Ven.HbA1c) + 1.4. The filter paper results were highly correlated with the venous sample values ( $r = 0.889$ ,  $p < 0.01$ ).

**CONCLUSION:** Measurement of glycated hemoglobin in dried blood spots on filter paper gives reliable and reproducible results. In our study, the mean capillary sample HbA1c value was 12% higher compared to the venous sample HbA1c values. Therefore a higher normal range may have to be used for interpreting the dried blood spot capillary blood HbA1c values.

*Comparative study*

**Chandramohan A, Eapen A, Govil S, Govil S, Jeyaseelan V.**

**Determining standard liver volume: assessment of existing formulae in Indian population.**

***Indian J Gastroenterol. 2007 Jan-Feb;26(1):22-5.***

Department of Radio-diagnosis, Christian Medical College and Hospital, Vellore

**BACKGROUND:** With the increasing numbers of living-related donor liver transplantation, accurate means of calculating standard liver volume (SLV) based on patient body indices becomes important. Three formulae reported in literature for this purpose have been derived from studies on Western and Japanese populations.

**AIM:** To assess the existing formulae for calculation of SLV in Indian population.

**METHOD:** Total liver volume (TLV) of 238 patients was measured using axial helical CT images obtained for conditions unrelated to the hepatobiliary system. Body surface area (BSA) was calculated from height and weight. Measurements obtained using CT were compared with the SLV calculated based on the previously reported formulae.

**RESULTS:** Though there was significant difference ( $p < 0.001$ ) between the TLV obtained by CT and the SLV calculated using the three formulae, they also showed good agreement. On an average the formula derived from the Japanese population underestimated the SLV by 63 (202) cc ( $p < 0.001$ ). Regression models for SLV ( $SLV = 243 + [186 \times BSA] + [11.4 \times \text{Weight}]$ ,  $SLV = 375.23 + [14.24 \times \text{body weight}]$ ,  $SLV = -204.092 + [874.461 \times BSA]$ ) were derived from the data obtained from our population. Age and gender had no effect on the SLV.

**CONCLUSIONS:** Formulae derived from Japanese population for calculation of SLV is not suitable for the Indian population. The newly described formulae may prove useful in the Indian population.

*Comparative study*

**Daniel HD, Vivekanandan P, Raghuraman S, Sridharan G, Chandy GM, Abraham P.**

**Significance of the hepatitis C virus (HCV) core antigen as an alternative plasma marker of active HCV infection.**

***Indian J Med Microbiol.* 2007 Jan;25(1):37-42.**

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

**PURPOSE:** To evaluate the role of core antigen (Ortho trak-C assay) as a marker of active HCV infection in comparison to HCV RNA as detected by reverse transcription polymerase chain reaction (RT-PCR).

**METHODS:** This evaluation was carried out during January 2000 to December 2003 in HCV infected individuals who were treatment naive or were on anti-viral therapy. Additionally, sequential plasma samples from patients on clinical follow-up were included in this study. A total of 167 samples from 61 patients were tested by trak-C and RT-PCR. HCV RNA detection was achieved by a RT-PCR. Trak-C assay results were also compared in a limited proportion of these samples with known HCV viral load and genotype.

**RESULTS:** Of 167 samples tested, 56.9% were RNA positive and 43.1% were RNA negative while 50.3% were trak-C positive and 49.7% were trak-C negative, yielding a sensitivity of 85.3% and a specificity of 95.8% for the trak-C assay (Kappa co-efficient = 0.8). The concentration of HCVcAg and HCV RNA showed significant correlation ( $n=38$ ,  $r=0.334$ ,  $P=0.04$ ). The trak-C assay detected the most prevalent HCV genotypes in India without significant difference ( $P=0.335$ ). The difference between mean absorbance values of HCV RNA positive samples compared to HCV RNA negative samples in the trak-C assay was highly significant ( $P < 0.000$ ). Qualitative results of trak-C assay and RT-PCR were comparable in 93% of follow-up samples.

**CONCLUSIONS:** Trak-C assay can be recommended for confirmation of HCV infection and follow-up in laboratories with resource-poor facilities.

*Comparative study*

**Faith M, Eapen CE, Wilfred G, Ramachandran J, Jacob M.**

**Serum biotinidase is a sensitive and specific biochemical marker of hepatic dysfunction: A preliminary report.**

***Hepatol Res.* 2007 Jan;37(1):13-7.**

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

Biotinidase is an enzyme synthesized predominantly by the liver. Serum activity of this enzyme has been shown to be low in chronic liver disease. In this study, we endeavored to assess the diagnostic value of serum biotinidase as a marker of hepatic biosynthetic function in acute and chronic liver dysfunction. Twenty-three patients with acute liver disease and 46 with chronic liver disease, as diagnosed by clinical examination, laboratory tests, histopathology and tests for viral markers, were inducted into the study. Forty-six healthy volunteers were selected as controls. Serum biotinidase activity was estimated in all the subjects. Biotinidase activity was found to be significantly lower in the serum of patients with acute ( $4.59 \pm 1.26$  IU/L vs  $7.56 \pm 0.82$  IU/L in controls;  $P \leq 0.001$ ) and chronic ( $2.98 \pm 1.18$  IU/L vs  $7.56 \pm 0.82$  IU/L in controls;  $P \leq 0.001$ ) liver disease. Using receiver-operator characteristic curves, serum biotinidase was found to have high values of sensitivity and specificity when applied as a diagnostic test in both acute and chronic liver disease. These results suggest that serum biotinidase may be a sensitive and specific diagnostic marker of hepatic biosynthetic function in both acute and chronic liver disease.

*Comparative study*

**Mathew GA, Kuruvilla G, Job A.**

**Dynamic slow motion video endoscopy in eustachian tube assessment.**

***Am J Otolaryngol.* 2007 Mar-Apr;28(2):91-7.**

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

**PURPOSE:** The aim of this study was to find out if there is a correlation between dynamic video endoscopic study of eustachian tube (ET) with middle ear disease and to grade ET movements based on dynamic slow motion video endoscopy (DSVE) findings and to determine if DSVE can be used as a useful tool to evaluate tubal function.

**MATERIALS AND METHODS:** A prospective, case control study was performed on 124 ears in 69 subjects who came to the ears, nose, and throat outpatient department. Transnasal endoscopic examination of the nasopharyngeal opening of the ET during rest, swallowing, and yawning was carried out to study its dilatory movements.

**RESULTS:** In the control group, among the 61 ears studied, 37 ETs were found normal and 24 tubes, dysfunctional. In ears with middle ear disease (case group), 63 ETs were studied. Ten were found normal, and the remaining, dysfunctional. Ten patulous tubes were observed in this study: 3 in the control group and 7 in the case group. Tubal movements were classi-

fied into 4 grades depending on (1) appearance of tubal mucosa, (2) movements of the medial and lateral cartilaginous lamina, (3) lateral excursion and dilatory wave of the lateral pharyngeal wall, and (4) whether tubal lumen opened well or not. Upon correlation of results obtained on DSVE with middle ear disease, the P value was less than .0001, suggesting a significant relationship between the 2. Dynamic ET endoscopy findings of 121 ears (of the total 124 ears studied) were correlated with middle ear manometric studies using Mc Nemar chi(2) test. Seventy-five ears showed complete agreement, and 46 ears showed disagreement. The P value was found to be .000, showing a strong association between the 2 tests. On correlating dynamic ET endoscopy findings in 60 of 63 ears in the case group with middle ear manometry, we noticed that 38 ears showed complete agreement and 22 ears showed disagreement. The P value was found to be .007, which again showed significant agreement between the 2 tests.

**CONCLUSION:** Dynamic slow motion video endoscopic analysis of ET is a potentially useful tool in the quest for further understanding the pathophysiology of tubal dysfunction. We have attempted to grade ET movements based on severity of tubal pathology. We conclude that DSVE is a vital tool in diagnosing ET dysfunction in patients with middle ear disease. Additional study is required to assess the role of DSVE in predicting outcome after middle ear surgery.

#### *Comparative study*

**Natarajan SK, Mukhopadhy A, Ramachandran A, Amalanathan S, Kurian G, Balasubramanian KA.**

**Spontaneous bacterial peritonitis results in oxidative and nitrosative stress in ascitic fluid.**

***J Gastroenterol Hepatol.* 2007 Feb;22(2):177-81.**

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

**BACKGROUND AND AIM:** Spontaneous bacterial peritonitis (SBP) is a major complication of liver cirrhosis and accounts for significant mortality. Although oxygen free radicals and nitric oxide been implicated in the pathophysiology of liver cirrhosis, information on their role during the development of SBP is scarce. This study examined these active species in ascitic fluid from patients with SBP, and in response to treatment.

**METHODS:** Forty-nine consecutive patients with cirrhosis and ascitic fluid neutrophil counts less than 250/cumm were studied as controls. Another 21 patients whose ascitic neutrophil count exceeded 250/cumm were treated as cases. Ascitic fluid was collected from these patients at entry and 48 h after treatment with antibiotics. Nitrate and markers of oxidative stress such as malondialdehyde, protein carbonyl content and total and rotein thiols were measured.

**RESULTS:** A significant increase in malondialdehyde and protein carbonyl levels was seen in ascites from patients with SBP when compared to controls. This was accompanied by a decrease in total thiols and protein thiols. In addition, there was a significant increase in ascitic fluid nitrate in patients with SBP when compared to control patients. After antibiotic treatment,

malondialdehyde, protein carbonyl and nitrate levels dropped back towards control values, and total thiols also recovered.

**CONCLUSIONS:** This study demonstrated the presence of oxidative stress in ascitic fluid from patients with SBP, and showed that ascitic fluid nitrate may be a marker for diagnosing SBP and a useful index in determining therapeutic response to antibiotic treatment.

*Comparative study*

**Sivalingam N, Hanumantharaya R, Faith M, Basivireddy J, Balasubramanian KA, Jacob M.**

**Curcumin reduces indomethacin-induced damage in the rat small intestine.**

***J Appl Toxicol.* 2007 Mar 9; [Epub ahead of print]**

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

Non-steroidal anti-inflammatory drugs (NSAIDs) are commonly used in clinical medicine. Their utility is, however, often limited by the adverse effects they produce in the gastrointestinal tract. Oxidative stress has been shown to occur in the small intestine in response to the oral administration of indomethacin, an NSAID commonly used in toxicity studies. In view of this, the effect of curcumin, an agent with anti-oxidant properties, was evaluated on indomethacin-induced small intestinal damage in a rat model. Rats were pretreated with various doses of curcumin (20 mg kg<sup>-1</sup>, 40 mg kg<sup>-1</sup> and 80 mg kg<sup>-1</sup>) before administering indomethacin at 20 mg kg<sup>-1</sup>. Various parameters of oxidative stress and the extent of small intestinal damage produced by indomethacin, with and without pretreatment with curcumin, were measured. Macroscopic ulceration was found to occur in the small intestine in response to indomethacin. The viability of enterocytes from indomethacin-treated animals was significantly lower than those from control animals. Drug-induced oxidative stress was also evident as seen by increases in the levels of malondialdehyde and protein carbonyl and in activities of pro-oxidant enzymes such as myeloperoxidase and xanthine oxidase in indomethacin-treated rats. Concomitant decreases were seen in the activities of the antioxidant enzymes catalase and glutathione peroxidase in these animals. Pretreatment with curcumin was found to ameliorate these drug-induced changes. Thus, curcumin appears to hold promise as an agent that can potentially reduce NSAID-induced small intestinal damage.

*Comparative study*

**Subbanna PK, Prasanna CG, Gunale BK, Tyagi MG.**

**Acetyl salicylic acid augments functional recovery following sciatic nerve crush in mice.**

***J Brachial Plex Peripher Nerve Inj.* 2007 Feb 42:3.**

Department of Pharmacology & Clinical Pharmacology, Christian Medical College, Vellore-

**ABSTRACT:** Cyclin-dependent kinase 5 (CDK-5) appears to play a significant role in peripheral

nerve regeneration as CDK-5 inhibition retards nerve regeneration following nerve crush. Anti-inflammatory drug acetyl salicylic acid elevates CDK-5 and reduces ischemia - reperfusion injury in cultured neurons. In this study we have evaluated the effect of acetyl salicylic acid on functional recovery following sciatic nerve crush in mice. Eighteen Swiss albino mice underwent unilateral sciatic nerve crush. Test animals received acetyl salicylic acid (100 mg/kg/day, n = 6 or 50 mg/kg/day, n = 6) and control animals (n = 6) received normal saline for 14 days following surgery. Functional recovery was assessed with improvement in Sciatic Function Index, nociception and gait. In comparison with normal saline treatment, acetyl salicylic acid (100 mg/kg/day) significantly improved functional recovery following sciatic nerve crush. Anti-inflammatory drug acetyl salicylic acid appears to be a promising agent for treating peripheral nerve injuries and hence elucidation of its neuroprotective pathways is necessary.

#### *Comparative study*

**Sundaresan S, Eapen CE, Shaji RV, Chandy M, Kurian G, Chandy G.**

**Screening for mutations in ATP7B gene using conformation-sensitive gel electrophoresis in a family with Wilson's disease.**

***Med Sci Monit.* 2007 Mar;13(3):CS38-40.**

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

**BACKGROUND:** Wilson's disease (WD) is an autosomal recessive disorder leading to copper overload, mainly in the liver and brain, due to mutations in the ATP7B gene. About 10% of heterozygous carriers of ATP7B gene mutations have decreased serum ceruloplasmin, posing diagnostic difficulties.

**CASE REPORT:** We report a four-member family wherein the 11-year-old daughter was diagnosed as having WD based on standard biochemical tests and the presence of Kayser Fleischer rings. On screening the entire family for WD, both parents and her eight-year-old brother had no clinical evidence of WD. However, serum ceruloplasmin was markedly decreased in the brother and was borderline low in the father, raising the possibility that the brother also had WD. We used conformation-sensitive gel electrophoresis (CSGE) to screen for mutations in the ATP7B gene in this family. Using CSGE we found that the patient's father and brother had an aberrant pattern in exon 8 of the ATP7B gene, the mother an aberrant pattern in exon 13, while the daughter (the index patient) had aberrant patterns in exons 8 and 13 of the ATP7B gene. DNA sequencing revealed that the index patient was a compound heterozygote with 2292-2312de121bp (a novel mutation) and Arg969Gln mutations, while the father and brother were heterozygous for the 2292-2312de121bp mutation and the mother for the Arg969Gln mutation.

**CONCLUSIONS:** This case report illustrates the utility of CSGE in analyzing mutations in the ATP7B gene to resolve diagnostic dilemmas arising in heterozygous carriers with low serum ceruloplasmin.

#### *Case report*

**Mukha RP, Kumar S, Kekre NS**

**Ureteral frozen section analysis during radical cystectomy: Do margins matter?**

***Indian J Urol* 2007;23:210-211**

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

No abstract available

## Epidemiology / Public Health

**Ajjampur SS, Gladstone BP, Selvapandian D, Muliyl JP, Ward H, Kang G.**

**Molecular and spatial epidemiology of cryptosporidiosis in children in a semiurban community in South India.**

***J Clin Microbiol.* 2007 Mar;45(3):915-20. Epub 2007 Jan 24.**

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

Cryptosporidium spp. are a leading cause of diarrhea in Indian children, but there are no data for prevalent species or subgenotypes. Genetic characterization of Cryptosporidium spp. by PCR-restriction fragment length polymorphism and spatial analysis of cases using Geographical Information Systems technology was carried out for 53 children with cryptosporidial diarrhea in an urban slum. The two most common species were *C. hominis* (81%) and *C. parvum* (12%). Other species identified were *C. felis* and *C. parvum* (mouse genotype). Five subgenotypes were identified at the Cpgp40/15 locus. Subgenotype Ia predominated among *C. hominis* isolates, and all *C. parvum* isolates were subgenotype Ic. *C. hominis* infection was associated with a greater severity of diarrhea. Sequencing of the Cpgp40/15 alleles of *C. felis* and *C. parvum* (mouse genotype) revealed similarities to subgenotype IIa and *C. meleagridis*, respectively. Space-time analysis revealed two clusters of infection due to *C. hominis* Ia, with a peak in February 2005. This is the first study to demonstrate space-time clustering of a single subgenotype of *C. hominis* in a setting where cryptosporidiosis is endemic. Molecular characterization and spatial analysis have the potential to further the understanding of disease and transmission in the community.

*Prospective study*

**Baddam John P, Russell S, Russell PS.**

**The Prevalence of Posttraumatic Stress Disorder Among Children and Adolescents Affected by Tsunami Disaster in Tamil Nadu.**

***Disaster Manag Response.* 2007 January - March; 5(1):3-7.**



Institute for Human Relations, Counselling and Psychotherapy, Christian Counselling Centre, Vellore, Tamil Nadu, Southern India; Department of Psychiatry, Christian Medical College, Vellore, Tamil Nadu, India

The Asian earthquake and subsequent tsunami of December 2004, one of the largest natural disasters in recent history, resulted in the deaths of over 250,000 people and massive destruction in 8 countries. As with any disaster, children are at risk for developing short- and long-term psychological consequences, including posttraumatic stress disorder (PTSD). One area particularly affected by this disaster was southern India. Five hundred twenty-three juvenile survivors of the tsunami were studied to determine the prevalence of PTSD. The survey was conducted in 2 waves. Interviews were conducted by postgraduate psychiatric social work students, proficient in the local language of Tamil and trained in PTSD-related data collection. The Impact of Event Scale-8 items Tamil Version and Child Behaviour Checklist Post-traumatic Stress Disorder-Tamil Revised Version, with age-specific measures and validated for the local culture and language, were used for the study. Our study revealed a prevalence of 70.7% for acute PTSD and 10.9% for delayed onset PTSD. PTSD was more prevalent among girls and more severe among adolescents exposed to loss of life or property. These results indicate that PTSD is widely prevalent among the survivors of the tsunami, reinforcing the need to develop an effective, culturally sensitive outreach therapy strategy for them.

*Prospective study*

**Banerjee I, Gladstone BP, Le Fevre AM, Ramani S, Iturriza-Gomara M, Gray JJ, Brown DW, Estes MK, Muliyl JP, Jaffar S, Kang G.**

**Neonatal infection with G10P[11] rotavirus did not confer protection against subsequent rotavirus infection in a community cohort in Vellore, South India.**

***J Infect Dis.* 2007 Mar 1;195(5):625-32. Epub 2007 Jan 22; Comment in: *J Infect Dis.* 2007 Mar 1;195(5):611-4.**

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

**BACKGROUND:** Various observational studies have suggested that neonatal rotavirus infection confers protection against diarrhea due to subsequent rotavirus infection. We examined the incidence of rotavirus infection and diarrhea during the first 2 years of life among children infected with the G10P[11] rotavirus strain during the neonatal period and those not infected with rotavirus.

**METHODS:** Children were recruited at birth and were followed up at least twice weekly. Stool samples, collected every 2 weeks for surveillance and at each episode of diarrhea, were screened by enzyme-linked immunosorbent assay and were genotyped by polymerase chain reaction.

**RESULTS:** Among 33 children infected neonatally with G10P[11] and 300 children not infected with rotavirus, there was no significant difference in the rates of rotavirus-positive diarrhea (rate ratio [RR], 1.05 [95% confidence interval [CI], 0.61-1.79]), moderate or severe rotavirus-positive diarrhea (RR, 1.42 [95% CI, 0.73-2.78]), or asymptomatic rotavirus shedding (RR, 1.25 [95% CI, 0.85-1.83]).

**CONCLUSION:** Neonatal G10P[11] infection with a strain resembling a vaccine candidate did not

confer protection against subsequent rotavirus infection or diarrhea of any severity in this setting.

*Prospective study*

**Gnanamony M, Peedicayil A, Abraham P.**

**An overview of human papillomaviruses and current vaccine strategies.**

***Indian J Med Microbiol.* 2007 Jan;25(1):10-7.**

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

Cervical cancer is one of the most common cancers in women worldwide, particularly in developing countries. The viral origin of cervical cancer has been proven beyond any reasonable doubt. Persistent infection with certain subsets of human papillomaviruses is recognized as a necessary cause for the development of cervical cancer. Persistence of oncogenic HPVs, immunodeficiency, high HPV viral load and cofactors like smoking, multiple sex partners and poor nutrition predispose to cervical cancer. Prophylactic vaccines using HPV virus-like particles containing capsid protein L1 have shown protection against disease in animals and are currently undergoing clinical trials. Therapeutic vaccines using HPV E6 and E7 proteins are also being investigated for their ability to remove residual infection.

*Review*

**Raghupathy P, Antonisamy B, Fall CH, Geethanjali FS, Leary SD, Saperia J, Priya G, Rajaratnam A, Richard J.**

**High prevalence of glucose intolerance even among young adults in south India.**

***Diabetes Res Clin Pract.* 2007 Aug;77(2):269-79. Epub 2007 Jan 16.**

Department of Child Health, Christian Medical College, Vellore 632004, India.

India is experiencing an epidemic of Type 2 diabetes mellitus (DM) in young adults. This study reports the prevalence of glucose intolerance, and insulin profiles, and their relationship to lifestyle factors in 2218 young adults (aged 26-32 years; 997 urban, 1221 rural) in south India. They were drawn from a cohort of 10,691 individuals born during 1969-1973 in Vellore and nearby villages. Family history, socio-economic status, physical activity and tobacco and alcohol use were recorded. Oral glucose tolerance tests were performed for diagnosis (WHO recommendations). Insulin resistance and secretion were derived from plasma insulin concentrations. Median BMI was 20.0kg/m<sup>2</sup>. The prevalence of Type 2 DM and impaired glucose tolerance (IGT) was higher in urban than in rural subjects (3.7% versus 2.1%, p=0.02; 18.9% versus 14.3%, p=0.002, respectively), while prevalence of impaired fasting glycaemia (IFG) was similar in urban and rural populations (3.8% versus 3.4%, p=0.04). Type 2 DM, IGT, IFG or higher insulin resistance and increment were associated with higher socio-economic status (more household possessions) and higher percentage body fat, body mass index and waist/hip ratio. Insulin increment was lower in men with higher alcohol consumption. Our data suggest high levels of glucose intolerance in young rural and urban adults highlighting an urgent need for preventive action to avert a public health catastrophe in India.

*Prospective study*

**Ramani S, Banerjee I, Gladstone BP, Sarkar R, Selvapandian D, Le Fevre AM, Jaffar S, Iturriza-Gomara M, Gray JJ, Estes MK, Brown DW, Kang G.**

**Geographic information systems and genotyping in identification of rotavirus G12 infections in residents of an urban slum with subsequent detection in hospitalized children: emergence of G12 genotype in South India.**

***J Clin Microbiol.* 2007 Feb;45(2):432-7. Epub 2006 Nov 29.**

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

Rotavirus infections by G12 strains in several countries have recently been described. In this study, we report the emergence of G12 strains in south India. Fourteen cases of G12 infection were identified between June and September 2005. G12 was seen in combination with P[6], P[8], or nontypeable P type. Nine cases, including five symptomatic infections and four asymptomatic infections, were identified as part of routine surveillance for rotavirus infections in a birth cohort in the community between June and July 2005. Significant temporal and time-space clustering of eight of these cases represents a possible recent introduction of a new rotavirus VP7 genotype. Previous rotavirus infections had been documented for six of the nine children in the community. In the following 2 months, five cases of G12 infection were identified among children presenting to a referral hospital with diarrhea. This is the first description of symptomatic and asymptomatic G12 infections in children in the community. The detection of G12 strains from different parts of the world in recent years suggests the possibility of its emergence as an important global genotype. Monitoring of cocirculating rotavirus strains and detection of emerging strains is important in the context of the availability of rotavirus vaccines.

*Cross-sectional study*

**Sarkar R, Prabhakar AT, Manickam S, Selvapandian D, Raghava MV, Kang G, Balraj V.**

**Epidemiological investigation of an outbreak of acute diarrhoeal disease using geographic information systems.**

***Trans R Soc Trop Med Hyg.* 2007 Jun;101(6):587-93. Epub 2007 Jan 30.**

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

An outbreak of acute diarrhoeal disease in a village in southern India was investigated through personal interviews of all households. Maps were drawn using geographic information system (GIS) tools of the water supply system, sewage channels and areas with observed faecal contamination of soil within and around the village. Geographic coordinates for each house in the village were extracted from a central database from the healthcare service provider for the village. Geographical clustering of cases was looked for using the SaTScan software, and diarrhoeal disease attack rates were calculated. Diarrhoeal disease occurred uniformly throughout the village without clustering in any area. All ages and both sexes were affected, but extremes

of ages were at higher risk. Water samples collected for microbiological examination after instituting control measures showed high coliform counts. Chlorine levels in the water tested were found to be inadequate to decontaminate common pathogens. Local cultural practices such as indiscriminate defecation in public places, washing clothes and cleaning utensils from water taps where the community collected its drinking water, and poor engineering design and maintenance of the water supply system were the risk factors that could have contributed to this outbreak.

*Cross-sectional study*

**Vaid A, Mammen A, Primrose B, Kang G**

**Infant mortality in an urban slum**

***Indian Journal of Pediatrics* 2007; 74(5): 449-453**

Department of Gastrointestinal Sciences; Department of Community Health, Christian Medical College, Vellore, Tamil Nadu, India

**OBJECTIVE.** Infant and child mortality are important indicators of the level of development of a society, but are usually collected by governmental agencies on a region wide scale, with little local stratification. In order to formulate appropriate local policies for intervention, it is important to know the patterns of morbidity and mortality in children in the local setting. **METHODS.** This retrospective study collected and analyzed data on infant mortality for the period 1995 to 2003 in an urban slum area in Vellore, southern India from government health records maintained at the urban health clinic.

**RESULTS.** The infant mortality rate over this period was 37.9 per 1000 live births. Over half (54.3%) of the deaths occurred in the neonatal period. Neonatal deaths were mainly due to perinatal asphyxia (31.9%), pre-maturity (16.8%) and aspiration pneumonia or acute respiratory distress (16.8%), while infant deaths occurring after the first mth of life were mainly due to diarrheal disease (43%) and respiratory infections (21%).

**CONCLUSION.** These results emphasize the need to improved antenatal and perinatal care to improve survival in the neonatal period. The strikingly high death rate due to diarrheal illness highlights the requirements for better sanitation and water quality.

*Retrospective study*

## Clinical: Observational Studies

**Balamugesh T, Christopher DJ, George B, Rajesh T.**

**Strongyloidosis hyperinfection in a neutropenic host diagnosed by bronchoalveolar lavage.**

***Indian J Chest Dis Allied Sci.* 2007 Jan-Mar;49(1):37-9.**

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

Opportunistic disseminated strongyloidosis is an important cause of morbidity and mortality in immunocompromised patients. In addition to a high index of clinical suspicion, alerting the microbiologist will help in diagnosing this condition early and institute therapy. We report a 51-year-old male who developed pulmonary infiltrates during the period of chemotherapy-induced neutropenia. Strongyloidosis larvae were found on bronchoalveolar lavage fluid and stool specimens. The patient responded to treatment with albendazole.

*Case report*

**Eapen CE, Mammen T, Moses V, Shyamkumar NK.**

**Changing profile of Budd Chiari syndrome in India.**

***Indian J Gastroenterol.* 2007 Mar-Apr;26(2):77-81.**

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

There is increasing evidence that Budd Chiari syndrome occurs when acquired predisposing factor(s) affect a susceptible individual with one or more underlying thrombophilic conditions. Geographical variations in disease pattern of Budd Chiari syndrome exist, which may reflect differing predisposing factors. We review a change in disease profile of Budd Chiari syndrome in India over the past three decades. While earlier studies from India reported isolated inferior vena cava (IVC) obstruction as the commonest disease type, this is a minority in more recent reports where a combination of IVC and hepatic vein obstruction is the commonest type. Longer duration of illness has been shown to be associated with IVC obstruction and the recent change in disease profile in India may reflect earlier diagnosis of Budd Chiari syndrome. Poverty, malnutrition, recurrent bacterial infections and filariasis have been previously suggested as predisposing factors for IVC obstruction. Improvement in hygiene and sanitation may partly explain the recent change in disease profile of Budd Chiari syndrome in India.

*Review*

**David AW, Stephen E, Pradhan NR, Nayak S, Perakath B.**

**Adult idiopathic ileosigmoid intussusception prolapsing per rectum.**

***Indian J Gastroenterol.* 2007 Jan-Feb;26(1):39-40.**

General Surgery and Colorectal Surgery Unit, Christian Medical College, Vellore, 632 004, India.

Ileosigmoid intussusception can lead to ischemia and necrosis of either the ileum or sigmoid colon. Ileosigmoid intussusception as a mass prolapsing per rectum in an adult has not been previously reported. We report a 50-year-old man with such a presentation. He recovered uneventfully after subtotal colectomy.

*Case report*

**Finny P, Jacob JJ, Thomas N, Philip J, Rajarathnam S, Oommen R, Nair A, Seshadri MS.**

**Medullary thyroid carcinoma: a 20-year experience from a centre in South India.**

***ANZ J Surg.* 2007 Mar;77(3):130-4.; Comment in: *ANZ J Surg.* 2007 Mar;77(3):98.**

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

**BACKGROUND:** Management of medullary thyroid carcinoma (MTC) remains controversial despite many advances over the past five decades. We attempt to review the presentation, management and prognosis of MTC at our institution over the last two decades.

**METHODS:** We conducted a retrospective review of the records of 40 patients with MTC over a period of 20 years.

**RESULTS:** Ten patients had hereditary MTC and 30 had sporadic MTC. The mean age of presentation was 41 years. Sixty-five per cent of the patients had a definite thyroid swelling and 43% had lymphadenopathy at the time of presentation. Total thyroidectomy with a central neck dissection was carried out in 82.5% of patients. Adjuvant therapy was given in 75% of patients because of extensive/residual disease. Postoperative hypercalcaemia was seen 73% of patients. (131)I metaiodobenzylguanidine scanning was carried out in 16 patients with persistent hypercalcaemia; the uptake was positive in 10 and negative in 6, indicating a positivity of 62%.

**CONCLUSION:** Medullary thyroid carcinoma accounts for 2.5% of thyroid carcinomas. There is a small male preponderance. In our series (131)I metaiodobenzylguanidine scan had a better positivity than what has been reported in the published work. Persistent postoperative hypercalcaemia was associated with a poorer prognosis that did not reach statistical significance.

*Retrospective case series*

**Ghosh DN, Sen S, Chacko J, Thomas G, Karl S, Mathai J.**

**The leaking pancreatic duct in childhood chronic pancreatitis.**

***Pediatr Surg Int.* 2007 Jan;23(1):65-8. Epub 2006 Sep 26.**

Department of Paediatric Surgery, Christian Medical College and Hospital, Vellore, Tamil Nadu 632004, India.

The leaking pancreatic duct in childhood chronic pancreatitis presents with ascites and pleural effusion and is a potentially lethal condition. Seven children with this condition were seen in the period 2003-2006. The correct diagnosis was not entertained till a raised serum amylase was discovered. The diagnosis was confirmed by very high levels of amylase in the aspirated abdominal or pleural fluid. Computerized tomogram was the most useful imaging study and demonstrated a dilated pancreatic duct. All children were operated within 6 days of diagnosis by a

Puestow's procedure in six and peripancreatic drainage in one. Six children made a prompt and lasting recovery after a Puestow's procedure while one child, also suffering from metastatic neuroblastoma, died in the immediate post operative period after peripancreatic drainage. We recommend prompt and definitive surgical management of this potentially lethal condition.

*Case series*

**Govil S, Justus A, Lakshminarayanan R, Nayak S, Devasia A, Gopalakrishnan G.**

**Retroperitoneal lymphatics on CT and MR.**

***Abdom Imaging. 2007 Jan-Feb;32(1):53-5.***

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

We report the CT and MRI appearances of dilated retroperitoneal lymphatic channels in six patients. In two patients, these dilated channels resembled a mass of confluent low-density lymph nodes on CT. On MR urography the lymphatic channels in all six patients were seen as a mesh-work of multiple tubular, tortuous, fluid-filled structures in the retroperitoneum of the abdomen and pelvis. On axial T1W images, these channels were seen as numerous, interconnected small, nodular and streaky intensities and as a cloak of diffuse homogenous hyperintensity on T2W axial images. The lymphatic nature of these abnormalities was confirmed at surgery in one patient. In another patient, the calibre and number of the dilated retroperitoneal channels reduced following anti-filarial therapy. The remaining four patients presented with chyluria.

*Case series*

**Jacob JJ, Finny P, Thomas M, Thomas N, John M.**

**Oncogenic osteomalacia.**

***J Assoc Physicians India. 2007 Mar;55:231-3.***

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

A 59-year-old gentleman presented with symptoms of progressively worsening low back pain associated with difficulty in rising from a squat over a period of two years. Biochemical tests confirmed the initial clinical diagnosis of osteomalacia. Blood pool scanning revealed a focal hot spot on the site of the clinically visible swelling close to the metacarpo-phalangeal joint of the left index finger. The biopsy of the specimen obtained by excision was reported to be consistent with a phosphaturic mesenchymal tumour. The patient had complete resolution of symptoms six months following excision of the lesion.

Case report

**Jacob JJ, Thomas N, Seshadri MS.**

**Tumoral calcinosis of the scalp: An unusual site for a rare tumor.**

***Laryngoscope. 2007 Jan;117(1):179-80.***

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

Tumoral calcinosis is a rare calcifying disorder that is associated with deposition of calcium crystals in the periarticular tissues. The mass is most often around the hips, elbows, shoulders, and feet but may be occasionally found elsewhere. We report a case of multiple sporadic tumoral calcinosises in an adult male over the scalp. The scalp as a site of tumoral calcinosis has not been previously reported in adults. Previous surgical excisions done on two occasions had

resulted in recurrence of the tumors. This report highlights the need to include tumoral calcinosis in the differential diagnosis of tumors of the scalp.

*Case report*

**John PB, Russell PS.**

**Validation of a measure to assess Post-Traumatic Stress Disorder: a Sinhalese version of Impact of Event Scale.**

***Clin Pract Epidemiol Ment Health.* 2007 Feb 163:4.**

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

**BACKGROUND:** There is paucity of measures to conduct epidemiological studies related to disasters in Sri Lanka. This study validates a Sinhalese translation of the Impact of Event Scale- 8 items version (IES-8) for use in Sri Lanka.

**METHODS:** This cross-sectional validation study was conducted in the densely populated rural area of Tangalle in the Southern province of Sri Lanka. The English version of the IES-8 after translation procedures into Sinhalese was administered by trained raters to a community sample of 30 survivors of tsunami aged 13 years and above. Diagnostic accuracy, reproducibility and validity of the translated IES was assessed in terms of sensitivity, specificity, predictive values, likelihood ratios, diagnostic odds ratio, inter-rater reliability, internal consistency, criterion validity and construct validity.

**RESULTS:** The cut-off score of 15 gave a fair sensitivity (77%) for screening along with other components of diagnostic accuracy. The inter-rater reliability was high (0.89). The internal consistency for the whole scale was high (0.78) with a high face and content validity. The criterion validity was high (0.83) and the construct validity demonstrated the two factor structure documented in the literature.

**CONCLUSION:** This study demonstrates that this Sinhalese version of the Impact of Event Scale has sound diagnostic accuracy as well as psychometric properties and makes it an ideal measure for epidemiological studies related to natural and man made disasters in Sri Lanka.

*Cross-sectional study*

**Gopalakrishnan G, Prasad GS.**

**Management of urolithiasis with chronic renal failure.**

***Curr Opin Urol.* 2007 Mar;17(2):132-5.**

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

**PURPOSE OF REVIEW:** Epidemiological trends of urolithiasis and the prevalence of renal failure in patients with stones have changed. This is the era of minimally invasive therapy for stone disease. We review the impact of minimally invasive therapy on the management of urolithiasis in patients with renal failure and its outcome.

**RECENT FINDINGS:** The prevalence of urolithiasis has reached its peak and plateaued in Europe and North America while it is still rising in the underdeveloped countries. The prevalence of renal failure in patients with chronic renal failure has reduced by half over the last decade. Mini-



mally invasive therapy like percutaneous nephrolithotripsy has fared better than open stone surgery in all respects. Patients with kidney stones do not have normal renal function. Recently, cystine stones, and stones in patients with renal tubular acidosis and bowel disease were shown to affect renal function significantly.

**SUMMARY:** Management of stones in chronic renal failure is challenging. Efforts should be made to minimize renal injury. Once a 'stone-free' kidney is achieved, steps should be taken to conserve renal function and address the issue of recurrence.

Review

**Karthikeyan Aswathaman, Antony Devasia, Ninan K Chacko**

**Abdominoscrotal Hydrocele with Hydronephrosis**

***Kuwait Medical Journal* 2007, 39 (1): 76-78**

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

Abdominoscrotal hydrocele is a congenital disorder usually seen in children. This is a report of an adult with abdominoscrotal hydrocele causing right sided hydronephrosis. Several explanations for this abnormality are suggested, but the exact etiology is still not known. The diagnosis is confirmed by ultrasound or computed tomography (CT) and complete surgical excision is recommended.

Case report

**Kavunkal AM, Pandiyan MS, Philip MA, Parimelazhagan KN, Manipadam MT, Cherian VK.**

**Large clear cell tumor of the lung mimicking malignant behavior.**

***Ann Thorac Surg.* 2007 Jan;83(1):310-2.**

**Department of Cardiothoracic Surgery, Christian Medical College & Hospital, Vellore, Tamil Nadu, India.**

An 18-year-old man presented with a large (12 x 10 cm) cystic mass involving the lower lobe and lingula of the left lung on computed tomography. Intraoperatively a large cystic mass was seen densely adherent to the left lung and the chest wall. A left pneumonectomy was performed because of the dense adhesions and extreme vascularity. Pathologic examination revealed a benign sugar cell tumor of the lung. We believe this is the first case report of such a large, clear cell tumor of the lung, mimicking malignant behavior in terms of vascularity and local invasion and requiring pneumonectomy.

Case report

**Kumar S, Kekre NS, Gopalakrishnan G.**

**Vesicovaginal fistula: An Update**

***Indian J Urol* 2007; 23:186-190**

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

Vesicovaginal fistula (VVF) has been a social and a surgical problem for centuries and remains a challenge to surgeons. Though advances have been made in the understanding of the etiology, diagnostic procedures and management of these fistulae, controversies still exist over the ideal approach and time to repair. This review was undertaken to look into the recent literature with regard to the timing and surgical approach to VVF repair. The literature search was done using the Medline database with keywords: vesicovaginal fistula, laparoscopy and robotic repair filtered for the last 5 years

*Review*

**Kuruville G, Job A, Thomas M.**

**A rare case of nasal cysticercosis mimicking a nasal dermoid.**

***J Laryngol Otol.* 2007 Jan;121(1):94-5. Epub 2006 Nov 2.**

Department of ENT, Head and Neck Surgery, Christian Medical College & Hospital, Vellore, Tamil Nadu, India.

Cysticercosis, caused by infestation with the pork tapeworm *Taenia solium*, is known to commonly involve the brain, muscles and subcutaneous tissue. Diagnosing cysticercosis can be difficult as its clinical presentation is usually non-specific. When involving subcutaneous tissue, it can present as firm, non-tender, solitary or multiple nodules. We report a case of subcutaneous cysticercosis at the nasion mimicking a nasal dermoid.

*Case report*

**Manipadam MT, Viswabandya A, Srivastava A.**

**Primary splenic marginal zone lymphoma with florid granulomatous reaction--a case report and review of literature.**

***Pathol Res Pract.* 2007;203(4):239-43. Epub 2007 Mar 29.**

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

Splenic marginal zone lymphomas (SMZL) constitute about 20% of primary splenic NHLs. We report a case of primary SMZL with a florid granulomatous reaction which obscured the underlying lymphoma. Although granulomas have been described in splenic non-Hodgkin lymphoma, it can be extensive and mask the underlying lymphoma. A careful search for the cytoarchitectural features of SMZL is warranted in such a case.

*Case report*

**Mathews JE, Rajaratnam A, George A, Mathai M.**

**Comparison of two World Health Organization partographs.**

***Int J Gynaecol Obstet.* 2007 Feb;96(2):147-50. Epub 2007 Jan 24.**

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

**OBJECTIVE:** To compare two World Health Organization (WHO) partographs – a composite partograph including latent phase with a simplified one without the latent phase.

**METHOD:** Comparison of the two partographs in a crossover trial.

**OBJECTIVE:** To compare two World Health Organization (WHO) partographs – a composite partograph including latent phase with a simplified one without the latent phase.

**RESULT:** Eighteen physicians participated in this trial. One or the other partograph was used in 658 parturients. The mean (S.D.) user-friendliness score was lower for the composite partograph (6.2 (0.9) vs. 8.6 (1.0);  $P=0.002$ ). Most participants (84%) experienced difficulty "sometimes" with the composite partograph, but no participant reported difficulty with the simplified partograph. While most maternal and perinatal outcomes were similar, labor values crossed the action line significantly more often when the composite partograph was used, and the women were more likely to undergo cesarean deliveries.

**CONCLUSION:** The simplified WHO partograph was more user-friendly, was more to be completed than the composite partograph, and was associated with better labor outcomes.

Comparative study

**Mittal R, Samarasam I, Chandran S, Mathew G.**

**Primary splenic flexure volvulus.**

***Singapore Med J.* 2007 Mar;48(3):e87-9.**

**Upper GI Surgical Unit, Department of General Surgery Unit 3, Christian Medical College and Hospital, Ida Scudder Road, Vellore 632004, India.**

Primary splenic flexure volvulus is a rare entity. We report an acute presentation of primary splenic flexure volvulus with gangrene in a 24-year-old man. Radiograph showed a massively dilated large bowel loop with a coffee-bean sign. At emergency laparotomy, a distended and gangrenous splenic flexure was found, with absence of all three ligamentous attachments of the splenic flexure.

Case report

**Moran JL, Peter JV, Solomon PJ, Grealy B, Smith T, Ashworth W, Wake M, Peake SL, Peisach AR**

**Tympanic temperature measurements: are they reliable in the critically ill? A clinical study of measures of agreement.**

***Crit Care Med.* 2007 Jan; 35(1):155-64.**

**Department of Intensive Care Medicine, The Queen Elizabeth Hospital, Woodville, South Australia, Australia.**

**OBJECTIVE:** Accurate measurement of temperature is vital in the intensive care setting. A prospective trial was performed to compare the accuracy of tympanic, urinary, and axillary temperatures with that of pulmonary artery (PA) core temperature measurements.

**DESIGN:** A total of 110 patients were enrolled in a prospective observational cohort study.

**SETTING:** Multidisciplinary intensive care unit of a university teaching hospital.

**PATIENTS:** The cohort was (mean +/- sd) 65 +/- 16 yrs of age, Acute Physiology and Chronic Health Evaluation (APACHE) II score was 25 +/- 9, 58% of the patients were men, and 76% were mechanically ventilated. The accuracy of tympanic (averaged over both ears), axillary (averaged over both sides), and urinary temperatures was referenced (as mean difference, Delta degrees centigrade) to PA temperatures as standard in 6,703 recordings. Lin concordance correlation (pc) and Bland-Altman 95% limits of agreement (degrees centigrade) described the relationship between paired measurements. Regression analysis (linear mixed model) assessed covariate confounding with respect to temperature modes and reliability formulated as an intra-class correlation coefficient.

**MEASUREMENTS AND MAIN RESULTS:** Concordance of PA temperatures with tympanic, urinary, and axillary was 0.77, 0.92, and 0.83, respectively. Compared with PA temperatures, Delta (limits of agreement) were 0.36 degrees C (-0.56 degrees C, 1.28 degrees C), -0.05 degrees C (-0.69 degrees C, 0.59 degrees C), and 0.30 degrees C (-0.42 degrees C, 1.01 degrees C) for tympanic, urinary, and axillary temperatures, respectively. Temperature measurement mode effect, estimated via regression analysis, was consistent with concordance and Delta (PA vs. urinary,  $p = .98$ ). Patient age ( $p = .03$ ), sedation score ( $p = .0001$ ), and dialysis ( $p = .0001$ ) had modest negative relations with temperature; quadratic relationships were identified with adrenaline and dobutamine. No interactions with particular temperature modes were identified ( $p > \text{or} = .12$  for all comparisons) and no relationship was identified with either mean arterial pressure or APACHE II score ( $p > \text{or} = .64$ ). The average temperature mode intraclass correlation coefficient for test-retest reliability was 0.72.

**CONCLUSION:** Agreement of tympanic with pulmonary temperature was inferior to that of urinary temperature, which, on overall assessment, seemed more likely to reflect PA core temperature.

*Prospective study*

**Pinheiro A, Mathew MC, Thomas M, Jacob M, Srivastava VM, Cherian R, Raju R. George R.**

**The clinical profile of children in India with pigmentary anomalies along the lines of Blaschko and central nervous system manifestations.**

***Pediatr Dermatol.* 2007 Jan-Feb;24(1):11-7.**

Department of Dermatology, Venereology and Leprosy, Christian Medical College, Vellore 632 004, Tamil Nadu, India.

The aim of this study was to describe the clinical profile of children with congenital pigmentary anomalies along Blaschko lines and the associated manifestations in the central nervous system. Twenty-six children aged 12 years or less (14 boys and 12 girls), with hypopigmentation and hyperpigmentation along Blaschko lines and central nervous system manifestations were included during the period June 2001 to December 2003. Detailed physical, cutaneous, and systemic examinations were carried out. Relevant investigations included histopathology, karyotyping, electroencephalogram, computerized tomography scans, and magnetic resonance imaging of the brain whenever possible. Twenty children had hyperpigmentation along the lines of Blaschko, four had hypopigmentation, and two had a combination of the two. Eight children had diffuse involvement. Of these, two each had hypomelanosis of Ito, incontinentia pigmenti and linear and whorled nevoid hypermelanosis. The remaining 20 patients could not be categorized as any of the described entities. The majority (92.3%) of patients manifested skin and

central nervous system disorders before the age of 2 years. Hyperpigmentation along Blaschko lines was significantly higher in patients with central nervous system manifestations ( $p = 0.01$ ). Developmental delay was the most frequent central nervous system presentation. Multiple systems were affected, including the eyes. Histology was useful to distinguish incontinentia pigmenti from other types of nevoid hyperpigmentation.

*Case series*

**Rajkumar AP, Jebaraj P, Tharyan P.**

**Multi-drug overdose risperidone, ziprasidone, valproate, trihexyphenidyl, and clonazepam.**

***J Assoc Physicians India.* 2007 Feb;55:146-8.**

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

Risperidone and ziprasidone are commonly used as first line drugs for the treatment of psychotic disorders and overdose with these agents is increasingly being reported. Relatively few of these reports have involved co-ingestion of multiple psychotropic agents. We report a case of overdose with risperidone, ziprasidone, valproate, trihexyphenidyl and clonazepam in a 25 years female, who recovered uneventfully with supportive management. Notwithstanding the benign outcome in this instance, age, co-ingested drugs, active metabolites and medical comorbidity are critical issues in overdose with atypical antipsychotics. As prescription of these drugs continues to increase in developing countries, systematic studies evaluating their clinical toxicity and management are necessary. The issues associated with overdose of multiple psychotropic agents and appropriate management policies are highlighted.

*Case report*

**Sakthivel A, Kekre NS, Gopalakrishnan G.**

**Unilateral asymptomatic adrenal tuberculoma: the role of percutaneous biopsy.**

***Scand J Urol Nephrol.* 2007;41(1):77-8.**

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

We report the case of a 55-year-old male with a large left adrenal mass that conformed to the normal shape of the adrenal gland. Percutaneous biopsy revealed tuberculosis and, following anti-tuberculosis therapy, there was a >75% decrease in the size of the mass. In large tumefactions of the adrenal glands in which a normal adrenal contour is maintained, a percutaneous biopsy may obviate the need for major intervention.

*Case report*

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

**Assessing insight in schizophrenia: East meets West.**

***Br J Psychiatry.* 2007 Mar;190:243-7.**

Section of Cognitive Neuropsychiatry, PO Box 68, Institute of Psychiatry, King's College London,

Denmark Hill, London SE5 8AF, UK.

**BACKGROUND:** Lack of insight has been observed in people with schizophrenia across cultures but assessment of insight must take into account prevailing illness models.

**AIMS:** To determine whether culturally specific and Western biomedical interpretations of insight and psychosis can be reconciled. **METHOD:** Patients with schizophrenia (n=131) were assessed during their first contact with psychiatric services in Vellore, South India. Patients' explanatory models, psychopathology and insight were investigated using a standard schedule translated into Tamil.

**RESULTS:** Supernatural explanations of symptoms were frequent. Some insight dimensions were weakly associated (inversely) with severity of symptoms whereas preserved insight was associated with anxiety, help-seeking and perception of change. Willingness to attribute symptoms to disease, in others and in one's self, but not to supernatural forces was strongly associated with insight.

**CONCLUSIONS:** The relationship between insight, awareness of illness and other clinical variables is similar in South India to elsewhere. However, the assessment of insight might have failed to capture locally accepted explanatory frameworks. An inclusive conceptual model which emphasises help-seeking is recommended.

*Cross-sectional study*

**Shyamkumar Nidugala Keshava, Ruben Sebben.**

**Renal Sub-capsular Hemorrhage: Unique Imaging Findings and Role of Interventional Management.**

***Vascular Disease Management.* 2007; 4(2): 37-40**

Christian Medical College, Vellore

We present two patients with sub-capsular renal hemorrhage treated with arterial embolization. One patient developed the hemorrhage secondary to a presumed perforation of the renal cortex by a guidewire during renal artery stenting, while hemorrhage was spontaneous in the other patient. Anticoagulation was a common factor in both. Computer tomography (CT) of the abdomen with arterial phase scans was useful in defining the sites of hemorrhage and planning intervention. The radiological findings and intervention are discussed with review of the relevant literature.

*Case reports*

**Thomas R, Christopher DJ, Roy A, Rose A, Chandy ST, Cherian RA, Rima J.**

**Chylothorax following innominate vein thrombosis--a rare complication of transvenous pacemaker implantation.**

***Respiration.* 2007;74(3):338-40.**

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

A case of chylothorax following innominate vein thrombosis which developed as a late complica-

tion of transvenous pacemaker implantation is discussed. A 78-year-old man presented with a refractory left-sided pleural effusion, which turned out to be a chylothorax. He had undergone a transvenous pacemaker implantation 6 years earlier for sick sinus syndrome. Aetiological work-up showed occlusion of the innominate vein as the cause for the chylothorax. The chylothorax resolved following pleurodesis with talc slurry, and the innominate vein was recanalized by angioplasty. To our knowledge, this is the first report of a case of this nature.

*Case report*

**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, and Department of Physical Medicine and Rehabilitation, 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 a 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 changes in the kinematic and kinetic parameters of gait with surface electromyographs 18 months after surgery. The focus of this paper is to highlight the utility of gait analysis following hemispherotomy with a view to directing postsurgical motor training and rehabilitation.

*Case report*

**Venkatesan T, Sen N, Korula PJ, Surendrababu NR, Raj JP, John P, Christopher S.**

**Blind placements of peripherally inserted antecubital central catheters: initial catheter tip position in relation to carina.**

***Br J Anaesth.* 2007 Jan;98(1):83-8. Epub 2006 Nov 22.**

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

**BACKGROUND:** We investigated how often blind placement of peripherally inserted central catheters (PICCs) through the antecubital veins results in a correct tip location in relation to carina and evaluated the inter-observer agreement in locating the tip of PICCs in plain radiography with digital imaging.

**METHODS:** In this study, 202 suitable chest radiographs with PICCs out of 803 patients were identified. An initial audit on the tip of these catheters in relation to carina was done by a consultant anaesthetist and was recorded as the first observer. The same sets of CXRs were examined by a consultant radiologist and the tips were identified and recorded as the second observer. Inter-observer agreement was assessed.

**RESULTS:** In 75 of 202 (37%), PICCs had a central tip location in relation to the carina. Fifty-five of 131 (42%) right-sided catheters had a central location compared with 20 of 71 (28%) of the left-sided catheters. The tip position for right-sided catheters was most frequently centrally located whereas the tip for left-sided catheters was most commonly positioned in the ipsilateral

innominate vein. There was excellent agreement between the observers in reporting the tip of PICCs at all positions ( $\kappa=0.87$ ) including central locations ( $\kappa=0.83$ ).

**CONCLUSIONS:** Right antecubital PICCs are more likely to be placed in the central location in relation to the carina. PICCs inserted through the left antecubital veins need to be pushed further down to aim for a central location. Inter-observer variability in identifying the tip of PICCs is least with the introduction of digital imaging.

*Comparative study*

**L. Warbah, M. Sathiyaseelan, C. VijayaKumar, B. Vasantharaj , S. Russell , K.S. Jacob**  
**Psychological distress, personality, and adjustment among nursing students.**

***Nurse Education Today 2006; 27: 597-601.***

College of Nursing; Department of Biostatistics, Department of Psychiatry, Christian Medical College, Vellore, India

Psychological distress and poor adjustment among a significant number of nursing students is an important issue facing nursing education. The concerns need to be studied in detail and solutions need to be built into the nursing course in order to help students with such difficulty. This study used a cross-sectional survey design to study psychological distress, personality and adjustment among nursing students attending the College of Nursing, Christian Medical College, Vellore, India. One hundred and forty five nursing students were assessed using the General Health Questionnaire 12, the Eysenck Personality Questionnaire, and the Bell's Adjustment Inventory to investigate psychological distress, personality profile and adjustment, respectively. Thirty participants (20.7%) of the 145 students assessed reported high scores on the General Health Questionnaire. Psychological distress was significantly associated with having neurotic personality and adjustment difficulties in different areas of functioning.

*Cross-sectional study*

#### Articles with no abstracts

**Aleyamma TK, Peedicayil A, Regi A.**

**Falciparum malaria in pregnancy.**

***Int J Gynaecol Obstet. 2007 Apr;97(1):48-9. Epub 2007 Feb 9.***

**Alex R, Prasad J, Kuruvilla A, Jacob KS.**

**Self-poisoning with pesticides in India.**

***Br J Psychiatry. 2007 Mar;190:274-5.***

**Alex R, Jacob KS.**

**Anti tuberculosis programmes in India: The absence of a public health approach.**

***National Medical Journal of India, 2007 Mar-April; 20: 101. (letter)***



**Ayyappan AP, Singh SE, Shah A.**

**Mature cystic teratoma in the falciform ligament of the liver.**

***J Postgrad Med.* 2007 Jan-Mar;53(1):48-9.**

**Jacob J, Paul T.**

**A boy with a limp. Slipped capital femoral epiphysis.**

***N Z Med J.* 2007 Mar 2120(1250):U2447.**

**Kuruvilla A, Alex R, Jacob KS**

**A note on the psychological responses to epidemics.**

***Journal of General Medicine* 2007; 19; 49-52.**

**Manoranjitham S, Jacob KS.**

**Focus group discussion.**

***Journal of the Nursing Association of India.* 2007; xcvi: 125-127**

**Tharyan P.**

**Free access to the Cochrane library for everyone in India.**

***Indian Journal of Surgery* 2007; 69:37-37.**

**Tharyan P.**

**Access to the Cochrane library for everyone in India.**

***National Medical Journal of India* 2007; 20 (1): 49.**

**Vasan SK, Jacob JJ, Seshadri MS.**

**Visual vignette. Albright-McCune syndrome.**

***Endocr Pract.* 2007 Mar-Apr;13(2):205.**

## Clinical: Interventional studies

**Das Adhikary S, Venkatesan T, Mohanty S, Ponniah M.**

**Difficult laryngoscopy made easy with the use of left-hand laryngoscope blade.**

***Br J Anaesth.* 2007 Jan;98(1):141-4. Epub 2006 Oct 30.**

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

In scenarios where difficult airway is anticipated as a result of a mass or any pathology in the right side of the upper airway, the plan of approach depends on the extent of difficulty assessed by various airway assessment tests/methods. If significant difficulty is suspected some of the available options include either an awake/sedated fibreoptic or blind nasal intubations. When the airway pathology involves part of the right side or exclusively the whole of the right side compressing the airway towards the left, there is no room to position a normal right or straight blade. A left-hand laryngoscope can be used in these types of cases where anatomy and contour of the blade manoeuvres the tongue and the right-sided lesion, thereby providing an unobstructed left-sided view of the larynx. The left-hand laryngoscope blade has been useful in converting the Cormack and Lehane grade III/IV laryngoscopies to grade II in our cases where the pathology was located exclusively on the right side of the airway. These cases suggest that there may be a role of left-hand laryngoscope in the management of difficult airway, particularly, in cases where there are right-sided mass lesions obstructing the airway.

Case series

**GNL Galappaththy, AAA Omari, P Tharyan.**

**Primaquine for preventing relapses in people with *Plasmodium vivax* malaria.**

***Cochrane Database of Systematic Reviews* 2007, Issue 1. Art. No.: CD004389.**

National Malaria Control Programme SRI LANKA; Liverpool School of Tropical Medicine UK; Prof BV Moses Centre for Clinical Trials and Evidence Based Healthcare, Christian Medical College, Vellore INDIA

**BACKGROUND:** *Plasmodium vivax* infections contribute to a significant proportion of the malaria infections in many countries. Primaquine is the most widely used drug for treating the dormant liver stage. Different primaquine dosing regimens are in use.

**OBJECTIVES:** To compare primaquine regimens for preventing relapses in people with *P. vivax* malaria.

**SEARCH STRATEGY:** In 2006, we searched the Cochrane Infectious Diseases Group's Specialized Register (January), CENTRAL (*The Cochrane Library* 2006, Issue 3), MEDLINE (October), EMBASE (January), LILACS (January). We also checked conference proceedings and reference lists, and contacted researchers, the World Health Organization (WHO), malaria mailing lists, and pharmaceutical companies.

**SELECTION CRITERIA:** Randomized and quasi-randomized controlled trials comparing primaquine plus chloroquine with chloroquine alone, and the standard primaquine regimen (15 mg/day for 14 days) with other primaquine-containing regimens in people with vivax malaria.

**DATA COLLECTION AND ANALYSIS:** All authors independently assessed trial eligibility and quality, and extracted data. We calculated odds ratios (OR) with 95% confidence intervals (CI) for dichotomous data, and used the random-effects model if there was significant heterogeneity.

**MAIN RESULTS:** Nine trials (3423 participants) met the inclusion criteria. Compared with chloroquine alone, five-day primaquine plus chloroquine was no better at preventing relapses (OR 1.04, 95% CI 0.64 to 1.69, random-effects model; 2104 participants; 3 trials), while 14-day primaquine plus chloroquine was significantly better (OR 0.24, 95% CI 0.12 to 0.45, random-effects model; 1071 participants, 6 trials). Limited data suggest the advantage for the 14-day primaquine regimen persisted for over six months (OR 0.41, 95% CI 0.29 to 0.60; 585 participants, 2 trials). Direct comparisons of the 14-day and five-day primaquine plus chloroquine regimens also confirm the superiority of the longer course (OR 13.33, 95% CI 3.45 to 51.44; 186 participants, 2 trials). Adverse effects were poorly reported, with three trials reporting skin rash, vertigo, headache, abdominal pain and/or nausea, and two trials reporting that primaquine was well tolerated.

**AUTHORS' CONCLUSIONS:** Primaquine (15 mg/kg/day for 14 days) plus chloroquine is more effective than chloroquine alone or primaquine (15 mg/kg for 5 days) plus chloroquine in preventing relapses of vivax malaria. Primaquine (five days) plus chloroquine appears no better than chloroquine. Countries should follow the WHO's recommendation for 14-day primaquine plus chloroquine regimen. Alternative regimens need to be evaluated in randomized controlled trials, which should also consider variations in regional *P. vivax* strains and the possibility of primaquine resistance, reinfection, and adherence in those who relapse.

*Systematic review and meta-analysis*

**Gopalakrishnan G, Prasad GS.**

**Management of urolithiasis with chronic renal failure.**

***Curr Opin Urol.* 2007 Mar;17(2):132-5.**

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

**PURPOSE OF REVIEW:** Epidemiological trends of urolithiasis and the prevalence of renal failure in patients with stones have changed. This is the era of minimally invasive therapy for stone disease. We review the impact of minimally invasive therapy on the management of urolithiasis in patients with renal failure and its outcome.

**RECENT FINDINGS:** The prevalence of urolithiasis has reached its peak and plateaued in Europe and North America while it is still rising in the underdeveloped countries. The prevalence of renal failure in patients with chronic renal failure has reduced by half over the last decade. Minimally invasive therapy like percutaneous nephrolithotripsy has fared better than open stone surgery in all respects. Patients with kidney stones do not have normal renal function. Recently, cystine stones, and stones in patients with renal tubular acidosis and bowel disease were shown to affect renal function significantly.

**SUMMARY:** Management of stones in chronic renal failure is challenging. Efforts should be made to minimize renal injury. Once a 'stone-free' kidney is achieved, steps should be taken to con-

serve renal function and address the issue of recurrence.

*Review*

**Jacob JJ, Mathew K, Thomas N.**

**Idiopathic sporadic tumoral calcinosis of the hip: successful oral bisphosphonate therapy.**

***Endocr Pract.* 2007 Mar-Apr;13(2):182-6.**

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

**OBJECTIVE:** To report the case of a woman with idiopathic sporadic tumoral calcinosis treated successfully with orally administered bisphosphonates.

**METHODS:** We report the clinical, laboratory, and imaging findings and describe the clinical course of tumoral calcinosis. The literature was reviewed for the pathophysiologic features and strategies for treatment of tumoral calcinosis. In addition, we specifically reviewed the use of bisphosphonates in tumoral calcinosis and the possible pharmacologic basis for the therapeutic benefit.

**RESULTS:** A 45-year-old woman presented with a 6-week history of left-sided pain in the hip in conjunction with stiffness after a trivial fall 4 weeks before the onset of symptoms. The findings on conventional radiology of the hip joint were consistent with tumoral calcinosis of the left hip. The biochemical profile of the patient was unremarkable. Oral treatment with alendronate, 70 mg once a week, yielded alleviation of symptoms within 12 weeks. Radiology of the left hip repeated after a period of 15 months revealed notable regression of the calcified lesion.

**CONCLUSION:** Bisphosphonate therapy may be considered as an alternative to surgical treatment in patients with idiopathic sporadic tumoral calcinosis.

*Case report*

**TJ Jacob, MRB Keighley, B Perakath.**

**Surgical intervention for chronic anorectal fistula [Protocol].**

***Cochrane Database of Systematic Reviews* 2007, Issue 1. Art. No.: CD006319.**

Department of Surgery, Christian Medical College, Vellore, INDIA

This is the protocol for a review and there is no abstract. The objectives are as follows: To assess the efficacy and morbidity of various surgical procedures for chronic anal fistula.

*Systematic Review (Protocol)*

**Livingstone RS, Chandy S, Peace TB, George PV, John B, Pati P.**

**Audit of radiation dose to patients during coronary angiography.**

***Indian J Med Sci.* 2007 Feb;61(2):83-90. Comment in: *Indian J Med Sci.* 2007 Feb;61(2):68-9. *Indian J Med Sci.* 2007 Feb;61(2):69-70.**

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

**BACKGROUND:** There is widespread concern about radiation doses imparted to patients during cardiology procedures in the medical community. The current study intends to audit and optimize radiation dose to patients undergoing coronary angiography (CA) performed using two dedicated cardiovascular machines.

**MATERIALS AND METHODS:** One hundred and forty nine patients who underwent CA are reported in this study. Dose auditing was done by implementing dose reduction strategies using spectral filters and by evaluating work practices of operators involved in performing CA.

**STATISTICAL ANALYSIS:** A Student's 't' test was used to analyze the statistical significance.

**RESULTS AND CONCLUSION:** The radiation dose imparted to patients was measured using dose area product (DAP) meter. The mean DAP values during CA before optimization was 55.86 Gy cm<sup>2</sup> and after optimization was 27.71 Gy cm<sup>2</sup>. No ill-effects of radiation were reported for patients who underwent CA. Use of copper filtration may be recommended for procedures performed using cardiovascular machines.

*Cross-sectional study*

**Peter JV, Chacko B, Moran JL**

**Comparison of closed endotracheal suction versus open endotracheal suction in the development of ventilator-associated pneumonia in intensive care patients: An evaluation using meta-analytic techniques.**

***Indian J Med Sci.* 2007 Apr;61(4):201-11.**

Department of Medical Intensive Care, Christian Medical College and Hospital, Vellore, India.

**BACKGROUND:** Ventilator-associated pneumonia (VAP), a frequent nosocomial infection in the intensive care, is associated with considerable morbidity. Endotracheal suctioning is routinely performed in mechanically ventilated patients to clear secretions. This study assessed if there were advantages of closed endotracheal suctioning (CES) over open endotracheal suctioning (OES) with respect to clinical outcomes.

**MATERIALS AND METHODS:** Trials comparing CES with OES were identified by search of MEDLINE (1966-July 2006) and bibliographies of relevant articles. Only trials reporting VAP and/or mortality were considered. Studies reporting only physiological outcomes were excluded.

**STATISTICAL ANALYSIS USED:** A meta-analysis of randomized controlled trials (RCTs) was performed using the random-effects estimator. The effect of suctioning type on VAP and mortality was reported as risk difference (RD) and duration of mechanical ventilation (MV) as mean weighted difference (MWD).

**RESULTS:** Nine RCTs fulfilled criteria for inclusion. There was no differential treatment effect of suctioning type (closed versus open, n = 9 studies) on VAP (RD - 0.01; 95% CI - 0.05, 0.03; P = 0.63) or on mortality (n = 5; RD 0.01; 95% CI - 0.04, 0.05; P = 0.8). Although OES was associated with a shorter duration of MV (n = 4; MWD -0.64; 95% CI 0.21, 1.06; P = 0.004), one study contributed significantly to the estimates. Heterogeneity of treatment effects was not observed.

**CONCLUSIONS:** This meta-analysis has not demonstrated a superiority of CES over OES with respect to VAP or mortality. Thus the decision for the use of CES may be based on possible benefits in patients requiring high respiratory supports, reduced costs in those needing prolonged MV or occupational health and safety concerns with OES.

*Meta-analysis*

**Reena C, Kekre AN, Kekre N.**

**Occult stress incontinence in women with pelvic organ prolapse.**

***Int J Gynaecol Obstet.* 2007 Apr;97(1):31-4. Epub 2007 Feb 8.**

Department of Obstetrics & Gynecology, Vellore, India.

**OBJECTIVES:** To study the prevalence of occult stress urinary incontinence (SUI) among Indian women with genitourinary prolapse, and determine the risk of developing SUI after vaginal hysterectomy and pelvic floor repair in Indian women with occult SUI.

**METHODS:** A prospective cohort study of 78 women with significant genitourinary prolapse without symptoms of SUI was conducted at Christian Medical College, Vellore, India. Before the surgical intervention, the prolapse was repositioned using a pessary and a Pyridium (Parke Davis, Morris Plains, NJ, USA) pad test was performed to detect occult SUI. The primary outcome studied was the risk of developing postoperative urinary incontinence.

**RESULTS:** Preoperatively, 67.9% of women were found to have occult SUI. The prevalence of SUI was 43.6% postoperatively, and 64.2% of the women with a positive result to the preoperative Pyridium pad test after pessary insertion were found to have urinary incontinence postoperatively. Postmenopausal women had twice the risk of developing occult SUI.

**CONCLUSION:** Preoperative testing is useful to identify women with genitourinary prolapse who have occult SUI. Women with a positive result may need a systematic clinical evaluation and urodynamic studies to characterize the incontinence. They can be then counseled preoperatively regarding concomitant anti-incontinence procedures.

*Prospective study*

**Stephen T, Kuruvila KT, Philip MA, Shukla V, Korula RJ.**

**Anomalous left anterior descending coronary artery from pulmonary artery with ventricular septal defect.**

***Ann Thorac Surg.* 2007 Mar;83(3):1175-7.**

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

Anomalous origin of the left anterior descending coronary artery with associated congenital defects is very rare. An angiogram of a 47-year-old woman admitted for a ventricular septal defect closure revealed an anomalous left anterior descending coronary artery arising from the left posterior sinus of the pulmonary artery. During the surgical procedure, the origin of the left anterior descending coronary artery was closed with pledgetted polypropylene sutures through the pulmonary artery. The ventricular septal defect was closed with a patch through the right atrium, and the left anterior descending coronary artery was bypassed with the left internal mammary artery.

*Case report*

**Subbanna PK, Margaret Shanti FX, George J, Tharion G, Neelakantan N, Durai S, Chandy SJ, Mathew BS, Suresh R.**

**Topical phenytoin solution for treating pressure ulcers: a prospective, randomized, double-blind clinical trial.**

***Spinal Cord.* 2007 Feb 6; [Epub ahead of print]**

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

STUDY DESIGN: Prospective, randomized, double-blind clinical trial.

OBJECTIVES: To evaluate the efficacy of topical phenytoin solution in treating pressure ulcers among patients with spinal cord disorders and to evaluate the systemic absorption of topical phenytoin.

SETTING: Physical Medicine and Rehabilitation Unit, Christian Medical College, Vellore, India.

METHODS: Twenty-eight patients with stage 2 pressure ulcers were randomized to receive either phenytoin solution (5 mg/ml) or normal saline dressing on their ulcers once daily for 15 days. Efficacy of the treatment was determined by assessing the reduction in Pressure Ulcer Scores for Healing (PUSH 3.0), ulcer volume and ulcer size as on day 16. Serum phenytoin concentrations were estimated to determine the systemic absorption of topical phenytoin.

RESULTS: Statistically insignificant but marginally higher reduction in PUSH 3.0 scores and ulcer size were seen with topical phenytoin treatment. Systemic absorption of topical phenytoin was negligible. No adverse drug events were detected during the study.

CONCLUSIONS: Phenytoin solution is a safe topical agent that accelerates healing of pressure ulcers. However, its efficacy is only slightly more than normal saline treatment.

*Randomized controlled trial*

### Articles with no Abstracts

**Basanth KK, Gopalakrishnan R, Jacob KS.**

**Clozapine-resistant mutism in noncatatonic schizophrenia.**

***J Postgrad Med.* 2007 Jan-Mar;53(1):75-6.**

**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.**

**Tharyan P.**

**ECT for depressed elderly: what is the evidence and is the evidence enough?**

***Int Psychogeriatr.* 2007 Feb;19(1):19-23, 27-35; discussion 24-6.**

*Review*

**Thiruvengkatarajan V, Rebecca J.**

**Anesthesia and graft-vs-host disease after hematopoietic stem cell transplantation.**

***Paediatr Anaesth.* 2007 Jan;17(1):7-15.**

*Review*

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