



Christian Medical College VELLORE

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Research

Digest





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Gagandeep Kang, MD, PhD, FRCPATH
Vice Principal (Research)

APPLIED BIOLOGY:

1. Aaron S, Alexander M, Maya T, Mathew V, Goel M, Nair SC, Mammen J, Vikram M.

Underlying prothrombotic states in pregnancy associated cerebral venous thrombosis

Neurol India; 2010, 58 (4): 555-9

Address: Department of Neurological Sciences, Neurology Unit, ChristianMedicalCollege, Vellore, Tamil Nadu, India.

BACKGROUND: The exact pathogenesis of pregnancy associated cerebral venous thrombosis is still unsettled. **Aims:** To identify possible inherited and acquired prothrombotic risk factors and also identify the factors associated with mortality in pregnancy associated CVT. **SETTINGS AND DESIGN:** Prospective cohort study to identify prothrombotic risk factors and case control study of influence of local traditional practice of puerperal water restriction on postpartum CVT. **MATERIALS AND METHODS:** Consecutive patients with pregnancy associated CVT seen over a period of three years. Thrombotic workup included genetic markers, protein assays, and other factors. **STATISTICAL ANALYSIS:** Univariate and chi-square analysis. **Results:** Of the 41 patients studied during the study period, 71% of patient had a single and 34% had multiple prothrombotic risk factors. Methylene tetrahydro-folate reductase (MTHFR) heterozygosity (19.5%) and factor V Leiden heterozygous (7.3%) were the commonest genetic markers. Hyperhomocysteinemia (34%) and elevated factor VIII levels (14.6%) were the other important risk factors. In this cohort the mortality was 17%. Mortality increased by odds of 1.3 for every additional prothrombotic marker. The factors associated with increased mortality included: status epilepticus ($P = 0.05$, OR 13.2, 95% CI 1.002 - 173), deep venous system involvement ($P = 0.016$, OR 9.64, 95% CI 1.53 - 60.6), presence of midline shift ($P = 0.012$, OR 24.7, 95% CI 2.05 - 29.8) and diffuse cerebral edema ($P = 0.006$, OR 14.5, 95% CI 2.18- 96.4). The traditional practice of decrease intake of water during puerperium was significant in woman with pregnancy associated CVT when compared to control subjects ($P < 0.02$). **CONCLUSION:** In patients with pregnancy associated CVT, prothrombotic markers can be multiple and are associated with increased odds of mortality. Deep venous system involvement, presence of midline shift and diffuse cerebral edema increased mortality.

Puerperal water restriction may be a modifiable risk factor.

PMID: 20739791

2. Balamurugan R, Magne F, Balakrishnan D, Suau A, Ramani S, Kang G, Ramakrishna BS.

Faecal bifidobacteria in Indian neonates & the effect of asymptomatic rotavirus infection during the first month of life

Indian J Med Res; 2010, 132 (6): 721-7

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

Background and Objectives : Bifidobacteria colonize the gut after the first week of life and remain an important component of the gut microbiota in infancy. This study was carried out to characterize the diversity and number of bifidobacteria colonizing the gut in Indian neonates and to investigate whether asymptomatic infection with rotavirus in the first month of life affected gut colonization by bifidobacteria. **Methods:** DNA was isolated from faeces of 14 term-born neonates who were under surveillance for rotavirus infection. Bacterial and bifidobacterial diversity was evaluated by temporal temperature gradient electrophoresis (TTGE) of 16S rDNA amplified using total bacteria and bifidobacteria-specific primers. Real time PCR, targeting 16S rDNA, was used to quantitate faecal bifidobacteria and enterobacteria. **Results:** TTGE of conserved bacterial 16S rDNA showed 3 dominant bands of which *Escherichia coli* (family Enterobacteriaceae) and *Bifidobacterium* (family Bifidobacteriaceae) were constant. TTGE of *Bifidobacterium* genus-specific DNA showed a single band in all neonates identified by sequencing as *Bifidobacterium longum* subsp. *infantis*. Faecal bifidobacterial counts (log 10 cfu/g faeces) ranged from 6.1 to 9.3 and enterobacterial counts from 6.3 to 9.5. Neonates without and with rotavirus infection in the first week of life did not show significant differences in the median count of bifidobacteria (log 10 count 7.48 vs. 7.41) or enterobacteria (log 10 count 8.79 vs. 7.92). **Interpretation and Conclusions :** *B. longum* subsp. *infantis* was the sole bifidobacterial species colonizing the gut of Indian neonates. Asymptomatic rotavirus infection in the first month of life was not associated with alteration in faecal bifidobacteria or enterobacteria.

PMID: 21245621

3. Balamurugan R, Mary RR, Chittaranjan S, Jancy H, Shobana Devi R, Ramakrishna BS.

Low levels of faecal lactobacilli in women with iron-deficiency anaemia in south India

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

PMID: 20447323

4. Chacko G, Chacko AG, Kovacs K, Scheithauer BW, Mani S, Muliyl JP, Seshadri MS.

The clinical significance of MIB-1 labeling index in pituitary adenomas.

Pituitary. 2010 Dec;13(4):337-44.

Section of Neuropathology, Department of Neurological Sciences & Pathology, Christian Medical College, Vellore, 632004, India, geetachacko@cmcvellore.ac.in.

Pituitary adenomas are unique in several ways—they are rarely malignant and yet can be invasive of several compartments. Recurrences in tumors with bland histological features that have been radically excised are a reason for frustration faced by endocrinologists and neurosurgeons in treatment of pituitary adenomas. Several attempts have therefore been made to determine the growth potential of pituitary adenomas. The aim of the present study was to define the biological significance of the MIB-1 labeling index (MIB-1 LI) in pituitary adenomas. The study included 159 cases of surgically treated pituitary adenoma seen in a single institution. MIB-1 LI was not found to be related to age or gender. The mean MIB-1 LI for clinically functional adenomas was marginally higher than that for clinically non-functional adenomas. There was a significant difference in the MIB-1 LI for tumors with a maximum diameter of more than 4 cm at a MIB-1 LI of $\geq 2\%$, however this difference was not statistically significant at a higher MIB-1 LI cut off value of $\geq 3\%$. The mean MIB-1 LI was significantly higher in tumors causing hydrocephalus and in those with cavernous sinus invasion and not when invasion was defined as invasion by tumor in any direction. We conclude that large pituitary macro adenomas, tumors filling the third ventricle causing hydrocephalus and tumors with true cavernous sinus invasions are more likely to have a higher proliferation index. Close follow up of tumors showing these imaging features would be recommended.

PMID: 20640601

5. Desire S, Balasubramanian P, Bajel A, George B, Viswabandya A, Mathews V, Srivastava A, Chandy M.

Frequency of TPMT alleles in Indian patients with acute lymphatic leukemia and effect on the dose of 6-mercaptopurine

Medical Oncol; 2010, 27 (4): 1046-9

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

Functional polymorphisms in the thiopurine methyl transferase (TPMT) gene have been associated with varying levels of enzyme activity and the occurrence of toxicity related to thiopurines. A total of 98 patients (66 pediatric and 32 adults) with precursor B acute lymphoblastic leukemia (Pre-B ALL) were evaluated for TPMT gene polymorphisms. The inability to tolerate

6-mercaptopurine (6-MP) at conventional doses was considered as a surrogate marker of hematologic toxicity. The allele frequency of TPMT*2, *3A, *3B and *3C in the study population was 0.5, 0, 0 and 2.6%, respectively, similar to the frequency observed in other Asian populations. Five patients were heterozygous for TPMT*3C variant allele, and one of these patient's was compound heterozygous with TPMT*2 variant as the other allele. The impact of TPMT polymorphisms on the toxicity and treatment outcome was assessed in 66 pediatric patients only, as there was no variant TPMT detected in the adult patients. Three of the 5 patients (60%) heterozygous for TPMT*2 or TPMT*3C polymorphisms and 12/61 patients (20%) with wild type TPMT genotype had more than 10% of reduction of 6-MP dose ($P=0.07$). The presence of TPMT polymorphisms did not seem to completely explain the variation in 6-MP toxicity in this small group of patients. Other novel variants in TPMT or variations in the genes involved in transport and biotransformation of 6-MP need to be evaluated in the Indian population.

PMID: 19830600

6. Fletcher GJ, Gnanamony M, Samuel P, Ismail AM, Kannangai R, Daniel D, Eapen CE, Abraham P. Association of mannose-binding lectin polymorphisms and HBV outcome in a South Indian population *Int J of Immunogenetics*; 2010, 37 (3): 177-84
Department of Gastrointestinal Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

Mannose binding lectin (MBL) is an important innate immune system pattern recognition molecule. The MBL gene polymorphisms are reported to play a crucial role in outcome of hepatitis B virus (HBV) infection. In this study, we ascertained the association of MBL genotypes with HBV outcome in a South Indian population. The MBL gene polymorphisms at codons 52, 54 and 57 of exon I, and promoter polymorphisms at -221 were typed by polymerase chain reaction-sequence specific primer in spontaneously recovered and in chronic HBV group. The allele frequency of codon 52 'C' was significantly higher in chronic HBV group than in the recovered group (98.5% vs. 93.6%; $P=0.003$) and codon 52 'T' was significantly higher in recovered group than in the chronic group (6.4% vs. 1.5%; $P=0.003$). In multivariate analysis, after adjusting for age, sex and state of origin, codon 52 'CC' and 'CT' genotypes were significantly associated with chronicity

and recovery respectively [odds ratio (OR), 0.25; 95% confidence interval (CI), 0.08-0.80, $P=0.02$] in co-dominant analyzing models. This was re-affirmed in analysis performed exclusively on Tamil Nadu subjects (OR, 0.23; 95% CI, 0.06-0.93, $P=0.039$). The frequency of low/none haplotype (XY/O) was significantly higher in recovered group than in chronic group (15.6% vs 7.5%) and associated with spontaneous recovery (OR, 2.28; 95% CI, 1.04-4.99, $P=0.035$). Our results provide preliminary evidence that inheritance of codon 52 genotypes and XY/O haplotype associated with low MBL level substantially determine the outcome of HBV infection in a sympatrically isolated South Indian population.

PMID: 20193030

7. Gupta M, Ashok Kumar J, Sitaram U, Neeraj S, Nancy A, Balasubramanian P, Abraham A, Mathews V, Viswabandya A, George B, Chandu M, Srivastava A, Srivastava VM. The t(6;9)(p22;q34) in myeloid neoplasms: a retrospective study of 16 cases *Cancer Genet Cytogenet*; 2010, 203 (2): 297-302
Cytogenetics Unit, Christian Medical College, Ida Scudder Road, Vellore 632004, India.

Among patients with acute myeloid leukemia (AML), the t(6;9) (p22;q34) is a rare but defined subset with a poor prognosis. We report 16 patients with the t(6;9), of whom 13 had AML, 2 had myelodysplastic syndrome (MDS), and 1 had chronic myeloid leukemia in myeloid blast crisis (CML-BC). All except for one were evaluated at diagnosis. The median age was 34.5 (range: 7-62 years), with 12 adults and 12 males. Trilineage dysplasia was present in 13 (81%). Marrow basophilia was seen in only two patients, one of whom had CML-BC. HLA-DR was positive in all 12 patients assessed, CD33 in 11, CD13 in 10, and CD34 in seven. Four patients had one other abnormality apart from the t(6;9). These were the t(9;22) in the patient with CML and deletion 9q, addition 13q, and an isochromosome 8q in the other three patients. There were no complex karyotypes. Fms-related tyrosine kinase 3—internal tandem duplication (FLT3-ITD) mutations were seen in seven of 13 patients. Follow-up details were available for six patients. Three received palliative care, and follow-up details were not available for the other seven. The response to chemotherapy was poor in the remaining patients. The only patients who survived

were three out of the four who had allogeneic hematopoietic stem cell transplantation (HSCT).

..... PMID: **21156248**

8. Manoharan A, Chatterjee S, Madhan S, Mathai D.

Evaluation of tigecycline activity in clinical isolates among Indian medical centers

Indian J Pathol Microbiol; 2010, 53 (4): 734-7

Benjamin M Pulimood Laboratories for Infection, Immunity and Inflammation (BMPLII), Department of Medicine Unit I and Infectious Disease, Christian Medical College, Vellore-632 004, Tamil Nadu, India. anandm@cmcvellore.ac.in

BACKGROUND: Resistance to multiple antibiotics among Gram-positive cocci (GPC) and Gram negative bacilli (GNB) is high in India. Tigecycline, a glycycline antibiotic is a newer treatment option for emerging single or multidrug-resistant (MDR) GPC and GNB. **MATERIAL AND METHOD:** We evaluated the in vitro activity of tigecycline and compared it against other antimicrobials. Between 2005-2007, seven Indian medical centers from diverse geographic regions forwarded 727 isolates [*Escherichia coli* (166), *Staphylococcus aureus* (125), *Klebsiella* spp (120), *Streptococcus pneumoniae* (102), *Enterococcus* spp. (100), *Pseudomonas aeruginosa* (50), *Acinetobacter* spp. (50) and *Enterobacter* spp. (14)] from patients with blood stream (BSI), skin and soft tissue (SSTI) including surgical site, urinary tract and respiratory infections to our reference laboratory. Susceptibility to 11 antimicrobials besides tigecycline included: vancomycin, linezolid, teicoplanin, quinopristin-dalfopristin, daptomycin, amikacin, imipenem, levofloxacin, meropenem, and piperacillin/tazobactam was determined by agar dilution and Etest method. **RESULT:** Tigecycline was active against all GPC (MIC 90 < 0.25 µg/ml), *E. coli* and *Klebsiella* spp. (MIC 90 ≤ 1 µg/ml). MDR *Acinetobacter* spp. showed lower susceptibility (70.6%) to tigecycline. Tigecycline MIC 90 values were not influenced by oxacillin resistance among *S. aureus*, *S. pneumoniae*, vancomycin resistance in *Enterococci* (VRE) and ESBL producing *E. coli*, *Klebsiella* spp. and *Enterobacter* spp. Increased resistance was seen to other antimicrobials among ESBL producing *E. coli*, *Klebsiella* spp., Metallo Beta Lactamase (MBL) producing *P. aeruginosa* and VRE. **CONCLUSION:** Tigecycline is an alternative option for emerging multidrug-resistant (MDR) pathogens

exhibiting promising spectrum/potency exceeding currently available agents seen in India.

..... PMID: **21045403**

9. Manoharan A, Chatterjee S, Mathai D.

Detection and characterization of metallo beta lactamases producing *Pseudomonas aeruginosa*

Indian J Med Microbiol; 2010, 28 (3): 241-4

Department of Medicine, Unit I and Infectious Diseases, Benjamin M Pulimood Laboratories for Infection, Immunity and Inflammation, Christian Medical College, Vellore 632004, Tamil Nadu, India.

This study was undertaken to evaluate phenotypic and genotypic methods for detection of Metallo-Beta-Lactamases (MBLs) among nosocomial *Pseudomonas aeruginosa*. Sixty one among 176 *P. aeruginosa* isolates, collected as part of a multicentric study (2005-2007), were evaluated for carbapenem resistance (CARB-R; resistant to either imipenem/meropenem) and screened for MBL by Combination Disk Diffusion Test (CDDT) using imipenem (IMP), meropenem (MER) and ceftazidime (CAZ) with EDTA. MBL positives were further confirmed by IMP + EDTA Etest. Twenty strains (42.6%) were found to be MBL producers among the 61 *P. aeruginosa*. PCR for IMP and VIM MBL was performed on 48 of the 61, 15 were positive for VIM MBL type. CDDT using IMP + EDTA had the highest sensitivity and specificity of 87.8% and 84.4% when compared to Etest, which was higher than the values obtained for CAZ + EDTA and MER + EDTA. CDDT using IMP + EDTA also compared very well with the PCR (specificity = 90.9%, sensitivity = 93.3%). CARB-R among *P. aeruginosa* is mediated predominantly via MBL production. Clinical *P. aeruginosa* isolates can be screened routinely using the less expensive IMP + EDTA CDDT in clinical microbiology laboratories.

..... PMID: **20644314**

10. Manoranjitham SD, Rajkumar AP, Thangadurai P, Prasad J, Jayakaran R, Jacob KS.

Risk factors for suicide in rural south India.

Br J Psychiatry. 2010 Jan;196(1):26-30. Comment in Br J Psychiatry. 2010 May;196(5):415; author reply 415-6.

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

BACKGROUND: The relative contributions of psychosocial stress and psychiatric morbidity to suicide are a subject of debate.

AIMS: To determine major risk factors for suicide in rural south India.

METHOD: We used a matched case-control design and psychological autopsy to assess 100 consecutive suicides and 100 living controls matched for age, gender and neighbourhood.

RESULTS: Thirty-seven (37%) of those who died by suicide had a DSM-III-R

psychiatric diagnosis. Alcohol dependence (16%) and adjustment disorders (15%) were the most common categories. The prevalence rates for schizophrenia, major depressive episode and dysthymia were 2% each. Ongoing stress and chronic pain heightened the risk of suicide. Living alone and a break in a steady relationship within the past year were also significantly associated with suicide.

CONCLUSIONS: Psychosocial stress and social isolation, rather than psychiatric morbidity, are risk factors for suicide in rural south India.

PMID: 20044655

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

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

Biol Blood Marrow Transplantation: Journal of the American Society for Blood and Marrow Transplantation; 2010, 16 (6): 854-60.

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

We investigated the impact of the number of infused and reconstituted immunocompetent cells including dendritic cells (DCs) on clinical outcome of patients with hematologic malignancies undergoing an allogeneic peripheral blood stem cell transplantation. Sixty-nine consecutive patients with hematologic malignancies were included in the analysis. The median age of the cohort was 32 years (range: 2-62 years) and there were 39 (57%) males. Twenty-one (30%) patients relapsed with a cumulative incidence of 44 % +/- 14% at a median follow up of 28 months. On a multivariate analysis, a high plasmacytoid dendritic cell (PC) content in the graft was associated with higher risk of relapse. The patients were further categorized based on the median PC counts in the graft as high ($\geq 2.3 \times 10^6$)/

kg) and low ($< 2.3 \times 10^6$ /kg) groups. The baseline characteristics of these 2 groups were comparable. The group that had a high PC content in the graft had significantly higher risk of relapse and lower overall survival (OS) and event-free survival (EFS). Our data suggests that PC content in the graft predicts clinical outcomes such as relapse and survival in patients with hematologic malignancies undergoing an allogeneic HLA matched related peripheral blood stem cell transplantation. There is potential for pretransplant manipulation of this cellular subset in the graft.

PMID: 20138229

CASE REPORTS:

12. Aaron S, Anupriya A, Sunithi, M, Mathew V, Maya T, Goyal MK, Alexander, M.

MELAS: Recurrent reversible hemianopia

Neurol India; 2010, 58 (5): 791-3

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

PMID: 21045518

13. Amritanand R, Venkatesh K, Premkumar AJ, Sundararaj GD.

Pathological dislocation of the dorsal spine following granulocytic sarcoma in a non-leukaemic patient

Eur Spine J; 2010, 19 Suppl 2 S114-7

Spinal Disorders Services, Department of Orthopedics Unit 1, Christian Medical College, Vellore, Tamil Nadu 632004, India. rohit@cmcvellore.ac.in

We describe a previously healthy, non-leukaemic young male presenting with neurological deficit and a pathological dislocation of D8 over D9 vertebra. The magnetic resonance imaging showed an enhancing soft tissue tumor. His basic laboratory workup as well as a bone marrow biopsy was normal. Through a single midline posterior approach, he underwent a decompressive laminectomy of D8 and D9 vertebra, anterior column reconstruction with a meshed titanium cage and posterior pedicle screw instrumentation. The histological diagnosis of granulocytic sarcoma was confirmed by appropriate immuno-histochemical studies. He received postoperative radiotherapy following which his wound dehisced and the tumor fun gated and spread to his left thigh. He declined chemotherapy and unfortunately expired 9 months later. This case is presented to draw attention to the unusual

presentation and to stress that granulocytic sarcoma should be kept in mind when making the differential diagnosis in patients with signs of spinal cord compression even in non-leukaemic individuals.

..... PMID: **19688354**

14. Annapandian VM, Basu G, Mathew BS, Fleming DH, Jacob CK, John GT.

Can mycophenolic acid dose requirement during the first transplant help predict dosing for the second transplant?

Nephrol Dial Transplant; 2010, 25 (10): 3449-52

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

We describe the pharmacokinetic profile of mycophenolic acid (MPA) in a patient receiving Mycophenolate mofetil (MMF) during her first and second renal transplantations. The MMF dose required to achieve a therapeutic range of MPA-AUC(0)-(12)(h) early following the second transplantation was 10 times greater than that required late following the first transplantation. Her MMF requirement then declined and continued to decrease even beyond 1 year. Intra-individual variability in MPA profiles precluded the ability to predict MMF dosing for the second transplant based on that during the first. Therapeutic drug monitoring of MMF should be continued beyond 1 year of transplantation.

..... PMID: **20647193**

15. Arora N, Nair S, Srivastava, A.

T/NK-cell post-transplant lymphoproliferative disorder of the urinary bladder: a case report.

J Clin Pathol; 2010.

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

..... PMID: **20861002**

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

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

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

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

Spinal extradural cysts do not normally present as a visible paraspinal mass or cause compression of the abdominal organs. The authors describe the case of

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

..... PMID: **20515331**

17. Balukrishna S, Jennifer P, Viswanathan PN.

Solitary Subcutaneous Metastasis from Squamous Cell Carcinoma of the Esophagus: A Case Report and Brief Review of Literature

J Gastrointest Cancer; 2010

Department of Radiation Oncology Unit 1, Christian Medical College, Ida Scudder Road, Vellore, 632 004, Tamil Nadu, India, balunair@cmcvellore.ac.in.

..... PMID: **21174174**

18. Banerji JS.

Gas in the renal area: emphysematous pyelonephritis Urol J; 2010, 7 (4): 225

Department of Urology, Christian Medical College, Vellore, Tamil Nadu, India. johnsbanerji2002@yahoo.co.in

..... PMID: **21170849**

19. Banerji JS, Nagarajan, R.

Fun gating anorectal carcinoma causing urinary retention Urol J; 2010, 7 (3): 201

Department of Urology, Christian Medical College, Vellore, India. johnsbanerji2002@yahoo.co.in

..... PMID: **20845299**

20. Bertha A, Danda S, Tjandrajana E, Srivastava V, Subramanian R, Mathew J.
Klinefelter syndrome with systemic lupus erythematosus in an Indian man. *Lupus* 2010 Jun;19(7):870-1. Epub 2010 Feb 15.
Clinical Genetics Unit, CMC, Vellore, India.

Previously, cases of systemic lupus erythematosus (SLE) and Klinefelter syndrome (KS) in men have been reported in Western populations. We report the case of a 30-year-old man from southern India with known infertility who was diagnosed to have SLE and KS by fluorescence in-situ hybridization, as routine karyotype cultures failed. The diagnosis has implications in management and highlights the need for strong clinical suspicion and laboratory confirmation of KS by molecular methods when suspected in all men with SLE. Quicker, long-term remission and genetic counseling of such individuals can help in better management and coping with this chronic, potentially fatal disease. *Lupus* (2010) 19, 870-871.

PMID: 20156931

Bichpuria S, Joseph E, Mani S, Rajshekhar V, Bugalia V, Gibikote S.
A retroclival cystic craniopharyngioma
Acta Neurol Belg; 2010, 110 (4): 356-7
Department of Radiodiagnosis, Christian Medical College Hospital, Vellore, T.N. 632004, India.
sumittheleo@yahoo.com

PMID: 21305871

Cherian RS, Keshava SN, George O, Joseph E.
Cervical aortic arch in a patient with Turner syndrome
Diagn Intervent Radiol; 2010, 16 (2): 132-3
Department of Radiology, Christian Medical College, Vellore, Tamil-Nadu, India. vijitkc@hotmail.com

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

PMID: 1983899

Chrispal A, Vasuki Z, Thomas EM, Boorugu HK.
Mixed connective tissue disorder and Castleman's disease
J Assoc Physicians India; 2010, 58 515-7
Department of Medicine, Christian Medical College, Vellore.

We present a 16-year-old girl who presented with polyarthritis in association with Raynaud's phenomenon, malar rash, oral ulcers, photosensitivity and alopecia of 6 months duration. On evaluation, it emerged that she had a mixed connective tissue disorder with a mesangio-proliferative glomerulonephritis. Her Chest radiograph revealed a well defined left mid and lower zone opacity with evidence of a hilar mass on CT Thorax. Histopathological examination following CT guided biopsy of the mass revealed a hyaline vascular type of Castleman's disease. Mixed Connective Tissue Disorder with Castleman's Disease is a rare association; the patient presenting with varied and interesting manifestations. It is important to understand this association in view of management. The exact etio-pathogenesis of the autoimmune manifestations in patients with Castleman's disease is not clear. Treatment with immunosuppression can suppress both immune manifestations and result in tumour regression as well.

PMID: 21189705

Das S, Ram TS, Chacko RT, Pavamani S, Viswanathan PN, Viswanathan FR, Kurian S.
Primitive neuroectodermal tumor of the jejunum; a case report and literature review.
J Gastrointestinal Cancer; 2010, 41 (4): 257-60
Department of Radiation Oncology Unit I, Christian Medical College Vellore, Vellore, 632004 Tamil Nadu, India.

OBJECTIVE AND IMPORTANCE: The aim of this paper is to report an unusual presentation of extranodal follicular dendritic cell tumor of neck with spinal metastasis. Follicular dendritic cells are nonlymphoid immune accessory cells present in the germinal centers of lymphoid follicles and play a crucial role in the induction and maintenance of the humoral immune response. Tumors from these cells are rare and treatment modality poorly defined. **CLINICAL PRESENTATION:** A 37-year-old lady presented with

recurrent neck swelling which was initially reported as malignant paraganglioma. The primary disease was treated with surgery and radiotherapy. Eleven years later, the patient presented with metastasis to the spinal cord. Subsequent immunohistochemical analysis of the primary site tumor and the metastatic deposits revealed it to be a follicular dendritic cell tumor. **INTERVENTION:** The patient was treated with surgery followed by radiotherapy to spine, and one and half year after treatment, the patient is doing well and has regained complete motor functions. **CONCLUSION:** Metastasis to spinal cord for follicular dendritic cell tumor is very rare, and to the best of our knowledge, no such case has been previously reported in the scientific literature so far. In the present case, good local control was achieved with initial surgery and radiotherapy but resulted in distant failure after 11 years. This underlines the need for adjuvant systemic therapy, and understanding the biology of the tumor may help in formulating targeted therapy in the future for this rare disorder.

..... **PMID: 20349158**

David S, Peter J, Raju R, Padmaja P, Mohanraj P.
Oculocutaneous anthrax: detection and treatment
Clin Ophthalmol; 2010, 4 713-6.
Department of Ophthalmology, Schell eye Hospital,
Christian Medical College Hospital, Vellore, India;

Anthrax, a zoonotic disease that primarily affects herbivores, has received recent attention as a potential agent of bioterrorism. We report a patient who presented with a 4-day history of pain, watering and difficulty in opening the left upper and lower eyelids, and fever. Clinical examination revealed brawny nonpitting edema with serosanguinous discharge. The history of the death of his sheep 1 week prior to the illness provided the clue to the diagnosis. Although standard cultures of the blood and the serous fluid from the lesion were negative, probably as a result of prior treatment, the diagnosis of cutaneous anthrax was made by a polymerase chain reaction (PCR) test of the serous fluid. Serial photographs demonstrating resolution of the lesion with appropriate antibiotic therapy are presented.

..... **PMID: 20689787**

Gopal GK, Anugrah C, Boorugu H.
Scrub typhus associated macrophage activation syndrome

Trop Doct; 2010, 40 (4): 249-50

Department of Medicine - 3, Christian Medical College,
Vellore, India. gops95@yahoo.com

Macrophage activation syndrome (MAS) is a rare phenomenon that occurs either primarily or secondary to a multitude of conditions, including juvenile rheumatoid arthritis most commonly, and other infections like enteric fever and tuberculosis. It has been reported as an extremely rare complication of scrub typhus with no cases presented from India. We report three cases of scrub typhus presenting with confirmed MAS between January 2007 and December 2007 to a tertiary care hospital in South India. All three patients had clinical and laboratory evidence for scrub typhus and MAS. All the patients responded promptly to antibiotics and made an uneventful recovery. These three patients are presented to highlight the importance of considering scrub typhus in patients with MAS following acute febrile illnesses.

..... **PMID: 20667920**

Joseph E, Irodi A, Sureka J, Padmapriya G, Chacko G.
Unusual fourthventricular mass.
Acta Neurol Belg. 2010 Sep;110(3):289.
Department of Radiology, Christian Medical College,
Vellore, Tamil Nadu, India. [corrected]

..... **PMID: 21114145**

Erratum in: Acta Neurol Belg. 2011 Mar;111(1):84.
Joseph, Elisabeth [corrected to Joseph, Elizabeth].
Acta Neurol Belg. 2010 Dec;110(4):358. Irodi, Aparna
[added]; Sureka, Jyoti
[added]; Padmapriya, G [added]; Chacko, Geeta
[added].

Iyyadurai R, Surekha V, Sathyendra S, Paul Wilson B,
Gopinath KG.
Azadirachtin poisoning: a case report
Department of Medicine, Christian Medical College,
Vellore, Tamil Nadu, India.
Clin Toxicol (Phila). 2010 Oct;48(8):857-8.

The use of neem-based products is widespread in the Indian Subcontinent. Neem-based pesticides obtained

from neem kernels are considered natural and safe. The toxic effects of ingestion and overdose of this pesticide in adults have not been described in this literature. We report the case of a 35-year-old lady who had consumed Azadirachtin in an attempt of deliberate self-harm. The patient had features of neurotoxicity because of Azadirachtin requiring intensive medical care with mechanical ventilation. The patient survived the overdose with no long-lasting side effects of the toxin.

PMID: 20932102

John SM, Venkatesan S, Tharyan A, Bhattacharji, S.
The challenge of patients with severe psychiatric illness who do not access care - a way forward
Trop Doct; 2010, 40 (4): 247-8
Low Cost Effective Care Unit/Ida Scudder Urban Health Centre, Christian Medical College, Vellore, India.
rikkisush@cmcvellore.ac.in

Psychiatric illnesses are a significant cause of morbidity all over the world. In India many people with mental disorders are unable to access psychiatric care for a variety of reasons. This article describes the successful management of a person with schizophrenia in the community through a primary care team in liaison with psychiatrist services.

PMID: 20826590

Joseph P, Raju RS, Vyas FL, Eapen A, Sitaram V.
Portal annular pancreas. A rare variant and a new classification
JOP; 2010, 11 (5): 453-5
Department of General Surgery Unit IV (Hepato-Biliary Pancreatic Surgery), Christian Medical College, Vellore, Tamil Nadu, India. pj1982@cmcvellore.ac.in

CONTEXT: Portal annular pancreas is a rare congenital anomaly resulting

from fusion of the pancreatic parenchyma around the portal vein/superior mesenteric vein. It is asymptomatic, but could have serious consequences during pancreatic surgery, if unrecognized. We describe a variant of this anomaly encountered during pancreaticoduodenectomy and propose a new classification. CASE REPORT: We report a 51-year-old male who underwent a pancreaticoduodenectomy for periampullary carcinoma. After division of the

pancreatic neck, a sheath of tissue was found posterior and extending to the left of the portal vein. When we divided this tissue, a large duct was encountered; this duct communicated with the main pancreatic duct. On review of the CT images, the main pancreatic duct was seen to be passing posterior to the portal vein and a smaller accessory pancreatic duct was present anterior to the portal vein. We describe the surgical implications. CONCLUSION: This variant of portal annular pancreas has not yet been reported during pancreaticoduodenectomy and we propose a new classification for this fusion anomaly.

PMID: 20818114

Kamath MS, Aleyamma TK, Muthukumar K, Kumar RM, George K.
A rare case report: ovarian heterotopic pregnancy after in vitro fertilization
Fertil Steril; 2010, 94 (5): 1910 e9-11
Reproductive Medicine Unit, Christian Medical College Hospital, Vellore, India.

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

PMID: 20362282

Koshy B, Surendrababu NR.
Image in medicine. Dyke-Davidoff-Masson syndrome
Annals Academy Med, Singapore; 2010, 39 (6): 501-2
Department of Developmental Paediatrics, Christian Medical College, India. beenakurien@cmcvellore.ac.in

PMID: 20625632

Koshy CG, Eapen CE, Lakshminarayan, R.

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

**Cardiovascular Interventional Radiol; 2010, 33 (3): 624-6
Department of Radiology, Christian Medical College,
Vellore, Tamil Nadu 632004, India.
gkchiramel@gmail.com**

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

PMID: 19484288

Kurien R, Manipadam MT, Rupa V.

Oncogenic osteomalacia in a patient with an ethmoid sinus tumor

J Laryngol Otol; 2010, 124 (7): 799-803

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

OBJECTIVE: To highlight the clinical presentation and management of a rare case of oncogenic osteomalacia due to an ethmoid sinus tumor. MATERIALS AND METHODS: We examined the case records of a 55-year-old man who presented with progressive fatigue, weakness and bone pain, and noted the clinical presentation, laboratory investigations, computed tomography findings, operative notes and follow-up details. CONCLUSION: Oncogenic osteomalacia secondary to a Para nasal sinus neoplasm is a rare entity. The causative tumor is often occult and may be missed by routine clinical examination. This case report illustrates the appropriate pattern of evaluation and management to ensure a successful outcome.

PMID: 20003602

Mahasuar R, Kuruvilla A, Jacob K.

Palatal tremor after lithium and carbamazepine use: a case report

J Med Case Reports; 2010, 4 176

**Department of Psychiatry, Christian Medical College,
Vellore 632002, India. sanju@cmcvellore.ac.in.**

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

PMID: 20537197

Mukha RP, Kumar S, Ramani MK, Kekre NS.

Isolated Malacoplakia of the bladder: a rare case report and review of literature

Int Urol Nephrol; 2010, 42 (2): 349-50

**Department of Urology, Christian Medical College and
Hospital Vellore, Vellore, Tamil Nadu 632004, India.
mukhas@gmail.com**

PMID: 19669585

Nirmal TJ.

Tuberous sclerosis complex

Urol J; 2010, 7 (4): 224

**Department of Urology, Christian Medical College,
Vellore, India. nirmaltj@gmail.com**

PMID: 21170848

NithyananthM, CherianVM, JepegnanamTS.

Reconstruction of traumatic medial malleolus loss: A case report

**Foot and ankle surgery : official journal of the European
Society of Foot and Ankle Surgeons; 2010, 16 (2): e37-9**

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

We describe the reconstruction of the medial malleolus in a severe open ankle injury with iliac crest bone graft and sural artery flap in a young adult. At

two years follow-up he had a good outcome with a painless, stable ankle with nearly full plantarflexion but restricted dorsiflexion.

PMID: 20483127

Padhan P, Danda D.

Parkinsonism mimicking rheumatoid arthritis

J Rheumatol; 2010, 37 (6): 1266

**Department of Clinical Immunology and Rheumatology,
Christian Medical College, Vellore, 632004 India.
prasanta.padhan@gmail.com**

PMID: 20516037

Perakath B, KeighleyMR.

Peritonitis following stapling of a flush ileostomy

Techniques in Coloproctol; 2010, 14 (2): 185-6

**Department of Surgery, Christian Medical College,
Vellore, India, benjamin@cmcvellore.ac.in**

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

PMID: 20358388

Peter CV, Williams AP, Korula A.

Hoarseness of voice and skin lesions since childhood

J Assoc Physicians India; 2010, 58 384

**Department of Dermatology, Christian Medical College,
Vellore 632 002**

PMID: 21125781

Peter D, Thomas M, Mathews M.

Ulcer over chin in an immunocompromised individual

Ame J Trop Med Hyg; 2010, 82 (6): 979

**Department of Dermatology, Christian Medical College,
Vellore 632004, Tamil Nadu, India. dincypeter@gmail.com**

PMID: 20519586

Peter J, David S, Joseph G, Horo S, Danda D.

**Hypoperfusive and hypertensive ocular manifestations
in Takayasu arteritis**

Clin Ophthalmol; 2010, 4 1173-6

**Department of Ophthalmology, Schell Eye Hospital,
Vellore, India.**

Takayasu arteritis is a relatively rare inflammatory arteritis that can be associated with ocular manifestations. We report four patients with proven Takayasu arteritis; two patients manifested hypoperfusive ocular manifestations of ocular ischemic syndrome and anterior ischemic optic neuropathy whilst two others had exudative retinal detachment and papilledema as a result of severe hypertension. The ischemic ocular manifestations were a result of hypoperfusion of the ocular structures due to occlusive arteritis of the aortic arch and its branches. The exudative retinal detachment and papilledema were manifestations of severe hypertension due to renal arterial involvement. Patients with Takayasu arteritis should be referred for ophthalmic assessment and screening for hypoperfusive and hypertensive manifestations.

PMID: 21060667

Prabhu K, Kurien M, Chacko AG.

**Endoscopic transsphenoidal approach to petrous apex
cholesterol granulomas**

Br J Neurosurg; 2010,

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

Cholesterol granulomas of the petrous apex are inflammatory reactions due to obstruction of air cells within the petrous apex. We report two cases of petrous apex cholesterol granulomas that were treated via the endoscopic transsphenoidal route. The transsphenoidal approach is minimally invasive, preserves hearing and drains these cysts into the sphenoid sinus. We consider this approach to be the technique of choice for a cholesterol granuloma that abuts sphenoid sinus.

PMID: 20874456

Prabhu K, Nair S, Chacko AG.

**Acute submandibular sialadenitis as a cause of unilateral
neck swelling after posterior fossa surgery in sitting
position**

Neurol India; 2010, 58 (6): 963-4

**Department of Neurosurgery, Christian Medical College,
Vellore, Tamil Nadu-632 004, India.**

PMID: 21150076

Prithishkumar, IJ, Kanakasabapathy I.
Agenesis of the left lobe of liver - A rare anomaly with associated hepatic arterial variations
Clinical Anat; 2010, 23 (8): 899-901
Department of Anatomy, Christian Medical College, Vellore, Tamilnadu, India. drivanjames@gmail.com

..... **PMID: 20112347**

Sahajanandhan R, Saravanan PA, Ponniah M, Jacob JI, Gupta, AK, Nambi GI.
Post-burn contracture neck with extreme microstomia and fibrosed obliterated nose: a unique airway challenge
Natl Med J India; 2010, 23 (5): 281-2
Department of Plastic Surgery, Christian Medical College and Hospital, Vellore 632002, Tamil Nadu, India. rajsahajanandhan@gmail.com

..... **PMID: 21250583**

Samson SK, NairPR, BaldiaM, Joseph, M.
Television tip-over head injuries in children
Neurol India; 2010, 58 (5): 752-5
Department of Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

Head injuries caused by television (TV) sets falling on small children are becoming frequent in India with increasing sales of TV sets. This report describes television tip-over injuries in eight children aged 14 months to 6 years. Symptoms and findings were varied, from only swelling of the eyes to coma. Head computerized tomography scan findings were also diverse and included fractures (most common), intracranial hematomas and infarcts. Six of the eight children were successfully managed conservatively, one patient died on the third postoperative day, and one patient refused admission. The anatomical proportions and biomechanics of spine and body of small children make them more vulnerable to these crushing types of head injuries. As there is significant morbidity and mortality associated with these injuries, there is a need for increased awareness about these injuries among health personnel, general public, teachers, government officials and TV-manufacturing companies.

..... **PMID: 21045503**

29.

Simha A, John M, Albert RR, Kuriakose T.
Orbito-sinal foreign body
Indian J Ophthalmol; 2010, 58 (6): 530-2
Department of Ophthalmolgy, Christian Medical College, Vellore, India. arathisimha@yahoo.com

Perforating injuries of the orbit involving the paranasal sinuses are uncommon. We report a case in which a large wooden foreign body lodged in the posterior orbit and maxillary sinus was surgically removed by a combined approach by ophthalmologists and ear, nose and throat surgeons.

..... **PMID: 20952841**

Sinha R, Agarwal I.
Anuria in an infant secondary to bilateral ureteric stones
Clin Exp Nephrol; 2010, 14 (5): 520-1
Department of Child Health (Unit II), Pediatric Nephrology Christian Medical College, Vellore, India, rajivsinha_in@yahoo.com.

..... **PMID: 20676719**

Srinivas B, Joseph V, Chacko G, Rajshekhar V.
Extradural developmental dural root sleeve cyst presenting as a lumbar paraspinal mass with renal compression in an infant
J Neurosurgery. Pediatrics; 2010, 5 (6): 586-90
Department of Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India.

Spinal extradural cysts do not normally present as a visible paraspinal mass or cause compression of the abdominal organs. The authors describe the case of a 9-month-old boy with multiple spinal extradural cysts. The largest of these cysts was along the right L-2 nerve root with significant extraspinal extension resulting in a visible slow-growing swelling in the right paraspinal region and radiological evidence of compression of the right kidney with hydronephrosis. Another large cyst along the left T-12 root caused radiologically evident compression of the left kidney but to a lesser degree. The patient also had monoparesis of the left lower limb and phenotypic features of Noonan syndrome. The authors performed marsupialization of the cysts, as well as repair of the fistula between the subarachnoid space and the cyst on the right side along the L-2 root and on the left

side along the T-12 root. At 1-year follow-up, there was no paraspinal mass and the lower limbs exhibited normal power. Magnetic resonance imaging confirmed marked reduction in the size of the cysts and relief of the renal compression. To the authors' knowledge, their patient is the youngest reported in literature to have a spinal extradural cyst and also the first with the cyst presenting as a paraspinal mass.

PMID: 20515331

Thomas EM, Gibikote S, Panwar JS, Mathew J.
Congenital nasal pyriform aperture stenosis: A rare cause of nasal airway obstruction in a neonate
Indian J Radiol Imaging; 2010, 20 (4): 266-8
Department of Radiology, Christian Medical College, Vellore, Tamil Nadu, India.

Congenital nasal pyriform aperture stenosis (CNPAS) is a rare cause of nasal airway obstruction that clinically mimics choanal atresia, but needs to be differentiated from the latter because of the widely divergent modes of management. We present a case of CNPAS, to highlight the importance of recognizing the classic signs of CNPAS on cross-sectional imaging.

PMID: 21423901

Varghese S, Tamilarasi V, Jacob CK, John GT.
Jejunal mesenteric artery laceration following blind peritoneal catheter insertion using the trocar method
Perit Dial Int; 2010, 30 (5): 573-4
Department of Nephrology Christian Medical College Vellore, India.

PMID: 20829552

Krishnan V, Amritanand R, Sundararaj GD.
Methicillin-resistant Staphylococcus aureus as a cause of lumbar facet joint septic arthritis: a report of two cases.
J Bone Joint Surg Am. 2010 Feb;92(2):465-8.
Spinal Disorders Services, Department of Orthopaedics Unit 1, Christian Medical College, Vellore, Tamil Nadu-632004, India.

PMID: 20124076

CLINICAL EPIDEMIOLOGY

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

Multisite study of cryptosporidiosis in children with diarrhea in India. *J Clin Microbiol*. 2010 Jun;48(6):2075-81. Epub 2010 Apr 14.

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

Cryptosporidium spp., a common cause of diarrhea in children, were investigated in the first multisite study in India. Diarrheal stools from hospitalized children aged <5 years from Delhi, Trichy, and Vellore were analyzed by microscopy, PCR-restriction fragment length polymorphism (RFLP), and/or sequencing at the small-subunit (SSU) rRNA and *Cp*gp40/15 loci for species determination and subgenotyping, respectively. Seventy of 2,579 (2.7%) children, 75% of whom were <2 years old, had cryptosporidial diarrhea as determined by microscopy. Genotyping and subgenotyping showed that *Cryptosporidium hominis* was the most commonly identified species (59/67 children), and subgenotypes Ie, Ia, Ib, and Id were common in all centers. A novel *C. parvum* subgenotype, II_n, was identified in Vellore. Meteorological analysis revealed a higher rate of cryptosporidial positivity during hotter and drier weather in Delhi.

PMID: 20392919

Ajjampur SS, Sarkar R, Sankaran P, Kannan A, Menon VK, Muliylil J, Ward H, Kang G.

Symptomatic and asymptomatic *Cryptosporidium* infections in children in a semi-urban slum community in southern India

Am J Trop Med Hyg; 2010, 83 (5): 1110-5

Department of Gastrointestinal Sciences, Christian Medical College, Vellore, India.
sitararao@cmcvellore.ac.in

Cryptosporidium is a leading cause of childhood diarrhea in developing countries. We investigated symptomatic and asymptomatic cryptosporidiosis in 20 children less than two years of age in a semi-urban slum in southern India. All surveillance (conducted every two weeks) and diarrheal samples from 20 children (n = 1,036) with cryptosporidial diarrhea

previously identified by stool microscopy were tested by polymerase chain reaction-restriction fragment length polymorphism for species and subgenotype determination. Thirty-five episodes of cryptosporidiosis were identified in 20 children, of which 25 were diarrheal. Fifteen episodes were associated with prolonged oocyst shedding. Multiple episodes of cryptosporidiosis occurred in 40% of the children. Most infections were with *C. hominis*, subtype 1a. Children with multiple infections had significantly lower weight-for-age and height-for-age Z scores at 24 months but had scores comparable with children with a single episode by 36 months. Multiple symptomatic *Cryptosporidium* infections associated with prolonged oocyst shedding occur frequently in this disease-endemic area and may contribute to the long-term effects of cryptosporidiosis on physical growth in these children.

PMID: 21036847

Alexander AM, Prabhakaran V, Rajshekhar V, Muliyl J, Dorny P.

Long-term clinical evaluation of asymptomatic subjects positive for circulating *Taenia solium* antigens.

Trans R Soc Trop Med Hyg; 2010.

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

Although presence of cysticercal antigens in serum is presumed to indicate active cysticercosis not all positive persons are symptomatic. The significance of a positive antigen test in asymptomatic individuals, in predicting development of symptomatic cysticercosis on long-term follow up, is unknown. Forty two of 48 persons from Vellore district, India who were positive for circulating serum cysticercal antigens were followed up for four to five years. None of them developed clinical evidence of neurocysticercosis or subcutaneous cysts. We conclude that asymptomatic individuals with circulating cysticercal antigens have a low risk of developing symptomatic cysticercosis within four to five years.

PMID: 20801473

Gladstone BP, Das AR, Rehman AM, Jaffar S, Estes MK, Muliyl J, Kang G, Bose A.

Burden of illness in the first 3 years of life in an Indian slum

J Trop Pediatric; 2010, 56 (4): 221-6

Department of Community Health, Christian Medical College, Vellore 632002, India.

The morbidity and mortality in a cohort of 452 children followed up from birth up to 3 years of age, in an urban slum in India, is described. These children were recruited and followed from March 2002 to September 2006. A prospective morbidity survey was established. There were 1162 child-years of follow-up. The average morbidity rate was 11.26 episodes/child-year. Respiratory infections caused 58.3 and diarrhea disease 18.4% of the illnesses. Respiratory illnesses resulted in 48, 67.5 and 50 days of illnesses, and there were 3.6, 1.64 and 1.16 diarrheal episodes per child in the 3 years, respectively. There were five deaths in the cohort in the 3 years of follow-up. Of the 77 drop-outs 44 were contacted for mortality data. The morbidity in the area is high, comparable to other studies. The mortality is low, and is attributed to the facilitated access to care.

PMID: 20028725

Gopichandran V, Claudius P, Baby LS, Felinda A, MohanVR.

Household food security in urban Tamil Nadu: a survey in Vellore

Natl Med J India; 2010, 23 (5): 278-80

Department of Community Health, Christian Medical College, Vellore 632004, Tamil Nadu, India. vijay.gopichandran@gmail.com

BACKGROUND: Food security has been a matter of concern in recent years due to the global food crisis and rising food prices. We aimed to study the level of food security in a densely populated urban area in southern India. METHODS: A door-to-door survey of 130 households in an urban area in Vellore district, Tamil Nadu was done and information on food security status was collected using the United States Department of Agriculture Household Food Security Scale, on socioeconomic status using the modified Kuppuswamy scale and demographic details. RESULTS: Of the 130 households surveyed, food insecurity with hunger was present in 61.5% (95% CI 52.98%-70.02%), food insecurity without hunger in 13.1% (95% CI 7.2%-

19%) and food security in 25.4% (95% CI 17.8%-33%) of the households. Prevalence of any form of food insecurity was present in three-fourths of the households (74.6%; 95% CI 67%-82.2%). Only 76 (58.5%) households used the public distribution system for buying rice-the staple food, and 63 (82.9%) households in the lower socioeconomic strata used the public distribution system for buying rice. **CONCLUSIONS:** Despite good penetration of the public distribution system in Tamil Nadu, the prevalence of food insecurity in urban areas is high. Nationwide and regional urban-rural food security data need to be studied to influence policy regarding the means to reduce food insecurity in India.

PMID: 21250582

Raghava MV, Prabhakaran V, Jayaraman T, Muliyl J, Oommen A, Dorny P, Vercruyse J, Rajshekhar, V.
Detecting spatial clusters of Taenia solium infections in a rural block in South India
Trans R Soc Trop Med Hyg; 2010, 104 (9): 601-12
Department of Community Health, Christian Medical College, Vellore 632 002, Tamil Nadu, India.
venkat@cmcvellore.ac.in

Neurocysticercosis (NCC) is a major cause of seizures/epilepsy in countries endemic for the disease. The objectives of this study were to spatially map the burden of active epilepsy (AE), NCC, taeniasis, seroprevalence for cysticercal antibodies and positivity to circulating cysticercal antigens in Kaniyambadi block (approximately 100 villages comprising 100 000 population) of Vellore district and to detect spatial clusters of AE, NCC, taeniasis and seroprevalence. Using geographic information system (GIS) techniques, all 21 study villages with over 8000 houses (population of 38 105) were mapped. Clustering of different indices of Taenia solium infection was determined using a spatial scan statistic (SaTScan). There was a primary spatial cluster of AE with a log likelihood ratio (LLR) of 10.8 and relative risk (RR) of 22.4; however, no significant clustering for NCC was detected. Five significant spatial clusters of seropositivity for cysticercal antibodies, two clusters of seropositivity for cysticercal antigens and one for taeniasis were detected (LLR of 8.35 and RR of 36.67). Our study has demonstrated the use of GIS methods in mapping and identifying 'hot spots' of various indices of T. solium

infection in humans. This spatial analysis has identified pockets with high transmission rates so that preventive measures could be focused on an intensive scale.

PMID: 20638091

Raghupathy V, Poornima S, Sivaguru J, Ramachandran A, Zachariah A, Oommen A.
Monocrotophos toxicity and bioenergetics of muscle weakness in the rat.
Toxicology. 2010 Nov 9;277(1-3):6-10. Epub 2010 Aug 20.
Wellcome Trust Research Laboratory, Department of Gastrointestinal Sciences, Christian Medical College, Vellore, India.

Acute organophosphate pesticide poisoning is a common medical emergency with high fatality in agricultural communities of Asia. Organophosphate compounds inhibit acetyl cholinesterase and prolonged neuromuscular weakness is a major cause of morbidity and mortality of poisoning. Organophosphate pesticide induced muscle weakness may not only arise from inhibition of acetyl cholinesterase but also from non-cholinergic pathomechanisms, particularly mitochondrial dysfunction, affecting the production of sufficient ATP for muscle function. This study examined whether muscle weakness in rats subject to monocrotophos toxicity (0.8LD (50)) was caused by inhibition of ATP synthesis, by oxidative phosphorylation and glycolysis, in addition to inhibition of muscle acetyl cholinesterase. Severe muscle weakness in rats following monocrotophos administration was associated with inhibition of muscle acetyl cholinesterase (30-60%) but not with reduced ATP production. The rats rapidly recovered muscle strength with no treatment. The ability of rats to spontaneously reactivate dimethoxy phosphorylated acetyl cholinesterase and efficiently detoxify organophosphates may prevent severe inhibition of muscle acetyl cholinesterase following acute severe monocrotophos poisoning. This may protect rodents against the development of prolonged muscle weakness induced by organophosphates.

PMID: 20728503

Sophia A, Isaac R, Rebekah G, Brahmadathan K, Rupa V.
Risk factors for otitis media among preschool, rural Indian children
Int J Pediatric Otorhinolaryngol 2010, 74 (6): 677-83.

OBJECTIVE: To establish the role of various risk factors for otitis media among preschool, rural Indian children. **METHODS:** A cross sectional study of 800 children was undertaken to determine the prevalence of otitis media. Thereafter, using a case control study design, all the cases and an equal number of controls were compared in terms of various common risk factors for otitis media. The 13 risk factors studied were age, sex, socioeconomic status (SES), nutritional status, balwadi attendance, duration of breast feeding, passive smoking, exposure to household smoke, persistent rhinorrhoea, positive throat culture, snoring, seasonal rhinitis and allergic rhinitis. Bivariate association between these risk factors and otitis media was studied using chi-square test of proportions. Multivariate logistic regression analysis was done by including the variables which were significant at $p=0.35$ in the bivariate analysis. **RESULTS:** From the cross sectional study, the prevalence of otitis media was found to be 8.6%, roughly half the prevalence obtained 10 years previously from the same region. Otitis media with effusion (OME) was the commonest manifestation of otitis media (6%) with 3.8% having bilateral disease. Ear wax was seen in 27.5% of subjects. Eighteen (2.3%) children failed the screening audiometry test set at 40 dB HL. Sociodemographic factors among cases and controls were comparable. The prime risk factors for otitis media identified by bivariate analysis included persistent rhinorrhoea, snoring and seasonal rhinitis. On multivariate logistic regression analysis, persistent rhinorrhoea ($p<0.01$, O.R.=7.56, 95% C.I. 2.73 - 20.92), snoring ($p=0.01$, O.R.=4.89, 95% C.I. 1.32 - 18.17), seasonal rhinitis ($p=0.02$, OR=5.93, 95% CI=1.33-26.51) and passive smoking ($p=0.04$, O.R.=3.29, 95% C.I. 1.05-10.33) were found to be important risk factors for otitis media. Age, sex, SES, parental education, seasonal or allergic rhinitis, inadequate breast feeding and exposure to household smoke were not significant risk factors. **CONCLUSIONS:** Otitis media continues to have a high prevalence among South Indian children. Persistent rhinorrhea, snoring, seasonal rhinitis and passive smoking are the chief risk factors for the disease. Measures to reduce the prevalence of otitis

media by addressing these risk factors are urgently required.

PMID: 20416956

Vivek R, Nihal L, Illiayaraja J, Reddy PK, Sarkar R, Eapen CE, Kang G.

Investigation of an epidemic of Hepatitis E in Nellore in south India

Tropical medicine & international health :

Trop Med Int Health; 2010, 15 (11): 1333-9

Department of Gastrointestinal Sciences, Christian Medical College, Ida Scudder Road, Vellore, India.

OBJECTIVE: To determine the incidence of acute hepatitis because of hepatitis E virus (HEV) and the source of the epidemic in Nellore in south India in 2008. **METHODS:** Anti-HEV IgM ELISA and RT-PCR for HEV-RNA were carried out on blood and stool samples from patients with acute hepatitis presenting to different hospitals in the city. The city was divided into 33 clusters, and 20 families from each cluster were systematically interviewed to determine the incidence of hepatitis E in the city. The survey was conducted on 2685 residents of 673 households from 24th November to 4th December 2008. **RESULTS:** The overall incidence of hepatitis was 5.7% (152/2685), i.e. an estimated 23,915 persons in the city were affected. There were two deaths because of acute hepatitis in the population surveyed translating to an estimated 315 deaths. Men had higher attack rates than women (7.8%vs. 3.5%) and young adults compared to children under 5 years (6.9%vs. 2.9%). Families drinking water from the pumping station at Bujjamarevu had the highest attack rate of 54.5% (39.8-69.2%). HEV IgM antibodies were present in 80/100 plasma samples tested. HEV-RNA was detected in 43/100 individuals tested, and isolates were characterized as genotype 1 by sequencing. **CONCLUSION:** Sewage draining into the river close to the pumping stations and broken pipelines crossing sewage drains may have triggered this large outbreak.

PMID: 20955497

CLINICAL OBSERVATIONAL:

Abraham LM, Kuriakose T, Sivanandam V, Venkatesan N, Thomas R, Muliyl J.

Correlation between ocular parameters and amplitude of accommodation. Indian J Ophthalmol. 2010 Nov-Dec;58(6):483-5.

Department of Ophthalmology, Christian Medical College, Vellore, India. lekhaabraham@yahoo.com

AIM: To study the relationship between ocular parameters and amplitude of accommodation (AA) in the peri-presbyopic age group (35-50 years). **MATERIALS AND METHODS:** Three hundred and sixteen right eyes of consecutive patients in the age group 35-50 years, who attended our outpatient clinic, were studied. Emmetropes, hypermetropes and myopes with best-corrected visual acuity of 20/20, J1 in both eyes were included. The AA was calculated by measuring the near point of accommodation. The axial length (AL), central anterior chamber depth (CACD) and lens thickness (LT) were also measured. **RESULTS:** There was moderate correlation (Pearson's correlation coefficient $r = 0.56$) between AL and AA as well as between CACD and AA ($r = 0.53$) in myopes in the age group 35-39 years. In the other age groups and the groups taken as a whole, there was no correlation. In hypermetropes and emmetropes, there was no correlation between AA and the above ocular parameters. No significant correlation existed between LT and AA across different age groups and refractive errors. **CONCLUSION:** There was no significant correlation between AA and ocular parameters like anterior chamber depth, AL and LT.

PMID: 20952831

Amritanand R, Venkatesh K, Sundararaj GD.

Salmonella spondylodiscitis in the immunocompetent: our experience with eleven patients.

Spine (Phila Pa 1976). 2010 Nov 1;35(23):E1317-21.

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

OBJECTIVE: To report the clinical features, diagnostic dilemmas and management options of 11 immunologically normal patients with salmonella spondylodiscitis. **SUMMARY OF BACKGROUND DATA.:** Majority of existing data on salmonella spondylodiscitis

in the immunologically normal patient is from anecdotal case report. **METHODS.:** From 1995 to 2008, 11 patients with salmonella spondylodiscitis proven by positive culture, biopsy, and Widal test were included. One patient died, and the average follow-up of the remaining 10 patients was 36 months (12-122 months). Five (50%) patients had a documented history of typhoid fever. Intravenous antibiotics for 2 weeks and oral antibiotics for at least 10 weeks were given to all patients. Indications for surgical intervention were unrelenting pain and osseous instability. Clinical outcome was evaluated according to Macnab criteria. **RESULTS.:** Salmonella typhi was cultured in 4 and S. Paratyphi in 5 patients. No organism was identified in 2 patients, on whom the diagnosis was performed by a characteristic history, high Widal titers, and a positive biopsy. Widal titers were positive for all patients (Average + 1360). Five patients were managed with antibiotics only, 1 with surgical debridement and uninstrumented fusion and 4 with single-stage debridement, anterior fusion, and posterior instrumentation. Healing of disease with a good to excellent outcome was seen in all patients. **CONCLUSION.:** Salmonella and tuberculous spondylitis must be differentiated as they both have similar epidemiological and clinicoradiologic presentations. Prodromal gastrointestinal symptoms are usually not present. The diagnosis rests largely on the recovery of the organism by appropriate culture techniques. However, when this is not apparent the Widal test, in the setting of a suggestive history and radiograph, may be used as a diagnosis tool. Though antibiotics are the mainstay of treatment, surgical debridement with the use of instrumentation may be indicated in selected patients.

PMID: 20938384

Anupriya A, Sunithi M, Maya T, Goel M, Alexander M, Aaron S, Mathew V.

Tuberculous optochiasmatic arachnoiditis

Neurol India; 2010, 58 (5): 732-5

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

Arachnoiditis involving optic nerve and the optic chiasm can occur as a complication of tuberculous meningitis (TBM). This study evaluates the clinical features,

cerebrospinal fluid (CSF) and laboratory parameters and imaging findings of optochiasmatic arachnoiditis (OCA) and also tried to identify any factors which can predict this complication in patients with TBM. Patients admitted with TBM in the neurology wards of a tertiary care teaching hospital over a period of 6 years formed the material for this study. Student's "t" test and univariate analysis were done to identify any predictors for this complication and the variables found to be significant were further analyzed by multivariate logistic regression analysis. One hundred sixty-three patients with TBM, admitted over a 6-year period, were studied. Twenty-three (14%) patients developed OCA. Eighteen out of 23 (78%) developed this complication while on antituberculous treatment (ATT) and 5/23 (22%) were newly diagnosed cases of TBM. Of those already on treatment, 12/23 (52%) were receiving only ATT, the remaining 6/23 (26%) had received steroids along with ATT in varying doses and duration. The average period from diagnosis of TBM to visual symptoms was 6.4 months. On the multivariate logistic regression analysis, female sex ($P < 0.037$), age less than 27 ($P < 0.008$) years and protein content in the CSF > 260 mg% ($P < 0.021$) were the factors predisposing toward this complication. At 6 months follow-up, on treatment with steroids and ATT, 17% had improvement and no further deterioration was noted in visual acuity in 52%. OCA can develop even while on treatment with ATT. Young women with a high CSF protein content seem to be more prone for this complication.

PMID: 21045497

Chacko A, Dutta AK.

Endoscopic resection of ampullary adenomas: novel technique to reduce post procedure pancreatitis. *J Gastroenterol Hepatol.* 2010 Aug;25(8):1338-9.

Department of Gastrointestinal Sciences, Christian Medical College, Ida Scudder Road, Vellore, India.

PMID: 20659220.

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

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

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

Department of Pulmonary Medicine, Christian Medical College and Hospital, Vellore, India.
drbalamugesh@cmcvellore.ac.in

BACKGROUND: Thoracoscopy is usually carried out using rigid metallic instruments. Recently, video flex-rigid or semi-rigid thoroscopes have been introduced. These have the advantage of easy maneuverability, although the biopsy samples are smaller as compared to those with rigid thoracoscopy. We have looked at the usefulness of flex rigid thoracoscope in the diagnosis and treatment of pleural diseases, remained undiagnosed after thoracentesis and closed biopsy.

METHODS: Retrospective analysis of data of patients who underwent thoracoscopy for the evaluation of pleural disease.

RESULTS: Thoracoscopy was done in 21 patients using a flex-rigid thoracoscope in our institution. The indication was pleural effusion with inconclusive or negative pleural fluid cytology and blind pleural biopsy in 18 of the 21 patients. Thoracoscopic biopsy was positive in 12 of the 18 patients (66.7%). Of the six who had a negative biopsy, the procedure indirectly helped in patient management in five. There were no significant procedure-related complications.

CONCLUSION: Thoracoscopy with flex-rigid thoracoscope is a useful diagnostic tool in the evaluation of pleural effusions with negative blind pleural biopsy and cytology.

PMID: 20364611

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

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

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

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

BACKGROUND: Transcultural studies have found lack of insight to be an almost invariable feature of acute and chronic schizophrenia, but its influence on prognosis is unclear.

AIMS: To investigate the relationship between insight, psychopathology and

outcome of first-episode schizophrenia in Vellore, India.

METHOD: Patients with a DSM-IV diagnosis of schizophrenia (n = 131) were assessed prospectively at baseline and at 6-month and 12-month follow-up. Demographic and clinical measures included insight, psychopathology, duration of untreated psychosis (DUP) and social functioning. Linear and logistic regression was used to measure predictors of outcome.

RESULTS: Follow-up data were available for 115 patients at 1 year. All achieved remission, half of them with and half without residual symptoms. Changes in psychopathology and insight during the first 6 months and DUP strongly predicted outcome (relapse or functional impairment), controlling for baseline measures.

CONCLUSIONS: Outcome of schizophrenia in this setting is driven by early

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

PMID: 20513855

Boopalan PR, Jepegnanam TS.

Reverse sural flap cover within a ring fixator.

Acta Orthop Belg. 2010 Oct;76(5):684-8.

Department of Orthopedics, unit III, Christian Medical College, Vellore, Tamilnadu, India 632004. jpboopy@gmail.com

The ring fixator is an ideal apparatus to treat infected gap nonunion of the tibia and to correct deformity in multiple planes. However soft tissue problems may arise during transport and at docking. Although various options such as free flaps, neurocutaneous flaps, fasciocutaneous flaps and cross leg flaps are available for flap cover, this is always done prior to application of a ring fixator. The versatility of the sural flap in terms of coverage of leg defects, ease of performing flap cover as well as its reliability and safety is well known. We describe an alternate way of treating soft tissue problems which occur at the lower third of the leg while being treated on an Ilizarov frame. We describe the surgical procedure followed in raising the flap and its

anterior transposition within the Ilizarov frame in two patients.

PMID: 21138227

Boopalan PR, Nithyananth M, Jepegnanam TS.

Lateral gastrocnemius flap cover for distal thigh soft tissue loss.

J Trauma. 2010 Nov;69(5):E38-41.

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

BACKGROUND: The gastrocnemius muscle flap has been used extensively for cover around the knee. However, the use of the lateral gastrocnemius for cover of the distal thigh has not been well described. METHODS: The lateral gastrocnemius flap was used in eight patients from October 2004 to February 2009 for cover of the distal thigh proximal to the knee joint. We included patients who had soft tissue loss secondary to trauma and infection and who required soft tissue cover in the distal lateral thigh (>8 cm proximal to the joint line). The average age of the patients was 40 years (21-64 years). Four patients had soft tissue loss secondary to trauma, two had loss secondary to chronic infection, and two patients had soft tissue loss after surgical infection. RESULTS: All patients had resolution of infection at final follow-up. The average area of soft tissue cover achieved was 14 x 9 cm. The maximal proximal extent reached with lateral gastrocnemius flap from the joint line was 17 cm (8-17 cm) measured in full knee extension. There were two complications. One patient developed a common peroneal palsy and infection, which recovered after re-exploration. Another patient developed a sinus, which resolved after removal of a loose screw. CONCLUSION: The lateral gastrocnemius muscle flap is effective in the cover of the lateral distal thigh.

PMID: 20234326

Chase S, Mittal R, Jesudason MR, Nayak S, Perakath B.

Anal sphincter repair for fecal incontinence: experience from a tertiary care centre.

Indian J Gastroenterol. 2010 Jul;29(4):162-5.

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

AIM: Structural anal sphincter damage may be secondary to obstetric anal sphincter injury, perineal trauma or anorectal surgery. We reviewed the spectrum of anal sphincter injuries and their outcomes in a tertiary care colorectal unit. **METHODS:** Data of patients who underwent anal sphincter repair between 2004 and 2008 were analyzed retrospectively. Outcomes were compared with respect to etiology, type of repair, previous attempts at repair and manometry findings. Outcomes were defined as good or poor based on patient satisfaction as the primary criteria. **RESULTS:** Thirty-four patients underwent anal sphincter repair. Twenty-two injuries were obstetric, eight traumatic, and four iatrogenic. All patients underwent overlap sphincteroplasty with six additional anterior levatorplasty and seven graciloplasty. Twenty-three (67.6%) patients had a good outcome while nine (26.4%) had a poor outcome. All patients who had augmentation anterior levatorplasty had a good outcome. Fifty percent of patients with a previous sphincter repair and 42.9% requiring augmentation graciloplasty had a poor outcome. Median resting and squeeze anal pressures increased from 57.5 to 70 cmH (2) O and 90.25 to 111 cmH (2) O in those with a good outcome. **CONCLUSIONS:** Overlap sphincteroplasty has a good outcome in majority of the patients with incontinence due to a structural sphincter defect. Additional anterior levatorplasty may improve outcomes. Previous failed repairs or use of a gracilis muscle augmentation may have a worse outcome secondary to poor native sphincter muscle. Improvement in resting and squeeze pressures on anal manometry may be associated with a good outcome.

..... PMID:20694541

Chandramohan A, Gibikote S, Saxena AK.
US as a primary tool in the work-up of malrotation.
Pediatr Radiol. 2010 Nov;40(11):1844-5; author reply 1846-7. Epub
2010 Aug 5.
Department of Radiology, Christian Medical College,
Vellore, India.

..... PMID: 20686760

Chrispal A, Boorugu H, Gopinath KG, Chandy S, Prakash JA, Thomas EM, Abraham AM, AbrahamOC, ThomasK.
Acute undifferentiated febrile illness in adult hospitalized patients: the disease spectrum and diagnostic predictors - an experience from a tertiary care hospital in South India
Trop Doct; 2010, 40 (4): 230-4
Department of Medicine Unit 2, Christian Medical College, Vellore, Tamil Nadu, India.
anugrahchrispal@gmail.com

Local prevalences of individual diseases influence the prioritization of the differential diagnoses of a clinical syndrome of acute undifferentiated febrile illness (AFI). This study was conducted in order to delineate the etiology of AFI that present to a tertiary hospital in southern India and to describe disease-specific clinical profiles. An 1-year prospective, observational study was conducted in adults (age >16 years) who presented with an undifferentiated febrile illness of duration 5-21 days, requiring hospitalization. Blood cultures, malarial parasites and febrile serology (acute and convalescent), in addition to clinical evaluations and basic investigations were performed. Comparisons were made between each disease and the other AFIs. A total of 398 AFI patients were diagnosed with: scrub typhus (47.5%); malaria (17.1%); enteric fever (8.0%); dengue (7.0%); leptospirosis (3.0%); spotted fever rickettsiosis (1.8%); Hantavirus (0.3%); alternate diagnosis (7.3%); and unclear diagnoses (8.0%). Leucocytosis, acute respiratory distress syndrome, aseptic meningitis, mild serum transaminase elevation and hypoalbuminaemia were independently associated with scrub typhus. Normal leukocyte counts, moderate to severe thrombocytopenia, renal failure, splenomegaly and hyperbilirubinaemia with mildly elevated serum transaminases were associated with malaria. Rash, overt bleeding manifestations, normal to low leukocyte counts, moderate to severe thrombocytopenia and significantly elevated hepatic transaminases were associated with dengue. Enteric fever was associated with loose stools, normal to low leukocyte counts and normal platelet counts. It is imperative to maintain a sound epidemiological database of AFIs so that evidence-based diagnostic criteria and treatment guidelines can be developed.

..... PMID: 20870680

15.

ChrispalA, Boorugu H, Gopinath KG, Prakash JA, Chandy S, AbrahamOC, Abraham AM, Thomas K.

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

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

Department of Medicine Unit 2, Christian Medical College, Vellore 632004, Tamil Nadu, India. anugrahchrispal@gmail.com

Scrub typhus is an important cause of acute undifferentiated febrile illnesses in the Indian subcontinent. Delay in diagnosis and in the initiation of appropriate treatment can result in severe complications such as acute respiratory distress syndrome (ARDS), septic shock and multisystem organ failure culminating in death. We conducted a prospective, observational study to delineate the clinical profile and predictors of mortality in scrub typhus in adults admitted to the medical wards of a tertiary care, referral hospital in South India over a one-year period. The case fatality rate in this study was 12.2%. Metabolic acidosis (odds ratio [OR] 6.1), ARDS (OR 3.6), altered sensorium (OR 3.6) and shock (OR 3.1) were independent predictors of mortality. It appears that scrub typhus has four possible overlapping clinical presentations: mild disease; respiratory predominant disease; central nervous system predominant disease (meningoencephalitis); or sepsis syndrome. Given the telltale presence of an eschar (evident in 45.5%), the characteristic clinical profile and the dramatic therapeutic response to a cheap, yet effective, drug such as doxycycline, medical practitioners in the region should have ample opportunity to reach an early diagnosis and initiate treatment which could, potentially, reduce the mortality and morbidity associated with scrub typhus.

PMID: 20360426

Edwardraj S, Mumtaj K, Prasad JH, Kuruvilla A, Jacob KS.
Perceptions about intellectual disability: a qualitative study from Vellore, South India

J Intellect Disabil Res; 2010, 54 (8): 736-48

Department of Psychiatry, Christian Medical College, Vellore, India. sushila.russell@cmcvellore.ac.in

BACKGROUND: Cultural and religious beliefs influence perceptions about health and illness. Data, from India, on perceptions about intellectual disability are scant.

This study explored people's cultural beliefs and attitudes about intellectual disability, perceived needs and burden associated with care in Vellore, south India. METHOD: A qualitative methodology using focus groups was employed. Eight focus groups were conducted in three settings and included the mothers of children and adolescents with intellectual disability (four groups, n = 29), community health workers (two groups, n = 17) and schoolteachers (two groups, n = 16). RESULTS: Our results suggest that cultural and religious beliefs perpetuated negative attitudes towards disability. This meant that caregivers bore a high burden of care with little support from family or society. The study confirmed the presence of diverse, multiple and contradictory models of disability drawing from biomedical and local religious, social and cultural constructs. CONCLUSIONS: Public awareness, education and community-level interventions for reducing the misconceptions and stigma related to intellectual disability are needed in addition to culturally sensitive treatment methods to improve the attitude towards and management of intellectual disability.

PMID: 20633202

Govindarajan P, Keshava SN.

Ultrasound-guided omental biopsy: Review of 173 patients

Indian J Radiol Imaging; 2010, 20 (4): 307-9

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

BACKGROUND: Omental biopsy has conventionally been performed using a surgical approach. USG-guided omental biopsy is a safe and effective alternative. The purpose of this study was to assess the utility of USG guidance for biopsy of the greater omentum. STUDY DESIGN: Retrospective study. MATERIALS AND METHODS: We retrospectively reviewed all omental biopsies performed under USG guidance from April 2006 to March 2010 in a tertiary care hospital. RESULTS: One hundred and seventy-three patients were included. Out of these, 82 (47%) patients were diagnosed to have malignancies, 58 (34%) patients had granulomatous inflammation either suggestive of or consistent with tuberculosis, 29 (17%) patients were diagnosed to have inconclusive biopsy results, and 4 (2%) patients had an inadequate sample for histopathological

examination. There were no major procedure-related complications. **CONCLUSION:** USG-guided biopsy of the omentum is a safe and effective procedure. A thickened omentum can serve as an easily accessible site for biopsy, especially in patients who have ascites of unknown etiology and in those with a history of previous malignancy.

..... **PMID: 21423910**

Prithishkumar IJ, David SS.

Morphometric analysis and clinical application of the working dimensions of cricothyroid membrane in south Indian adults: with special relevance to surgical cricothyroidotomy.

Emerg Med Australas. 2010 Feb;22(1):13-20. Epub 2009 Dec 1.

Institute of Anatomy, Government Madras Medical College and Research Institute, Chennai, India. drivanjames@gmail.com

OBJECTIVE: To measure the working dimensions of the cricothyroid membrane in the adult south Indian population and to establish the association between the working dimensions and the appropriate endotracheal tube size for the purpose of cricothyroidotomy.

METHODS: Cross-sectional evaluation of 50 fresh adult autopsy cases (35 men, 15 women) in a medical university teaching hospital in South India.

RESULTS: Age ranged from 17.0 to 83.0 years. Working dimensions of the membrane in neutral position of neck, in men: width = 8.41 +/- 2.11 mm, height = 6.57 +/- 1.87 mm; in women: width = 6.30 +/- 1.29 mm, height = 5.80 +/- 1.56 mm. Depth of the subglottic larynx at the level of cricoid cartilage: men = 20.73 +/- 1.97 mm, women = 15.62 +/- 1.71 mm. Distance of the lower border of cricothyroid membrane from suprasternal notch in neutral position of neck, in men = 5.18 +/- 1.76 cm, women = 4.72 +/- 1.55 cm; in passively extended neck, men = 7.86 +/- 1.25 cm, women = 8.05 +/- 1.28 cm. Regression equations have been derived to determine endotracheal tube size for cricothyroidotomy, based on distance between sternal notch and chin, and height of the individual ($P < 0.05$).

CONCLUSIONS: Working dimensions are smaller in the Indian group compared with western publications.

Endotracheal tubes ranging from size 3.0 to 6.0 might be used for cricothyroidotomy in the adult south Indian population.

..... **PMID: 19958379**

Jacob KS.

Alcohol and public health policies in India

Natl Med J India; 2010, 23 (4): 224-5

Department of Psychiatry, Christian Medical College, Vellore 632002, Tamil Nadu, India. ksjacob@cmcvellore.ac.in

Extreme policies of prohibition or the current permissive strategies are counterproductive and call for a nuanced public health approach that integrates both the regulation of availability of alcohol as well as helps in rigorously enforcing the law.

..... **PMID: 21192518**

Jacob KS.

Indian Psychiatry and classification of psychiatric disorders.

Indian J Psychiatry. 2010 Jan;52(Suppl 1):S104-9.

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

The contribution of Indian psychiatry to classification of mental disorders has

been limited and restricted to acute and transient psychosis and to personality disorders. There is a need for leadership in research in order to match diagnosis and management strategies to the Indian context and culture.

..... **PMID: 21836665**

John V, Chacko J, Mathai J, Karl S, Sen, S.

Psychosocial aspects of follow-up of children operated for intermediate anorectal malformations

Pediatr Surg Int; 2010, 26 (10): 989-94

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

PURPOSE: To determine the degree of stress in parents of children operated for intermediate anorectal malformations, and their quality of life (QOL) at follow-up. **METHODS:** Forty-two of the 166 children who had undergone a sacroperineal pullthrough operation for

an intermediate type of anorectal malformation, between 1996 and 2005, in the department of paediatric surgery at Christian Medical College, Vellore, responded to follow-up. The psychosocial well-being of the parents and the QOL of the children were assessed by an independent observer. RESULTS: The main factor which aggravated the stress and caused dissatisfaction with the final outcome was fecal soiling. Mothers bore the brunt of the care of these children, with some help from the fathers and grandparents. The QOL was also significantly affected by soiling, and improvement in soiling resulted in a dramatic improvement in the QOL. CONCLUSION: Managing fecal soiling aggressively in the child with anorectal malformation, and providing social support to the family, are crucial for achieving a better QOL in these children and their families.

PMID: 20694472

Kamath MS, Aleyamma TK, Chandy A, George K. Aromatase inhibitors in women with clomiphene citrate resistance: a randomized, double-blind, placebo-controlled trial.

Fertil Steril. 2010 Dec;94(7):2857-9. Epub 2010 Jul 17. Reproductive Medicine Unit, Christian Medical College, Vellore, Tamil Nadu, India.

In 36 women with polycystic ovary syndrome and clomiphene citrate resistance, letrozole, an aromatase inhibitor, statistically significantly increased the ovulation rate by 33.3% in the treatment group, indicating that letrozole can be used as an effective and simple alternate ovulation-inducing agent in these women.

PMID: 20638059

Kamath MS, Bhav P, Aleyamma T, Nair R, Chandy A, Mangalaraj AM, Muthukumar K, George K. Predictive factors for pregnancy after intrauterine insemination: A prospective study of factors affecting outcome. J Hum Reprod Sci. 2010 Sep;3(3):129-34. Reproductive Medicine Unit, Christian Medical College, Vellore, India.

OBJECTIVE: To determine the predictive factors for pregnancy after controlled ovarian hyperstimulation (COH)/intrauterine insemination (IUI). DESIGN:

Prospective observational study. SETTING: University-level tertiary care center. PATIENTS AND METHODS: 366 patients undergoing 480 stimulated IUI cycles between November 2007 and December 2008. INTERVENTIONS: Ovarian stimulation with gonadotrophins was initiated and a single IUI was performed 36 h after triggering ovulation. MAIN OUTCOME MEASURES: The primary outcome measures were clinical pregnancy and live birth rates. Predictive factors evaluated were female age, duration of infertility, indication for IUI, number of preovulatory follicles, luteinizing hormone level on day of trigger and postwash total motile fraction (TMF). RESULTS: The overall clinical pregnancy rate and live birth rate were 8.75% and 5.83%, respectively. Among the predictive factors evaluated, the duration of infertility (5.36 vs. 6.71 years, $P = 0.032$) and the TMF (between 10 and 20 million, $P = 0.002$) significantly influenced the clinical pregnancy rate. CONCLUSION: Our results indicate that COH/IUI is not an effective option in couples with infertility due to a male factor. Prolonged duration of infertility is also associated with decreased success, and should be considered when planning treatment.

PMID: 21234173

Kavalakatt JP, Kumar S, Aswathaman K, Kekre NS. Continuous ambulatory peritoneal dialysis catheter placement: Is omentectomy necessary? Urology Annals; 2010, 2 (3): 107-9 Department of Urology, CMC, Vellore, Tamil Nadu, India.

CONTEXT: There are different methods of continuous ambulatory peritoneal dialysis (CAPD) catheter placement. Open surgical technique is a widely followed method. The complication rate following catheter placement varies and catheter blockage due to omental plugging is one of the main reasons. AIM: To analyze the need for routine omentectomy during CAPD catheter placement. MATERIALS AND METHODS: This was a retrospective analysis of 58 CAPD catheter placements performed between July 2002 and June 2007. Tenckhoff double cuffed catheter was used in all. The postoperative complications were analyzed. RESULTS: There were 44 males and 14 females. The mean age was 51 years ranging from 15 to 76 years. Of these, 40 (69%) patients underwent omentectomy (group A) and 18 (31%) did not (group B). Laparoscopic and open techniques were performed in 5 and 53

patients, respectively. Omentectomy was not performed in 13 patients with open technique and all the five in the laparoscopic group. One patient in group A developed hemoperitoneum which was treated conservatively. None from group A developed catheter blockage, whereas five (27.8%) from group B developed catheter blockage postoperatively. The median time interval between the primary procedure and development of catheter blockage was 45 days (ranged from 14 to 150 days). **CONCLUSIONS:** Omentectomy during CAPD catheter placement prevents catheter blockage and secondary interventions.

PMID: 21098197

Kumar TS, Aggarwal A.

Approach to a patient with connective tissue disease.

Indian J Pediatr. 2010 Oct;77(10):1157-64. Epub 2010 Oct 6. Review.

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

Connective tissue disease (CTDs), though rare in childhood, are an important cause of morbidity. Most of them involve multiple organ systems and are associated with presence of autoantibodies. Systemic lupus erythematosus (SLE) is the most common CTD, the others being Juvenile dermatomyositis, systemic sclerosis, mixed connective disease and Sjogren syndrome. The clinical presentation of CTD in childhood can range from an acute severe illness mimicking a serious infection, to an insidious onset of disease with gradual accumulation of symptoms and signs over wks to months. The presence of multi-system involvement, evidence of inflammation and lack of any obvious cause should alert a clinician to the possibility of CTD. Diagnosis is usually clinical and features like malar rash, Raynaud's phenomenon, Gottron's rash, photosensitivity, oral ulcers suggest a possibility of CTD. Presence of autoantibodies like anti-nuclear antibodies, anti-dsDNA etc. provide supportive evidence to a diagnosis of CTD. Most CTDs are treated with immunosuppressive drugs with good success. Early recognition and prompt treatment results in excellent outcome.

PMID: 20924723

Lakshmi VA, Chacko RT, Kurian S.

Gastrointestinal stromal tumors: a 7-year experience from a tertiary care hospital

Indian J Pathol Microbiol; 2010, 53 (4): 628-33.

Department of Pathology, Christian Medical College and Hospital, Ida Scudder Road, Vellore - 632 004, Tamil Nadu, India.

BACKGROUND: Gastrointestinal stromal tumor (GIST), now the most common mesenchymal tumor of the gastrointestinal tract (GIT), has been frequently studied, especially with regard to its successful targeted therapy using imatinib mesylate. **AIM:** Our aim was to describe the clinicopathological features of a large number of cases from a tertiary care hospital in India and report on the follow-up after treatment of some of the cases, comparing them with series described in the west. **DESIGN:** This is a retrospective study of cases encountered over a 7-year period (1999-2005). **RESULTS:** Ninety-two cases of GIST were studied, which made up the largest group (52.8%) of mesenchymal tumors of the GIT, with smooth muscle tumors comprising 38.1%, the next large group. GISTs were almost equally prevalent in the stomach and the small intestine, unlike in most studies where stomach is the most common site. GIST may be considered as a cause of bleeding when upper and lower GI endoscopy is normal. Ninety-five percent of the GISTs were positive for CD117 (KIT), as is known. A majority of them (70.4%) were of the high-risk malignant category, unlike most studies where high-risk tumors make up 30-45%. Histologically, the majority had a pure spindle cell morphology and skenoid fibers were rare. Follow-up of 11 cases, the majority with high-risk tumor, treated with adjuvant imatinib for 6 months after surgical resection showed stable disease for periods from 2 to 5 years. However, 11 cases treated with imatinib for longer than 6 months had a poorer outcome due to recurrent, metastatic, or inoperable disease. **CONCLUSION:** In our study of a large number of GISTs, which were equally prevalent in the stomach and small intestine, the majority were of the high-risk malignant category and of pure spindle cell morphology. Limited numbers had follow-up after imatinib therapy, which showed in one group treated for 6 months, after resection of high-risk GIST, stable disease for periods ranging from 2 to 5 years.

Molecular studies and larger numbers are required for meaningful conclusions to be drawn.

PMID: 21045382

Mammen T, Keshava S, Eapen CE, Moses V, Babu NR, Kurien G, Chandy G.

Intrahepatic collateral recanalization in symptomatic Budd-Chiari syndrome: a single-center experience

J Vasc Interv Radiol; 2010, 21 (7): 1119-24

Department of Radiology, Christian Medical College and Hospital, Vellore, India. tmammen@gmail.com

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

PMID: 20537910

Mathew AJ, Samuel B, Jacob KS.

Perceptions of illness in self and in others among patients with bipolar disorder.

Int J of Social Psychiatry; 2010, 56 (5): 462-70

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

AIM: The study aimed to examine the perceptions of illness in self and among others in patients with bipolar disorder in remission. The effect of a structured educational programme on the perceptions of illness was also tested. **METHOD:** We examined the perceptions of illness in self and in others (using a vignette) among patients with bipolar disorder in remission attending the Department of Psychiatry, Christian Medical College, Vellore, India. We also examined the effect of a structured educational programme on explanatory models in a randomized controlled trial. Explanatory models were assessed using the Tamil version of the Short Explanatory Model Interview. **RESULTS:** Eighty two subjects were recruited for the trial; half of them received structured education

while the other half received treatment as usual. There was agreement between perceptions related to the individual's own illness and their opinion of illness in others as assessed using a vignette at baseline and at follow-up. There were no significant differences in explanatory models between patients who received education and those who did not. **CONCLUSIONS:** The results of this study show that during periods of remission, patients can clearly see the relationship between their own illness and that described in others, suggesting that insight is state dependent and may be related to psychopathology with good recovery of insight during periods of remission. These findings also argue for the fact that the current multi-dimensional models of insight which focus on biomedical explanations and treatments are not culturally sensitive. The assessment of insight demands universal conventions with comparison to the local cultural standards rather than universal definitions and yardsticks which employ Western and biomedical perspectives.

PMID: 19651694

Mathews V, George B, Chendamarai E, Lakshmi KM, Desire S, Balasubramanian P, Viswabandya A, Thirugnanam R, Abraham A, Shaji RV, Srivastava A, Chandy M.

Single-agent arsenic trioxide in the treatment of newly diagnosed acute promyelocytic leukemia: long-term follow-up data.

J Clin Oncol; 2010, 28 (24): 3866-71

Department of Hematology, Christian Medical College and Hospital, Vellore 632004, India; vikram@cmcvellore.ac.in.

PURPOSE We previously reported our results with a single-agent arsenic trioxide (ATO) -based regimen in newly diagnosed cases of acute promyelocytic leukemia (APL). The concern remained about the long-term outcome of this well-tolerated regimen. We report our long-term follow-up data on the same cohort. **PATIENTS AND METHODS** From January 1998 to December 2004, 72 patients with PML/RARalpha+ APL were enrolled. All patients were treated with a single-agent ATO regimen. **Results** Overall 62 (86.1%) achieved a hematologic remission (complete remission). After the initial report, an additional seven patients have relapsed for a total of 13 relapses. There were no additional toxicities to report on follow-up. At a median follow-up 60 months, the 5-year Kaplan-Meier estimate

(+/- SE) of event-free survival, disease-free survival, and overall survival (OS) was 69% +/- 5.5%, 80% +/- 5.2%, and 74.2% +/- 5.2%, respectively. The OS in the good risk group as defined by us remains 100% over this period. **CONCLUSION** Single-agent ATO as used in this study in the management of newly diagnosed cases of APL is safe and is associated with durable responses. Results in the low-risk group are comparable to that reported with conventional therapy while additional interventions would probably be required in high-risk cases.

..... PMID: **20644086**

Menon VK, George S, Ramani S, Illiayaraja J, Sarkar R, Jana AK, Kuruvilla KA, Kang G.

Genogroup IIb norovirus infections and association with enteric symptoms in a neonatal nursery in southern India *J Clin Microbiol*; 2010, 48 (9): 3212-5.

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

Noroviruses (NoVs) are increasingly recognized as an important cause of acute gastroenteritis in children worldwide. However, there are limited data on the role of NoVs in neonatal infections and disease. The objectives of the present study were to determine the prevalence of NoVs in neonates with gastrointestinal disease using a case-control study design and to characterize the NoV strains infecting neonates. A total of 309 fecal samples from 161 neonates with gastrointestinal symptoms and 148 asymptomatic controls were screened for genogroup II (GII) NoV using reverse transcription-PCR. A subset of PCR-positive amplicons for the polymerase and capsid regions was sequenced. NoV was detected in 26.2% of samples, with the rate of detection being significantly higher among symptomatic neonates (60/161, 37.2%) than asymptomatic neonates (24/148, 14.1%) ($P < 0.001$). On the basis of sequencing of 29 strains, a single NoV strain, GIIB, was identified to be the predominant (27/29, 93.1%) cause of neonatal infections. Co infection with rotavirus was seen in nearly one-third of symptomatic neonates. The study demonstrates a high prevalence of NoV infections in neonates and indicates that co infection with rotavirus may result in significantly more gastrointestinal disease in this population.

..... PMID: **20631107**

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

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

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

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

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

..... PMID: **19593157**

Moses V, Daniel RT, Chacko AG.

The value of intraoperative ultrasound in oblique corpectomy for cervical spondylotic myelopathy and ossified posterior longitudinal ligament.

Br J Neurosurg. 2010 Oct;24(5):518-25.

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

Intraoperative ultrasound (IOUS) has been described to be useful during central corpectomy for compressive cervical myelopathy. This study aimed at documenting the utility of IOUS in oblique cervical corpectomy (OCC). Prospective data from 24 patients undergoing OCC for cervical spondylotic myelopathy and ossified posterior longitudinal ligament (OPLL) were collected. Patients had a preoperative cervical spine magnetic resonance (MR) image, IOUS and a postoperative cervical CT scan. Retrospective data from 16 historical controls that underwent OCC without IOUS were analysed to compare the incidence of residual compression between the two groups. IOUS identified the vertebral artery in all cases, detected residual cord compression in six (27%) and missed compression in two cases (9%). In another two cases with OPLL, IOUS was sub-optimal due to shadowing. IOUS measurement of the corpectomy width correlated well with these measurements on the postoperative CT. The extent of cord expansion noted on IOUS after decompression showed no correlation with immediate or 6-month postoperative neurological recovery. No significant difference in residual compression was noted in the retrospective and prospective groups of the study. Craniocaudal spinal cord motion was noted after the completion of the corpectomy. IOUS is an inexpensive and simple real-time imaging modality that may be used during OCC for cervical spondylotic myelopathy. It is helpful in identifying the vertebral artery and determining the trajectory of approach, however, it has limited utility in patients with OPLL due to artifacts from residual ossification.

PMID: 20707681

Moses V, Peter JV.

Acute intentional toxicity: endosulfan and other organochlorines.

Clin Toxicol (Phila). 2010 Jul;48(6):539-44.

Department of Medicine, Christian Medical College, Vellore, Tamil Nadu, India. vijumoses@gmail.com

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

PMID: 20572757

Yacob M, Stephen E, Bit N, Turel M, Sadhu D, Agarwal S. Risk Factors for peripheral arterial disease in the tropics and its comparison with the Western Population, Asian Pacific J Trop Med 2010: 407-409.

35.

Nair SC, Dargaud Y, Chitlur M, Srivastava A.

Tests of global haemostasis and their applications in bleeding disorders. Haemophilia. 2010 Jul;16 Suppl 5:85-92.

Christian Medical College, Vellore, India. aloks@cmcvellore.ac.in

SUMMARY: There is a potential for significant paradigm shift in the assessment of haemostasis from the conventional plasma recalcification times, such as prothrombin time (PT) and activated partial thromboplastin time (APTT), which correspond to artificially created compartments of haemostasis to tests that assess the entire process in a more physiological and holistic manner. These include the thrombin generation test, thromboelastogram and the clot wave form analysis. While these tests have been described many years ago, there is renewed interest in their use with modified technology for assessing normal haemostasis and its disorders. Although early data suggest that they can provide much greater information regarding the overall haemostasis process and its disorders, many challenges remain. Some of them are possible only on instruments that are proprietary technology, expensive and are not widely available. Furthermore, these tests need to be standardized with regard to their reagents, methodology and interpretation, and finally, much more data need to be collected regarding clinical correlations with the parameters measured.

..... PMID: 20590862

Paul TV, Asha HS, Thomas N, Seshadri MS, Rupali P, Abraham OC, Pulimood SA, Jose A.

Hypovitaminosis D and bone mineral density in human immunodeficiency

virus-infected men from India, with or without antiretroviral therapy.

EndocrPract. 2010 Jul-Aug;16(4):547-53.

Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, India. thomasvpaul@yahoo.com

OBJECTIVE: To study the vitamin D status and bone mineral density (BMD) in men infected with human immunodeficiency virus (HIV) in a tertiary care center from southern India. **METHODS:** We conducted a cross-sectional study of 35 HIV-infected men (between 20 and 50 years old) receiving highly active antiretroviral therapy (HAART) (group 1) in comparison with 35 age- and body mass index-matched HIV-positive antiretroviral therapy-naïve men (group 2) and 35 HIV-negative healthy control subjects (group 3). **RESULTS:** A significantly greater proportion ($P = .002$) of patients (74%) in the HAART group had vitamin D

deficiency (<20 ng/mL) in comparison with the other 2 groups (37% in each group). The mean intact parathyroid hormone level was higher ($P < .001$) and the mean duration of exposure to sunlight was lower ($P = .001$) in the HAART group than in the other 2 groups. By logistic regression analysis, HAART was found to be significantly associated with vitamin D deficiency. The BMD in the femoral neck was significantly lower in men with HIV infection who were receiving HAART in comparison with the other 2 groups ($P = .006$). On multivariate logistic regression, older age, low body mass index, and high parathyroid hormone levels emerged as factors significantly associated with decreased BMD at the femoral neck. **CONCLUSION:** A significant proportion of patients receiving HAART had vitamin D deficiency. The secondary hyperparathyroidism probably due to vitamin D deficiency is an important contributing factor for the observed changes in BMD. Vitamin D deficiency noted in this group is probably multifactorial, and further research is needed to determine whether the effect of HAART on vitamin D metabolism is an additional causative factor and what benefit vitamin D supplementation might confer in these patients.

..... PMID: 20150027

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

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

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

Department of Medical Intensive Care, Christian Medical College and Hospital, Vellore 632 004, Tamil Nadu, India. peterjohnvictor@yahoo.com.au

The WHO classification of pesticides by hazard is based primarily on the acute oral and dermal toxicity to rats. In several Asian countries there is no legislation against the sale of Class I insecticides. We evaluated if there was an association between the WHO hazard Class I, II or III organophosphate compound and outcomes in human poisoning. Two-hundred and fifty-one patients with mean (SD) age of 30.4 (11.8) years, admitted with symptomatic poisoning and treated with atropine and supportive

care, were followed up until death or hospital discharge. The admission pseudocholinesterase level of 818.8 (1368) IU/L indicated significant suppression of cholinesterase activity. Class I compounds were ingested by 126, Class II by 113 and Class III by 12 patients. The hospital mortality rate was 16.7%, 5.3% and 0% with Class I, II and III organophosphate compounds, respectively ($P=0.01$). Ventilatory requirements were higher with Class I compared with Class II poisoning (77.0% vs. 54.9%, $P<0.001$). Patients with Class I poisoning needed mechanical ventilation for a longer period (10.55 (7.4) vs. 7.0 (5.2) days, $P=0.002$). The linear relationship between the WHO hazard class and mortality in acute organophosphate poisoning mandates the restriction of the sale of organophosphate compounds associated with higher lethality amongst humans.

..... PMID: 20097246

Peter JV, Jerobin J, Nair A, Bennett A, Samuel P, Chrispal A, Abraham OC,

Mathews KP, Fleming JJ, Oommen A.

Clinical profile and outcome of patients hospitalized with dimethyl and diethyl organophosphate poisoning.

Clin Toxicol(Phila). 2010 Nov;48(9):916-23.

Medical Intensive Care Unit, Christian Medical College and Hospital, Vellore, India. peterjohnvictor@yahoo.com.au

The two major classes of organophosphate compounds, dimethyl and diethyl organophosphates, have different toxicokinetic properties. This study evaluated the clinical profile and outcomes in patients admitted with poisoning with these two classes of organophosphates. **METHODS:** This retrospective study spanned 6 years (2002-2007). Patients were treated with atropine and supportive care including ventilation, as required, and followed up until death or hospital discharge. Oximes were not administered. Of the 422 charts retrieved, 396 fulfilled inclusion criteria. Data on the clinical profile, ventilation, length of hospital stay, incidence of intermediate syndrome and mortality were extracted. **RESULTS:** The mean (\pm standard deviation) age was 31.4 \pm 12.7 years with a male preponderance (2.6:1). The median (interquartile range (IQR)) admission pseudocholinesterase level of 317 (222-635) U/L indicated significant inhibition of cholinesterase activity. The median lag-time to presentation to our

hospital was 5 (IQR 3-8.5) hours. Oximes were administered at a primary center in 33 patients (8.3%). Dimethyl organophosphate was ingested by 141 patients, diethyl organophosphate by 108, S-alkyl organophosphate by 2, and an un-identified organophosphate by 145 patients. Ventilation was required in 260 patients (65.7%); the median duration of ventilation being 7.5 (IQR 3-12) days. Overall mortality was 13.1%. There was a significant difference between dimethyl and diethyl organophosphate compounds in ventilatory requirement (76% vs. 56%, adjusted odds ratio (OR) 2.37, 95% CI 1.01-5.57, $p=0.047$), duration of ventilation (11 (4-15) vs. 5 (2-9) days, adjusted OR 1.12, 95%CI 1.04-1.21, $p=0.002$) and incidence of intermediate syndrome (72/125 (58%) vs. 24/92 (26%), adjusted OR 2.84, 95%CI 1.38-5.86, $p=0.004$). Mortality was similar in the two groups (20/141 (14%) vs. 7/108 (6%), dimethyl vs. diethyl organophosphate, adjusted OR 1.29, 95%CI 0.43-3.94, $p=0.65$). **CONCLUSIONS:** Patients admitted with dimethyl organophosphate poisoning have a worse outcome compared with diethyl organophosphate poisoning for clinically relevant patient outcomes.

..... PMID: 21171848

Rajaian S, Kumar S, Gopalakrishnan G, Chacko NK, Devasia A, Kekre NS.

Outcome of shock wave lithotripsy as monotherapy for large solitary renal stones (>2 cm in size) without stenting. Indian J Urol; 2010, 26 (3): 359-63

Department of Urology, Christian Medical College Hospital, Ida Scudder Road, Vellore, Tamil nadu, India.

PURPOSE: To evaluate the outcome of shock wave lithotripsy (SWL) as monotherapy for solitary renal stones larger than 2 cm without ureteral stenting. **MATERIALS AND METHODS:** Our retrospective study included patients with solitary renal radio opaque stones larger than 2 cm treated with SWL using electromagnetic Dornier Compact S lithotripter device (Wessling, Germany) for a period of 3 years (September 2002-2005). Stone clearance was assessed at 1 week, 1 month, and 3 months with plain X-rays of kidney, ureter, and bladder region, ultrasonography, and tomograms. Stone-free status, morbidity of the procedure, and fate of clinically insignificant residual fragments (CIRF) were studied. A stone-free state was defined as no radiologic evidence of stone. Success

was defined as complete clearance + CIRF. RESULTS: Fifty-five patients, aged 11-65 years (mean 49.8) underwent SWL. Of them, only two were children. Male-to-female ratio was 3:1. The stone size was 21-28 mm (average 24 mm). The mean number of shocks were 3732 (range 724-12,100) and average energy level was 14 kV (range 11-16 kV). The mean follow-up was 18 months (range 3-22 months). Over all, stone-free status was achieved in 50% and success in 81% at 3 months. Stone clearance was not affected by stone location. Stones <25 mm had better stone-free rate (54.16% vs. 28.5%) and lesser CIRF (14.6% vs. 28.5%) when compared to larger stones (>26 mm) (P = -0.10). Of 54 patients, 39 developed steinstrasse with mean length of 3.2 cm (range 1.4-6.2 cm) and only four required intervention. Effectiveness quotient (EQ) for SWL monotherapy for solitary renal stones more than 2 cm was 25.3%. The EQ for stones <25 mm and those more than 25 mm were 28.4% and 10% (P = -0.12), respectively. There was a lesser trend of difference between stones with size <25 and more than 25 mm. During the last review, the overall stone-free rate was 67.2%. CONCLUSIONS: SWL monotherapy was safe but significantly less effective for solitary renal stones larger than 2 cm. It can only be suggested to those who refuse surgical intervention. Pretreatment DJ stenting is not mandatory when closer follow-up is ensured.

PMID: 21116354

Rajendran P, Ajjampur SS, Chidambaram D, Chandrabose G, Thangaraj B, Sarkar R, Samuel P, Rajan DP, Kang G.
Pathotypes of diarrheagenic Escherichia coli in children attending a tertiary care hospital in South India
Diagn Microbiol Infect Dis; 2010, 68 (2): 117-22
Department of Gastrointestinal Sciences, Christian Medical College, Vellore, India.

The prevalence of diarrheagenic Escherichia coli (DEC) in children under 5 years was studied in children with diarrhea and controls in South India. Four polymerase chain reaction (PCR) "schemes" were used to detect genes of the 6 pathotypes of DEC. In 394 children with diarrhea, 203 (52%) DEC infections were found. Among the 198 controls, 126 (63%) DEC infections were found. Enteropathogenic E. coli was the most common pathotype by multiplex PCR both in cases (58, 14.7%) and controls (47, 23.7%), followed by

enteropathogenic E. coli seen in 10% cases and 8% of controls. Enterotoxigenic E. coli (ETEC), enterohemorrhagic E. coli (EHEC), enteroinvasive E. coli (EIEC), and diffusely adherent E. coli (DAEC) were found in 4.1%, 2.0%, 1.0%, and 0.5% of cases, respectively. ETEC was found in 2.5% of controls, but EHEC, EIEC, and DAEC were not detected. Overall, no single assay worked well, but by discounting genes with a pathogenicity index of less than 1, it was possible to use the PCR assays to identify DEC in 75/394 (19%) cases and 12/198 (6.1%) controls, while mixed infection could be identified in 8/394 (2%) cases and 2/198 (1%) controls.

PMID: 20846583

Rajshekhar V, Moorthy RK.
Status of Stereotactic Biopsy in Children with Brain Stem Masses: Insights from a Series of 106 Patients
Stereotact Funct Neurosurg; 2010, 88 (6): 360-366.
Department of Neurological Sciences, Christian Medical College, Vellore, India. rajshekhar@cmcvellore.ac.in

Background: There is no consensus on the indications for stereo tactic biopsy for brain stem masses in children. Objectives: We analyzed the results of stereo tactic biopsy for brain stem masses in 106 consecutive children to define current indications for this surgery. Methods: We performed a retrospective review of inpatient summaries, stereo tactic worksheets and radiological investigations of 106 consecutive patients, under the age of 18 years, who underwent CT-guided stereo tactic biopsies for brain stem lesions between 1987 and 2008. Patients were divided into two eras: era I from 1987 to 1997 and era II from 1998 to 2008. Results: 91 children underwent a biopsy in era I, and 15 had the procedure in era II, this difference clearly indicating the impact of the availability of magnetic resonance imaging. There was no difference in the proportion of diffuse lesions biopsied in both eras. Astrocytoma was the most frequently diagnosed pathology in both eras accounting for nearly 90% of biopsies. Inflammatory masses were diagnosed in less than 10% of patients. There was no mortality or permanent morbidity. Mortality, on follow-up, in children with diffuse low- and high-grade astrocytoma was similar. Conclusions: CT-guided stereo tactic biopsy for brain stem masses in children is safe and

is presently indicated in ruling out an inflammatory pathology of an enhancing mass of the brain stem.

PMID: 20861659

Ramachandran J, Juneja R, John L, Dutta AK, Chen JW, Woodman RJ, Wigg AJ.

Chronic kidney disease following liver transplantation: a South Australian experience.

Transplant Proc. 2010 Nov;42(9):3644-6.

South Australian Liver Transplant Unit, Flinders Medical Centre, Adelaide, Australia. jeyapati@yahoo.com

The incidence of chronic kidney disease (CKD) and its impact on survival have not been widely studied in the Australian liver transplant (OLT) population. The aims of this study were to evaluate the prevalence of CKD stages at various timepoints, calculate the cumulative incidence of progression to severe CKD, and study the impact of CKD stages on patient survival and risk factors for severe CKD in a single-center post-OLT population. We studied retrospectively 130 patients who underwent OLT in South Australia with a minimum of 6 months of follow-up from 1992 to 2008. CKD was staged according to Kidney Diseases Outcome Quality Initiative Guidelines. Glomerular filtration rate (GFR) was calculated using the Modification of Diet in Renal Disease equation. Multiple pre- and post-OLT variables were examined for their association with severe CKD. Log-rank tests and Cox regression analysis were performed to evaluate the survival data. The cumulative incidences of severe CKD (stages 4 and 5) at 2, 5, and 15 years were 3.8%, 12.7%, and 14.8%, respectively. Severe CKD was associated with an increased mortality (hazard ratio 6.5; 95% confidence interval = 2.5-17.0; $P < .001$). Mild and moderate CKD stages were not associated with increased mortality. Risk factors for severe CKD were: female gender, hepatitis C infection, pre-OLT diabetes, acute renal failure post-OLT, and low 1-year GFR. Mild and moderate CKD are common post-OLT. The development of severe CKD, which can be predicted early in the post-OLT period, is strongly associated with an increased mortality rate.

PMID: 21094832

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

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

Indian J Gastroenterol: official journal of the Indian Society of Gastroenterology; 2010, 29 (4): 152-6

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

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

PMID: 20577845

Ramani S, Paul A, Saravanabavan A, Menon VK, Arumugam R, Sowmyanarayanan TV, Samuel P, Kang G.

Rotavirus antigenemia in Indian children with rotavirus gastroenteritis and asymptomatic infections.

Clin Infect Dis; 2010, 51 (11): 1284-9

Departments of Gastrointestinal Sciences¹ and Biostatistics², Christian Medical College, Vellore, India.

BACKGROUND: Rotavirus gastroenteritis results in significant morbidity and mortality in Indian children. Although there are numerous studies on rotavirus diarrhea, there are few reports on antigenemia and extraintestinal presentations in these populations. **METHODS:** Following screening for rotavirus antigen of stool samples from children with and without acute gastroenteritis with a commercial enzyme immunoassay (EIA), a total of 199 stool and serum sample pairs were identified for additional testing. All EIA-positive stool samples were genotyped, and viral load estimated by real-time reverse-transcriptase polymerase chain reaction (RT-PCR). Serum samples were tested for rotavirus antigen by an in-house EIA, and antigen was quantified by optical density. Scoring of disease severity was performed for all hospitalized children. Data on extra-intestinal presentations were collected if available. **RESULTS:** Based on screening of stool samples by EIA, the study population could be divided into 3 groups, including 111 children with rotavirus diarrhea, 44 children with diarrhea and no rotavirus detected in stool specimens, and 44 children with asymptomatic rotavirus infection. Antigenemia was significantly higher among children with rotavirus diarrhea (50.4%) than among children with non-rotaviral diarrhea (16%) or asymptomatic infections (2.3%) ([Formula: see text]). Low copies of rotavirus were detected by RT-PCR in all 7 children with EIA-negative stool specimens and antigenemia. Presence and levels of rotavirus antigen in serum specimens correlated with stool viral load. Children with antigenemia had significantly more-severe disease but not more extraintestinal presentations than did children without antigenemia. **CONCLUSIONS:** Antigenemia occurs frequently in rotavirus infection and correlates with virus replication in the gut but not with extra-intestinal presentations.

..... **PMID: 21039217**

Renita L, Pulimood SA, Eapen EP, Muliyl J, John KR.
Health care utilisation in Indian leprosy patients in the era of elimination
Lepr Rev; 2010, 81 (4): 299-305
Department of Dermatology, Venereology, Leprosy, Christian Medical College, Vellore, India.

OBJECTIVE: The health care utilisation pattern among Indian leprosy patients accessing a tertiary care centre

over an 18 month period was studied. **DESIGN:** A study was conducted at the Dermatology Outpatient Clinic at the Christian Medical College, Vellore, from January 2005 to June 2006. The profile of patients was assessed and a subgroup was interviewed on their healthcare use, including any delays and costs incurred. **RESULTS:** 198 patients presented of which 115 patients (58.1%) were on treatment for leprosy or a leprosy reaction (active) including 35 new patients (17.7%), and 83 (41.9%) patients were not on active treatment (inactive). 81 patients were interviewed in depth, 14 (17.3%) were new patients included among 54 (66.7%) patients with active disease, and 27 (33.3%) with inactive disease. The average delay from the onset of symptoms to starting treatment in those interviewed was 13.4 months, 7.9 months of which was a patient-related delay and 5.4 months of which was the health care system-related delay. In patients who had been released from treatment, 78.6% (22/28) required care after cure. **CONCLUSIONS:** Improved awareness is required to reduce patient-related delays and systems for sustained training need to be in place to tackle the problem of health care system-related delays. Care after cure is a felt need for many patients released from treatment.

..... **PMID: 21313975**

Sajith KG, Chacko A, Dutta AK.
Recurrent acute pancreatitis: clinical profile and an approach to diagnosis
Dig Dis Sci; 2010, 55 (12): 3610-6
Department of Gastrointestinal Sciences, Christian Medical College, Vellore, Tamil Nadu 632 004, India.

BACKGROUND AND AIMS: Though recurrent acute pancreatitis is often seen in clinical practice, there are few comprehensive articles on this entity. The aim of this study therefore was to assess the etiological and clinical profile as well as diagnostic yield of non-invasive and invasive tests in this group of patients. **METHODS:** All patients with recurrent acute pancreatitis seen from 2002 to 2007 were included in the study, retrospectively. Clinical information, investigation, and treatment data were collected for all patients by a standardized review of medical charts. Diagnostic tests were grouped into level one (non-invasive) and level two (invasive) tests and their yield was assessed. Comparison was made between the

group with known etiology and idiopathic group to look for significant differences. **RESULTS:** A total of 188 patients with recurrent acute pancreatitis were seen during the study period. Common etiological factors were biliary disease (37%), pancreas divisum (8.5%) and alcohol (6.4%). Multiple etiologies were seen in 7% of cases, and no cause was found in 32.4%. The diagnostic yield of level-one investigation (non-invasive) was 29.3%. Level-two tests (invasive) identified presumptive etiologies in 38.3% of cases. Complications developed in 12.2% and there was no mortality. Clinical features and complications were similar in the idiopathic group and those with known etiology. **CONCLUSIONS:** Etiological diagnosis was obtained in 67.6% of patients after comprehensive diagnostic work up. Diagnosis in the majority of patients could only be reached after invasive tests (bile crystal analysis, EUS, ERCP). Early diagnosis and etiology-based therapy is the key to optimum patient outcome.

PMID: 20232145

Samuelkamaleshkumar S, Radhika S, Cherian B, Elango A, Winrose W, Suhany BT, Prakash MH.

Community reintegration in rehabilitated South Indian persons with spinal cord injury.

Arch Phys Med Rehabil. 2010 Jul;91(7):1117-21.

Department of Physical Medicine and Rehabilitation, Christian Medical College, Bagayam, Vellore, Tamil Nadu, India. stopatsams@rediffmail.com

OBJECTIVES: To explore community reintegration in rehabilitated South Indian persons with spinal cord injury (SCI) and to compare the level of community reintegration based on demographic variables. **DESIGN:** Survey. **SETTING:** Rehabilitation center of a tertiary care university teaching hospital. **PARTICIPANTS:** Community-dwelling persons with SCI (N=104). **INTERVENTIONS:** Not applicable. **MAIN OUTCOME MEASURES:** Craig Handicap Assessment and Reporting Technique (CHART). **RESULTS:** The mean scores for each CHART domain were physical independence 98+/-5, social Integration 96+/-11, cognitive independence 92+/-17, occupation 70+/-34, mobility 65+/-18, and economic self sufficiency 53+/-40. Demographic variables showed no statistically significant difference with any of the CHART domains except for age and mobility, level of education, and social integration. **CONCLUSIONS:** Persons with SCI in rural South India

who have completed comprehensive, mostly self-financed, rehabilitation with an emphasis on achieving functional ambulation, family support, and self-employment and who attend a regular annual follow-up show a high level of community reintegration in physical independence, social integration, and cognitive independence. CHART scores in the domains of occupation, mobility, and economic self-sufficiency showed lower levels of community reintegration.

PMID: 20599052

Samuel S, Ismavel R, Boopalan PR, Matthai, T.

Practical considerations in the making and use of high-dose antibiotic-loaded bone cement

Acta Orthop Belg; 2010, 76 (4): 543-5

Department of Orthopaedics, Christian Medical College, Vellore, Tamilnadu, India. sumantsamuel@gmail.com

Local antibiotic delivery with antibiotic loaded acrylic bone cement has been used extensively in the management of chronic osteomyelitis and implant related infections. Though newer drug delivery vehicles are being investigated, it remains the most widely used local antibiotic delivery vehicle in orthopaedic surgery. Self-made antibiotic loaded bone cement beads, which are cheaper and antibiotic specific, have been shown to elute less effectively than commercial antibiotic loaded cement beads. We offer several tips for increasing the elution and effectiveness of antibiotic loaded bone cement in clinical practice.

PMID: 20973363

Ramani S, Sankaran P, Arumugam R, Sarkar R, Banerjee I, Mohanty I, Jana AK, Kuruvilla KA, Kang G.

Comparison of viral load and duration of virus shedding in symptomatic and asymptomatic neonatal rotavirus infections. J Med Virol. 2010 Oct;82(10):1803-7.

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

A single rotavirus strain causing asymptomatic infections as well as severe gastrointestinal disease has been described in the neonatal nurseries of the Christian Medical College, Vellore. In this study, quantitative real-time RT-PCR was used to determine the association of viral load with the presence of gastrointestinal symptoms in neonates. Viral load

was estimated in terms of the crossing point [C(t) value] at which the amplicon could be detected in the real-time PCR assay. The study was carried out on 103 neonates, including 33 asymptomatic neonates and 70 neonates with different gastrointestinal symptoms. The duration of virus shedding was also compared between five symptomatic and four asymptomatic neonates using real-time RT-PCR. There was no significant difference in viral load between symptomatic and asymptomatic neonates ($P = 0.087$). Among neonates with different gastrointestinal symptoms, those presenting with feed intolerance and abdominal distension had a significantly higher viral load than those with other gastrointestinal symptoms ($P = 0.02$). For the study on virus shedding, nine neonates were followed up for a median duration of 53 days, with a median of 31 samples tested per child. Extended shedding of low copies of rotavirus was found, with no significant differences in pattern of shedding between symptomatic and asymptomatic neonates. The lack of correlation between viral load and gastrointestinal disease demonstrates yet another difference between neonatal rotavirus infection and infection in older children where higher viral load correlates with severe disease.

PMID: 20827780

Soman S, Sudhakar SV, Keshava SN.

Celiac axis compression by median arcuate ligament on computed tomography among asymptomatic persons

Indian J Gastroenterol; 2010, 29 (3): 121-3

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

BACKGROUND/AIM: Compression of celiac artery by median arcuate ligament (MAL) may cause abdominal symptoms. This study looked at the prevalence of this finding in asymptomatic persons. **METHODS:** Abdominal angiograms of 155 healthy asymptomatic voluntary kidney donors aged 18-65 years, done as part of the standard pretransplant work up, were reviewed retrospectively. **RESULTS:** Celiac axis compression, defined as greater than 50% luminal narrowing of the celiac artery by the MAL was found in eight (5.1%) of 155 angiograms. **CONCLUSION:** The high frequency of this finding re-emphasizes the need

for caution in attributing abdominal symptoms to such compression based on imaging findings alone.

PMID: 20658331

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

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

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

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

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

PMID: 20179944

Vedantam A, Subramanian V, Rao NV, John KR.
Malnutrition in free-living elderly in rural south India: prevalence and risk factors.

Public Health Nutr; 2010, 13 (9): 1328-32

Department of Community Health, Christian Medical College, Vellore, Tamil Nadu, India.
vedantam.aditya@gmail.com

OBJECTIVE: To estimate the prevalence of malnutrition among free-living elderly in a rural population of south India. **DESIGN:** Cross-sectional study. **Nutritional status** was assessed using the Mini Nutritional Assessment (MNA) questionnaire, which is an eighteen-item nutritional screening instrument used in the elderly. **SETTING:** Kaniyambadi block, a rural development block in the state of Tamil Nadu, south India. **SUBJECTS:** Community-dwelling elderly (aged 60 years and above). **RESULTS:** As evaluated by the MNA, 14 % of the 227 subjects were malnourished and 49 % were at risk of malnourishment. No significant difference was found between men and women. The majority of the elderly were living with their children, had no income and consumed three meals per day. Older age ($P < 0.001$), decreased food intake ($P < 0.001$) and consuming fewer meals ($P < 0.001$) were independently associated with lower MNA scores. **CONCLUSIONS:** More than 60 % of the subjects had low MNA scores (<23.5) indicating that deficient protein-energy intake is common among rural elderly of south India and requires more attention.

PMID: 19807935

CLINICAL TRIALS:

David D, Samuel P, David T, Keshava SN, Irodi A, Peter JV.
An open-labelled randomized controlled trial comparing costs and clinical outcomes of open endotracheal suctioning with closed endotracheal suctioning in mechanically ventilated medical intensive care patients

J Crit Care; 2010,
Department of Medicine II, Christian Medical College & Hospital, Vellore, 632004, Tamil Nadu, India.

PURPOSE: Closed endotracheal suctioning (CES) may impact ventilator-associated pneumonia (VAP) risk by reducing environmental contamination. In developing countries where resource limitations constrain the provision of optimal bed space for critically ill patients, CES assumes greater importance. **MATERIALS AND**

METHODS: In this prospective, open-labeled, randomized controlled trial spanning 10 months, we compared CES with open endotracheal suctioning (OES) in mechanically ventilated patients admitted to the medical intensive care unit (ICU) of a university-affiliated teaching hospital. Patients were followed up from ICU admission to death or discharge from hospital. Primary outcome was incidence of VAP. Secondary outcomes included mortality, cost, and length of stay. **RESULTS:** Two hundred patients were recruited, 100 in each arm. The incidence of VAP was 23.5%. Closed endotracheal suctioning was associated with a trend to a reduced incidence of VAP (odds ratio, 1.86; 95% confidence interval, 0.91-3.83; $P = .067$). A significant benefit was, however, observed with CES for late-onset VAP ($P = .03$). Mortality and duration of ICU and hospital stay were similar in the 2 groups. The cost of suction catheters and gloves was significantly higher with CES (Rs 272 [US \$5.81] vs Rs 138 [US \$2.94], $P < .0001$). Nine patients need to be treated with CES to prevent 1 VAP (95% confidence interval, -0.7 to 22). **CONCLUSIONS:** In the ICU setting in a developing country, CES may be advantageous in reducing the incidence of VAP, particularly late-onset VAP. These results mandate further studies in this setting before specific guidelines regarding the routine use of CES are proposed.

PMID: 21106340

Pichamuthu K, Jerobin J, Nair A, John G, Kamalesh J, Thomas K, Jose A, Fleming JJ, Zachariah A, David SS, Daniel D, Peter JV.

Bioscavenger therapy for organophosphate poisoning - an open-labeled pilot randomized trial comparing fresh frozen plasma or albumin with saline in acute organophosphate poisoning in humans.

Clin Toxicol; 2010, 48 (8): 813-9

Medical Intensive Care Unit, Christian Medical College & Hospital, Ida Scudder Road, Vellore 632 004, Tamil Nadu, India.

INTRODUCTION: Traditional treatment of organophosphate poisoning (OP) with oximes has had limited success. Fresh frozen plasma (FFP) or albumin, acting as bioscavengers to mop up free organophosphate, has been recently proposed as a treatment modality. In this pilot open-label, three-arm, randomized controlled study exploring proof of concept,

we evaluated if bioscavenger therapy had a role in OP. **PATIENTS AND METHODS:** Sixty patients with significant poisoning presenting within 12 hours, with suppression of pseudocholinesterase activity to < 1,000 U/L, were randomized to receive FFP (8 bags, 250 mL each over 3 days), 20% human albumin (4 x 100 mL over 3 days), or saline (2,000 mL over 3 days) in addition to atropine and supportive care. Pseudocholinesterase and organophosphate levels were measured pretreatment, post-infusion (Day 2, Day 3), and predischage and expressed as mean +/- standard error. The incidence of intermediate syndrome, need for mechanical ventilation, atropine requirement, and mortality were assessed. **RESULTS:** Twenty patients received albumin and 19 patients each FFP or saline. FFP increased pseudocholinesterase levels (250 +/- 44-1,241 +/- 364 U/L) significantly (p = 0.007). Small, nonsignificant increases were observed with saline (160 +/- 30-259 +/- 78) and albumin (146 +/- 18-220 +/- 61). Organophosphate levels reduced in all 3 arms; no clear-cut trends were observed. We observed more cases of intermediate syndrome with FFP [10/19 (53%) vs. 5/20 (25%) vs. 5/19 (26%), FFP, albumin, and saline arms (p = 0.15)]. The interventions did not affect ventilatory requirements (14/19 vs. 15/20 vs. 14/19) or prevent delayed intubation. There were no differences in mean (+/-standard error) atropine requirement (in milligrams) in the first 3 days (536 +/- 132 vs. 361 +/- 125 vs. 789 +/- 334) and duration (in days) of ventilation (10.0 +/- 2.1 vs. 7.1 +/- 1.5 vs. 7.5 +/- 1.5) or hospital stay (12.4 +/- 2.2 vs. 9.8 +/- 1.4 vs. 9.8 +/- 1.6). Two patients developed adverse effects with FFP. Mortality was similar (4/19 vs. 5/20 vs. 2/19, p = 0.6). **CONCLUSIONS:** Despite significant increase in pseudocholinesterase levels with FFP, this pilot study did not demonstrate favorable trends in clinical outcomes with FFP or albumin.

PMID: 20923392

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

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

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

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

BACKGROUND: Studies on different methods to supplement the traditional informed consent process have generated conflicting results. This study was designed to evaluate whether participants who received group counseling prior to administration of informed consent understood the key components of the study and the consent better than those who received individual counseling, based on the hypothesis that group counseling would foster discussion among potential participants and enhance their understanding of the informed consent.

METHODS: Parents of children participating in a trial of nutritional

supplementation were randomized to receive either group counseling or individual counseling prior to administration of the informed consent. To assess the participant's comprehension, a structured questionnaire was administered approximately 48-72 hours afterwards by interviewers who were blinded to the allocation group of the respondents.

RESULTS: A total of 128 parents were recruited and follow up was established with 118 (90.2%) for the study. All respondents were aware of their child's participation in a research study and the details of sample collection. However, their understanding of study purpose, randomization and withdrawal was poor. There was no difference in comprehension of key elements of the informed consent between the intervention and control arm.

CONCLUSIONS: The results suggest that the group counseling might not influence the overall comprehension of the informed consent process. Further research is required to devise better ways of improving participants' understanding of randomization in clinical trials.

PMID: 20470423

Singh AS, Kang G, Ramachandran A, Sarkar R, Peter P, Bose A.

Locally made ready to use therapeutic food for treatment of malnutrition a randomized controlled trial

Indian Pediatr; 2010, 47 (8): 679-86.

Departments of Gastrointestinal Sciences and Community Health, Christian Medical College, Vellore TN 632004, India.

OBJECTIVE: To evaluate the effectiveness of a locally made ready-to-use therapeutic food (RUTF) in decreasing mild to moderate malnutrition. **DESIGN:** A randomized open label, controlled trial. **SETTING:** Pre-schools run by the Department of Community Health in Kaniyambadi administrative block, Vellore, India; duration of follow-up 3 months from the date of recruitment. **PARTICIPANTS:** Pupils aged 18 -60 months with Weight-for-Age 2 SD. **INTERVENTIONS:** A locally produced energy-dense supplement (RUTF), and the current standard of care [teaching caregivers how to make a fortified cereal-milk supplement called High Calorie Cereal Milk (HCCM)]. **MAIN OUTCOME MEASURES:** Increase in weight-for-age status; increase in levels of plasma zinc, vitamin B12, serum albumin and haemoglobin. **Results:** The Mean (SD) weight gain at 3 months was higher in the RUTF group: RUTF (n=51): 0.54 kg; (SE = 0.05; 95% CI = 0.44 - 0.65) vs HCCM (n=45): 0.38 kg;(SE = 0.06; 95% CI = 0.25 - 0.51), P = 0.047. The weight gain per kilogram of body weight was directly proportional to the severity of malnutrition. **CONCLUSIONS:** Community-based treatment showed weight gain in both groups, the gain being higher with RUTF.

PMID: 20972285

EXPERIMENTAL RESEARCH:

Abraham P, Kolli VK, Rabi S.

Melatonin attenuates methotrexate-induced oxidative stress and renal damage in rats.

Cell Biochem Funct. 2010Jul;28(5):426-33.

Department of Biochemistry, Christian Medical College, Bagayam, Vellore 632002, Tamil Nadu, India. premilaabraham@yahoo.com

Nephrotoxicity is an adverse side effect of methotrexate (MTX) chemotherapy. The present study verifies whether melatonin, an endogenous antioxidant prevents MTX-induced renal damage. Adult rats were administered 7 mg/kg body weight MTX intraperitoneally for 3 days. In the melatonin pretreated rats, 40 mg/ kg body weight melatonin was administered daily intraperitoneally 1 h before the administration of MTX. The rats were killed 12 h after the final dose of MTX/vehicle. The kidneys were used for light microscopic and biochemical studies. The

markers of oxidative stress were measured along with the activities of the antioxidant enzymes and myeloperoxidase activity in the kidney homogenates. Pretreatment with melatonin reduced MTX induced renal damage both histologically and biochemically as revealed by normal plasma creatinine levels. Melatonin pretreatment reduced MTX induced oxidative stress, alteration in the activity of antioxidant enzymes as well as elevation in myeloperoxidase activity. The results suggest that melatonin has the potential to reduce MTX induced oxidative stress, neutrophil infiltration as well as renal damage. As melatonin is an endogenous antioxidant and is non-toxic even in high doses it is suggested that melatonin may be beneficial in minimizing MTX induced renal damage in humans.

PMID: 20589739

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

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

Auton Autacoid Pharmacol; 2010, 30 (3): 173-7

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

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

PMID: 20085574

Hareendran S, Sathishkumar S, Abbas S, Mackay AM, Rajan P.

A novel composition for the culture of human adipose stem cells which includes complement C3.

Cytotechnol. 2010 Oct;62(5):389-402. Epub 2010 Sep 11.

Center for Stem Cell Research, Christian Medical College, Bagayam, Vellore, 632002, India.

Adipose tissue is an easily accessible and abundant source of stem cells. Adipose stem cells (ASCs) are currently being researched as treatment options for repair and regeneration of damaged tissues. The standard culture conditions used for expansion of ASCs contain fetal bovine serum (FBS) which is undefined, could transmit known and unknown adventitious agents, and may cause adverse immune reactions. We have described a novel culture condition which excludes the use of FBS and characterised the resulting culture. Human ASCs were cultured in the novel culture medium, which included complement protein C3. These cultures, called C-ASCs, were compared with ASCs cultured in medium supplemented with FBS. Analysis of ASCs for surface marker profile, proliferation characteristics and differentiation potential indicated that the C-ASCs were similar to ASCs cultured in medium containing FBS. Using a specific inhibitor, we show that C3 is required for the survival of C-ASCs. This novel composition lends itself to being developed into a defined condition for the routine culture of ASCs for basic and clinical applications.

..... PMID: **20835846**

Rajaian S, Kumar S.

There is no need to stent the ureterovesical anastomosis in live renal transplants

Indian J Urol; 2010, 26 (3): 454-6

Department of Urology, Christian Medical College Hospital, Ida Scudder Road, Vellore, Tamil Nadu - 632004, India.

Double-J (DJ) stents are used in urology practice for various reasons. In renal transplantation, DJ stenting is used to treat the complications like urine leak and ureteric obstruction. However, the role of routine or prophylactic DJ stenting during renal transplantation is debatable. Most of the urinary complications occurring following renal transplantation are because

of poor surgical technique and transplant ureteric ischemia. Routine DJ stenting cannot be a substitute for sound surgical technique, which avoids ureteric devascularization and create watertight ureterovesical anastomosis. DJ stenting increases the risk for complications like recurrent urinary tract infection, stent encrustation, stone formation, hematuria, and severe storage lower urinary tract symptoms. Routine DJ stenting during renal transplantation is not mandatory. It can harm an immunosuppressed renal transplant recipient by predisposing to various complications.

..... PMID: **21116376**

REVIEWS:

Chacko, G.

Parasitic diseases of the central nervous system

Semin Diagn Pathol; 2010, 27 (3): 167-85.

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

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Parasitic infections, though endemic to certain regions, have over time appeared in places far removed from their original sites of occurrence facilitated probably by the increase in world travel and the increasing migration of people from their native lands to other, often distant, countries. The frequency of occurrence of some of these diseases has also changed based on a variety of factors, including the presence of intermediate hosts, geographic locations, and climate. One factor that has significantly altered the epidemiology of parasitic diseases within the central nervous system (CNS) is the HIV pandemic. In this review of the pathology of parasitic infections that affect the CNS, each parasite is discussed in the sequence of epidemiology, life cycle, pathogenesis, and pathology.

..... PMID: **20919609**

Christopher PR, David KV, John SM, Sankarapandian V.

Antibiotic therapy for Shigella dysentery.

Cochrane Database Syst Rev. 2010 Aug 4;(8):CD006784.

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

BACKGROUND: Shigella dysentery is a relatively common illness and occasionally causes death, worldwide. Mild symptoms are self-limiting but in more severe cases, antibiotics are recommended for cure and preventing relapse. The antibiotics recommended are diverse, have regional differences in sensitivity, and have side effects. **OBJECTIVES:** To evaluate the efficacy and safety of antibiotics for treating Shigella dysentery. **SEARCH STRATEGY:** In June 2009 we identified all relevant trials from the following databases: Cochrane Infectious Diseases Group Specialized Register; Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library 2008, issue 4), MEDLINE, EMBASE, LILACS and the metaRegister of Controlled Trials (mRCT). We also checked conference proceedings for relevant abstracts, and contacted researchers, organizations, and pharmaceutical companies. **SELECTION CRITERIA:** Randomized controlled trials of antibiotics for Shigella dysentery. **DATA COLLECTION AND ANALYSIS:** Four authors, working in pairs, independently assessed trial eligibility, methodological quality, and extracted data. We calculated risk ratios (RR) with 95% confidence intervals (CI) for dichotomous data, and used the random-effects model for significant heterogeneity. We explored possible sources of heterogeneity, when present, in subgroup analyses of participant age and percentage of participants with confirmed Shigella infection. **MAIN RESULTS:** Sixteen trials (1748 participants), spanning four decades and with differing sensitivity to Shigella isolates, met the inclusion criteria. Seven were judged to be at risk of bias due to inadequate allocation concealment or blinding, and 12 due to incomplete reporting of outcome data. Limited data from one three-armed trial of people with moderately severe illness suggest that antibiotics reduce the episodes of diarrhoea at follow-up (furazolidone versus no drug RR 0.21, 95% CI 0.09 to 0.48, 73 participants; cotrimoxazole versus no drug RR 0.30, 95% CI 0.15 to 0.59, 76 participants). There was insufficient evidence to consider any class of antibiotic superior in efficacy in treating Shigella dysentery, but heterogeneity for some comparisons limits confidence in the results. All the antibiotics studied were safe. There was inadequate evidence regarding the role of antibiotics in preventing relapses. **AUTHORS' CONCLUSIONS:** Antibiotics reduce the duration of Shigella dysentery. Regularly updated local or regional antibiotic sensitivity patterns to different species and

strains of Shigella are required to guide empiric therapy. More trials adhering to standard guidelines are required to evaluate the role of antibiotics in the treatment of severe forms of Shigella dysentery and in groups who are at high risk of complications.

PMID: 20687081

George K, Kamath MS.

Fertility and age

J Hum Reprod Sci; 2010, 3 (3): 121-3

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

The changing social scenario together with economic growth and an increase in job opportunities has to a great extent reduced gender inequality and has resulted in more and more older women seeking help from infertility clinics. Fertility and aging have always been closely linked and the age of the female partner remains the single most important factor in predicting success with treatment. Although tests for the ovarian reserve are an important informative tool and are helpful in selecting treatment options, they are poor predictors of the outcome.

PMID: 21234171

Jacob KS.

The assessment of insight across cultures

Indian J Psychiatry; 2010, 52 (4): 373-7

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

The assessment of insight is a part of the routine clinical examination for people with mental illness. Such assessment, by psychiatrists, is based on the current definitions of insight, which rely on western notions of health and illness. This paper discusses the recent findings of illness perspectives of people with a variety of physical diseases and mental disorders from India. Studies on insight in schizophrenia and bipolar disorders also examined explanatory models of illness among patients, relatives, and the general population. The findings argue for the fact that the assessment of insight should be against the local cultural standards rather than universal yardsticks. The assessment of insight should evaluate awareness, attribution, and action. People with psychosis who are able to re-label their psychotic experience, offer non-delusional

explanations for changes in themselves, which correspond to beliefs about illness held by the subculture, admit to the need for restitution, and seek locally available help, can be said to possess insight. The results recommend the use of universal conventions to assess insight in people with psychosis rather than the use of uniform criteria.

PMID: 21267375

Sinclair D, Preziosi MP, Jacob John T, Greenwood B.
The epidemiology of meningococcal disease in India.
Trop Med Int Health. 2010 Dec;15(12):1421-35.
The South Asian Cochrane Centre, Christian Medical College, Vellore, India. davesinkers@yahoo.com

OBJECTIVE: To undertake a review of the literature on the epidemiology of meningococcal disease in India, with a view to informing future control policies. **METHODS:** We searched the PUBMED, EMBASE, Global Health, IMSEAR and MedIND databases for observational studies relating to the burden of endemic meningococcal disease in India, the occurrence and epidemiological characteristics of epidemics, and the prevalence of individual meningococcal serogroups. **RESULTS:** The relatively few reports identified suggest that the incidence of endemic meningococcal disease in India is low, but that occasional epidemics of meningococcal disease have been recorded for at least 100 years. The larger epidemics have affected mainly the cities of northern India and have almost universally been caused by meningococci belonging to serogroup A. These epidemics have showed a few characteristics, including a marked seasonality, which are similar to those of epidemic meningococcal A disease in Africa. **CONCLUSIONS:** New serogroup A-containing meningococcal conjugate vaccines are now being developed and reaching the market, including an affordable monovalent serogroup A vaccine manufactured in India, but intended primarily for use in Africa. These new tools may have a role in containing future Indian epidemics, but their usefulness is dependent on early identification of epidemics. This will require a functional disease surveillance system with adequate laboratory support throughout India.

PMID: 21054695

MISCELLANEOUS:

Abraham J, Mathai KV, Rajshekhar V, Narayan RK.
Jacob Chandy: pioneering neurosurgeon of India.
Neurosurgery. 2010 Sep;67(3):567-75; discussion 575-6.
Department of Neurological Sciences, Christian Medical College, Vellore, India.

Jacob Chandy, WHO passed away in 2007 at the age of 97, was born into a deeply religious Christian family in Kerala, South India. After obtaining his medical education at the Madras Medical College, Madras, he serendipitously came to work with Dr Paul Harrison, a renowned medical missionary, in the Gulf state of Bahrain. Harrison urged Chandy to pursue training in the fledgling specialty of neurosurgery in North America. Chandy received his neurosurgical training at the Montreal Neurological Institute with Wilder Penfield and in Chicago with Theodore Rasmussen. At Harrison's urging, Chandy decided to return to India after completing his training to work at the Christian Medical College in Vellore. Thus, it was in 1949 that Chandy established the first neurosurgery department in south Asia in Vellore. He initiated the first neurosurgical training program in India at the Christian Medical College in 1957, with a distinct North American neurosurgical tradition. He went on to train nearly 20 neurosurgeons, many of whom set up new departments of neurosurgery in their home states. Chandy also had several other remarkable achievements to his credit. Despite the pressures of clinical practice, he insisted on fostering both basic and clinical neurosciences within his department, an arrangement that persists to this day in the Department of Neurological Sciences at the Christian Medical College, Vellore. As the Principal (Dean) of the Christian Medical College, Chandy displayed his skills as a medical educator and administrator. In this role, he was instrumental in starting specialty training programs in several other medical and surgical disciplines. His greatest legacies survive in the form of the department that he founded and his trainees and their students who have helped to establish neurosurgery all over the country.

PMID: 20647965

Zachariah A, Mathew G, Seshadri MS, Bhattacharji S, Jacob KS.

Regulating medical education,
The Hindu dated 10/07/2010.

Mathew A.

Changing Medical Practice through Continuing Medical Education,
Health Action 2010 Oct: 4-7.

Joseph A, Kang G.

Making can-do into must-do; the way forward to health and wealth?
Indian J Med Ethics. 2010 Oct-Dec;7(4):238-40.

PMID: 22106578.

Devanandan S.

N P Singh: History of the first intensive care unit in Delhi -reminscences. Indian J Anaesth. 2010 Nov;54(6):574-5.
C.M.C., Vellore - 632 002, Tamil Nadu, India

As most of us are aware, ventilator support came to stay after the polio epidemic in Denmark in the '50s. Many of us are also aware that Peter Safar, an Anaesthesiologist, is credited with pioneering cardiopulmonary resuscitation (CPR), who also wrote a book titled "The ABC of Resuscitation" in 1957 for training the public in CPR. It was later adopted by the American Heart Association. He also started the first intensive care unit (ICU) in 1958 in the USA. Ten years later, from 1968, the specialty grew from strength to strength in our country and, in 1992, the Society of Critical Care Medicine was formed.

PMID: 21224980

Ganesh A, Ganesh, G.

Reflective writing by final year medical students: lessons for curricular change.

Natl Med J India; 2010, 23 (4): 226-30

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BACKGROUND: Reflective writing has been used in undergraduate medical curricula to inculcate

empathetic attitudes in medical students. Journal writing has been used to enhance reflection in a confidential space. We aimed to introduce our medical students to reflective writing of their daily experiences, both to enhance empathetic attitudes as well as to use the entries to inform curricular changes. METHODS: We invited 16 final year medical students posted in the Department of Medicine to record their emotional experiences during a 6-week posting. Freedom to abstain without prejudice was emphasized, yet all 16 students complied. RESULTS: According to the principle of grounded theory, the entries were grouped into 8 themes: (i) doctor-patient relationship; (ii) personal inadequacy; (iii) empathy; (iv) communication skills; (v) doctor's competence; (vi) patient behaviour; (vii) hospital practices; and (viii) personal feelings. There were 179 entries which were evaluable under the above categories, with no significant gender differences. Based on the entries, the following curricular suggestions were made: (i) use of diaries by medical students to express their emotional reactions and make value judgements, followed by guided discussion by experienced facilitators; (ii) introduction of communication skills courses at appropriate points to enhance Interview skills, empathetic listening, conflict resolution and breaking bad news; (iii) encourage reflection on healthcare delivery and its inequities and suggest methods of dealing with individual patients; and (iv) use of positive feedback and encouragement by faculty. Conclusions. Reflective journal writing by medical students in India gives valuable insights into improving communication skills and professionalism. Appropriate curricular changes should be made to meet the challenges posed by the existing healthcare system.

PMID: 21192519

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Department of Gastrointestinal Sciences, Christian
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Microbes strike back: End of golden era of antibiotics?
Indian J Urol; 2010, 26 (3): 325
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PMID: 21116347

Kekre NS.
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Vellore - 632 004, Tamil Nadu, India.
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Mittal R, Perakath, B.
Evidence-based surgery: knowledge, attitudes, and
perceived barriers among surgical trainees
J Surg Educ; 2010, 67 (5): 278-82

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OBJECTIVES: This study was conducted to assess the knowledge and attitude of surgical trainees toward evidence-based medicine (EBM) and their perceived barriers to its practice. **DESIGN:** The McColl questionnaire and the BARRIERS scale were modified and incorporated into a single questionnaire, which was administered to all surgical trainees attending a Continuing Surgical Education meeting. **SETTING:** Department of Surgery, Christian Medical College, Vellore, India. **PARTICIPANTS:** One hundred ten surgical trainees from 22 medical colleges. **RESULTS:** In all, 84.5% (93/110) trainees returned the questionnaire. The attitudes toward EBM were welcoming, although individual participants reported they welcomed EBM more than their colleagues did. Participants agreed that EBM was useful in everyday practice and that it improved patient care. About 50% of actual practice was considered evidence based. In all, 12.6% (10/89) of participants had received formal training in EBM, and 64.3% (54/84) of participants were aware of the Cochrane database of systemic reviews, but only 35.7% (30/84) read it regularly. Also, 67.8% (61/90) of respondents used protocols and guidelines developed by colleagues. However, 61.5% (56/91) of participants were interested in learning the skills of EBM. The terms absolute risk, relative risk, and clinical effectiveness were understood by >80% of respondents, whereas publication bias, confidence interval, and heterogeneity were poorly understood. The major barriers to practice of EBM were the inability to understand statistical analysis, inadequate facilities for implementation, lack of a single compiled source of literature, relevant literature not being readily available, and insufficient time on the job. **CONCLUSIONS:** Surgical trainees have a positive attitude towards EBM and have some familiarity with the common terms used in EBM. There is a need to increase awareness of, and provide access to, available sources of medical literature. Formal training in EBM, as well as basic statistical analysis, should form a part of the surgical curriculum to foster an environment favorable to the practice of EBM.

PMID: 21035766

Panda A.

For post-graduation in urology: Is a preliminary degree in general surgery necessary?

Indian J Urol; 2010, 26 (3): 326-30

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The format of urological training in India has changed little since its inception. The dogma of tradition has perhaps failed to consider the paradigm shifts in the science. A system that was relevant 50 years ago may not be so relevant today. The majority of procedures are endourological and laparoscopic, to which an average surgical resident has minimal exposure. Yet, the fundamentals of surgical craft are best learnt prior to any sub-specialty training. This is an apparent contradiction that has to be bridged if our training programs seek to be the foremost in the world. A single restructured training program that combines the core surgical curriculum to an extended exposure to the subspecialty will perhaps best address this issue.

PMID: **21116348**

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PMID: **20806534**