CHARM stands for Chengalpattu Academic and Research Meet. The brainchild of Chengalpattu medical college students was one of the biggest academic and research meet conducted for the medical undergraduates from 28th to 31st of August, 2013.

CHARM encompassed a highly enlightening Pre Conference Workshop - under 6 essential topics, Case reports and Abstract presentations, Clinico Pathological case presentation - an evidence based medicine event, Health Summit 2013- a Model United Nation simulation, Panel discussions on Medical Education and finally our very own, renowned medical quiz - Chemfios 6.0.

The conference was interspersed with Key-note lectures by stalwarts in various fields of medicine in order to enlighten the young and aspiring minds who attended the conference, and give them a glimpse of how exactly these great minds think.

The whole conference was accredited by Dr.MGR Medical University, Guindy with 30 credit points. We are also proud to be associated with NCRM-NICHE, SOCHARA and Journals like Australasian Medical Journal, Journal of Pioneering Medical Sciences, Speed Medical Centre and many more.

**DISCLAIMER:** This is to inform that none of the abstracts were peer-reviewed by Journal of Pioneering Medical Sciences. They have been published as sent by CHARM.

**ABSTRACTS:**

**Histopathology: Without Xylene- A Safer Alternative?**

Dr. Snegha Ananth¹

¹Department of Medicine, Government Kilpauk Medical College, Chennai, India

**BACKGROUND:** The basic material for the bulk of daily diagnostic work is the paraffin tissue section usually stained with hemotoxylin and eosin. Therefore any technique that minimizes the use of xylene by using non-biohazardous substitutes, reduces staining time, and does not compromise the staining quality will be very valuable for diagnostic reasons as well as for maintaining a healthy laboratory environment thereby minimizing the risk of laboratory personell. 1.7 % liquid dish washing soap, has been used as a replacement for xylene in this study.

**METHODOLOGY:** Two paraffin sections of 5 microns each to be cut from the previously processed 100 paraffin blocks (100X2=200 paraffin blocks). 100 of them stained by the conventional hemotoxylin and eosin staining (Group 1) and the other 100 by the experimental xylene-free method.(Group 2). In the new experimental method, instead of xylene, the slides are dipped in 1.7% dilute dish wash liquid at 90oC. This is a temperature sensitive method. Thus finally, 100 sections stained by the conventional method and 100 section stained by the xylene-free method will be given random numbers. A randomized mix of 200 sections producing 100 matched pairs were presented to pathologist of the department who was single blinded and was asked to score 6 parameters (nuclear, cytoplasmic staining, clarity, uniformity of staining, artefacts and blurndness) relatively.

**RESULTS:** By Wilcoxon Test, The new xylene free method was better/as good as conventional method in 46% of the sections and poorer in 54% of the section. However, 81% of the sections stained by the xylene free method was above average in their scores (score > or =6) and adequate for diagnosis. > 90% of the sections showed adequate nuclear, cytoplasmic and clarity of staining

**CONCLUSION:** Thus, we can conclude that though the new xylene free method couldn’t stand in same scale as the conventional method nor better than that, but it certainly stands out to be a fair method. Taking into the hazards of xylene and its cost, this method proves to be a valuable one, for the environment as well as the pathologists.

**Prevalence of Overweight and Obesity in School Going Children and Predisposing Factors: Urban vs. Rural, Chennai**

D.Shanmugapriya¹, Dr. Vimala Sarojini²
BACKGROUND: Overweight & obesity have significant impact on a child’s physical and psychological health. Hence we decided to study the prevalence of childhood overweight and obesity to find out the predisposing factors associated with it.

METHODOLOGY: A Cross – sectional study was conducted during June to July 2012 in Paarivakam and Mylapore on randomly selected school-going children. 17.73% was the prevalence of overweight and obesity among school-going children in Coimbatore city, Tamilnadu, this was applied to calculate the sample size. Formula for subjects required = 4p q/d2 = 463, Hence N = 500. Data was collected from a preformed and predetermined questionnaire followed by anthropometric measurements (Height, Weight). All the obtained data are absolutely confidential. The data is expressed in percentage and association found out by test of significance.

RESULTS: Overall Prevalence of overweight in school going children is 15.8%, Rural 5.6% and urban 26% respectively. In rural 4.4% are overweight and 1.2 % are obese, in urban 12.8% are overweight and 13.2% are obese. Hence the urban vs. rural difference is highly significant. 29.7% of the binge eaters are overweight, 7.4% of the children indulged in more amount of sedentary work are overweight.

CONCLUSION: It is documented that the association between binge eating & sedentary work is also highly significant and hence are the important predisposing factors. Intervening now to reduce the prevalence will help reducing the morbidity later in these individuals.

Attitude and Practice of Complementary, Alternative and Integrative Medicine among Students and Interns of a Medical College in Mangalore

Abhinaya Sridhar

BACKGROUND: Complementary and alternative medicine (CAM) is a group of diverse medical and health care systems, that are not generally considered part of allopathic or conventional medicine. Integrative medicine is the combination of such practices of medicine with evidence-based medicine. In India about 80% of population seeks complementary, alternative and integrative medicine (CAIM), but it continues to exist at the periphery of allopathic medicine. This study was conducted to assess the attitude of medical students towards CAIM and its practice in the current scenario.

METHODOLOGY: The cross sectional study was conducted among 401 undergraduate and postgraduate medical students and interns of Kasturba Medical College, Mangalore. A semi-structured questionnaire was used to collect relevant information pertaining to study variables. The attitude of the students towards CAIM was assessed using a five point Likert scale. The collected data was analyzed using SPSS 11.5.

RESULTS: The mean age of the study population was 22.63 ± 2.24 years, of the total study population 62.3% were females. 56.9% of the students were aware of CAIM. Majority of the students had a positive perception about CAIM. On the whole the participants generally expressed a positive attitude towards many of the core principles queried by the questionnaire. 290 (72.3%) students agreed that CAIM would be more effective than either conventional medicine or CAM provided independently and 275 (68.6%) of the students believed that patients benefit more when doctors are familiar with CAIM. 165 (41.1%) students admitted to have practiced CAIM in everyday life. Homeopathy and Ayurveda were found to be the most frequently used treatment modality. 70.3% of students who practiced CAIM felt that they had benefitted from the respective therapies.

CONCLUSION: Majority of the study participants were aware and had a positive attitude towards CAIM even practicing it in their daily life. Since the study was confined to the students of a single medical college, a multicentric study can be conducted with more medical schools involved.

A Study on Drug Utilization and Treatment Outcomes in Complicated Childhood Malaria in a Tertiary Care Hospital

T. Seetham Kumar

BACKGROUND: Malaria remains a major health burden worldwide especially in developing countries. Around 1.5 million cases and one thousand deaths occur annually in India of which 50% are due to plasmodium falciparum.
In view of widespread chloroquine resistance, detection of resistance cases and evaluation of treatment outcomes still remains a global need. With the above background, the present study will be undertaken to find out the drug utilization pattern and treatment outcome in terms of improvement in clinical and laboratory findings in complicated childhood malaria among the pediatrics age group of patients.

**METHODOLOGY:** This was a prospective, cross sectional, hospital based study in which clinically diagnosed complicated childhood malaria cases (age <14 years, both male and female), admitted to the pediatric ward were enrolled with prior informed consents from parents and ethical permission. Fever with co-infection (typhoid, HIV, TB.) and clinically suspected cases of systemic infections due to non- malarial origin were excluded. The baseline characteristics, presenting symptoms and vital signs were recorded in a pre- designed CRF. The drug utilization pattern was evaluated using WHO drug use indicator form. Treatment outcomes were evaluated from routine laboratory tests before and after treatment like parasitemia clearance, fever clearance time, period of hospital stay and cure rate.

**RESULTS:** Out of total 64 cases enrolled in this study the maximum cases (71.88%) were < 5 years of age, males outnumbered females (67.19% Vs 32.81%), mostly from low socioeconomic status (51.57%) and rural areas (85.94%). The most frequent manifestation was severe anemia (76.56%), followed by cerebral malaria (43.75%). Peripheral blood smear examination revealed 81.25% slide positive cases of which 68.75% cases were falciparum positive and 31.25% had mixed falciparum and vivax positive. On treatment, the degree of parasitemia reduced significantly on day 2 (p<0.001). Again the hematological parameters, random blood sugar, serum albumin, total bilirubin, ALT, AST of hepatic dysfunction patients and  ser. Urea, creatinine of impaired renal function cases were significantly improved as compared to their pretreatment values (p<0.001). The mean time of resolution of fever and total parasitemia clearance were 51.6±2.23 hrs and 1.58 ± 0.09 days respectively. The average period of hospital stay was 6.20 ± 0.24 days and all cases were cured. The average no. of drugs per prescription was 6.28, 41.04% were in generic names, 64.19% were injectable preparations and 99.05% were from essential drug list. Other than antimalarials, antimicrobials (20.39%) and anticonvulsants (11.19%) were also used.

**CONCLUSION:** In the present study the use of anti - malarial for complicated childhood malaria followed national drug policy and most of the drugs prescribed were from EDL. The treatment outcome was 100% because early and prompt management was implemented.

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**A Study on the Spectrum of Premalignant and Malignant Lesions Of The Cervix**

Sana Aboosalih1

1Department of Pathology, Sri Ramachandra Hospital, Porur, Chennai, India

**BACKGROUND:** Lesions of the cervix are important cause of morbidity for women of all age groups. The exact incidence of various cervical lesions is not available for this part of India where active “Pap screening” is not in place. The aim of this study is to analyse the spectrum of premalignant and malignant lesions of the cervix, in our patients over a period of 5 years. This will help us to know the prevalence of different cervical lesions and to implement the screening program to prevent and treat the same.

**METHODOLOGY:** This is a retrospective analysis over a period of 5 years from 2008 to 2012. The data was obtained from the archival material of the histopathology division in our hospital. The data was analysed and the incidence of various lesions were calculated.

**RESULTS:** A total of 882 cases of cervical lesions that were biopsy and hysterectomy specimens over this period of 5 years. There were 107 cases (12.13%) of malignancies which included 96 cases of squamous cell carcinoma and 11 cases of adenocarcinoma. The Squamous cell carcinoma cases were divided into keratinising and non-keratinising types. They were also graded on the basis of differentiation. Sixty two cases (7.03%) were premalignant (Cervical Intraepithelial Neoplasia, CIN). Of this 15 cases presented as CIN I, 14 cases presented as CIN II and 33 cases were that of CIN III. Inflammatory pathology was observed in 480 cases (54.42%). This includes chronic cervicitis, nabothian cysts, regenerative hyperplasia, ulceration and microglandular adenosis. Benign endocervical polyps were recorded in 233 cases (26.42%).

**CONCLUSION:** This analysis highlighted the spectrum of cervical premalignant and malignant lesions in women of varying age groups in our hospital. The incidence of CIN is 7.03% and that of cancer is 12.13% and 54.42% is representative of an inflammatory pathology. The incidence of premalignant and malignant cervical lesions is very less in developed countries where Pap smear is actively used for screening. Its effectiveness has to be used in this part of India by increasing its awareness among physicians and patients.
Assessment of the Pattern of Cognitive Functions in Subjects with Juvenile Diabetes

C. Rama Krishna
1Department of Physiology, Government Stanley Medical College, Chennai, India

BACKGROUND: Cognitive function refers to all aspects of thinking and intellectual activity. It includes mental processes like reasoning, abstract thinking, judgement, attention and perception. Diabetes leads to neural damage in the brain which ultimately culminates in cognitive impairment. Hyperglycemia alters mechanisms like formation of Advanced Glycation End products (AGEs), polyol pathway activation, increased glucose shunting in HMP pathway & DAG activation of Protein Kinase C. These factors may lead to neural damage and impairment in cognitive functions. We aim to assess the pattern of cognitive function in subjects with juvenile diabetes in comparison with normal subjects.

METHODLOGY: 30 type 1 diabetes subjects of both sexes in the age group of 10 to 15 years from the diabetic OP, Government Stanley Medical College, Chennai and 30 age and gender matched controls from paediatric OP, who have the same socio economic background were chosen. After proper ethical committee approval and consent from the subjects, cognitive function study was done using BKL charts, approved by the WHO.

RESULTS: The cognitive function is significantly reduced in the type 1 diabetic subjects when compared to that of the controls.

CONCLUSION: Reduction in many aspects of cognitive function is observed in our study, suggests the possibility of hyperglycemia in the neural impairment. So early treatment and control of blood glucose level may prevent cognitive dysfunction in Juvenile Diabetes.

Detection of ESBL (Extended Spectrum Beta Lactamases) In Gram Negative Bacilli Isolated From Various Clinical Samples

Deeptha Vasudevan
1Department of Microbiology, Shri Sathya Sai Medical College and Research Institute, Chennai, India

BACKGROUND: Extended-spectrum beta-lactamases (ESBL) are enzymes that confer resistance towards most beta-lactam antibiotics including 3rd generation cephalosporins, monobactam and aztreonam. ESBL-producing organisms have been associated with high incidence of treatment failures resulting in poor prognosis. Reliable identification of ESBL-producing organisms in laboratories can be challenging but very useful. Hence the study was carried out to detect the ESBLs in the various gram negative bacilli isolated from various clinical samples.

METHODLOGY: A total 51 gram negative bacilli isolated from various clinical samples (sputum, pus, blood, urine and body fluids) were included for this study. The isolates were screened for ESBL production by the Phenotypic conformation-Disk diffusion method, Cetazidime (30μg) vs. ceftazidime/ clavulanic acid (30/10μg) were placed on to Mueller Hinton agar plate lawned with the test organisms and it was incubated overnight at 35ºC. Regardless of zone diameters, a ≥5 mm increase in a zone diameter of an antimicrobial agent tested in combination with clavulanic acid vs tested alone will indicate ESBL production.

RESULTS: Out of the 140 clinical samples collected from patients, 51 gram negative bacilli were isolated. The isolated organisms include klebsiella (22), E.coli (16), pseudomonas (8), proteus (4) and acinetobacter (1). Of the 51 isolates, 19 (37%) were ESBL producers by our method. Among the various samples, pus was having more number of ESBL producers - 9 (47%), followed by urine (26%). Among the various isolates, all the strains of proteus (100%) were ESBL producer followed by 37% of pseudomonas, 32% of klebsiella and 31% of E.coli.

CONCLUSION: This study showed that klebsiella is the most common gram negative bacteria isolated from our setting. The incidence of ESBL is 37% which correlates with the studies published in literatures. Pus sample is the most potential source of ESBL producers. Proteus species are the major ESBL producer in our study followed by pseudomonas. The high incidence of ESBL producers explains the importance of microbiological laboratories and its facility to detect ESBL as a routine diagnostic testing method.

Evaluation of Visual Evoked Potential in Chronic Obstructive Pulmonary Disease Patients
BACKGROUND: The World Health Report listed COPD as the fifth leading cause of death. Numerous previous studies illustrate the association of COPD with peripheral neuropathy, but only very few studies have evaluated the cranial neuropathies especially optic nerve involvement in COPD. Visual Evoked Potential is a simple, non-invasive electro physiological test to detect the neuropathy earlier. We aimed to evaluate the subclinical neuropathy in COPD patients using Visual Evoked Potential.

METHODOLOGY: Based on GOLD criteria, 30 stable COPD patients were selected from pulmonology OPD. After an ophthalmological examination, VEP was recorded using MEDICAID polyrite in neurophysiology lab, Department of physiology and compared with 30 age & gender matched healthy controls from Master Health checkup. Institutional ethical committee approval was obtained. Written & informed consent was obtained before the study from subjects.

RESULTS: The data were analyzed using SPSS software 16.0 version. Compared to the controls, in the COPD patients VEP latencies were significantly increased P<0.05*.

CONCLUSION: Significant increase in the VEP latencies of COPD patients is suggestive of subclinical neuropathy which may be due to imbalance in ventilation perfusion ratio. Hence evaluation of subclinical neuropathy using VEP in COPD patients will be useful in reducing the morbidity.

Correlation between the Latencies of Brainstem Auditory Evoked Potential Waves with the Duration of Disease in Type-2 Diabetics

Gayathiri M

BACKGROUND: Diabetes mellitus, a common metabolic disorder has a long-term complication of diabetic neuropathy which includes both central and peripheral nerve damage. BAEP is a noninvasive and simple procedure to evaluate neuropathy. We aimed to evaluate the correlation between the wave V and I-V of Brainstem Auditory Evoked Potential (BAEP) with the duration of the disease in the patients with Type-2 Diabetes Mellitus (DM).

METHODOLOGY: This study was performed in 50 patients with type-2 DM selected from the Diabetic OPD based on WHO criteria (2007). After an Institutional Ethical Committee approval and ENT examination, they were subjected to BAEP in the Neurophysiology Lab of Department of Physiology, VGMC&H using MEDICAID POLYRITE as per the standards of the American Clinical Neurophysiology Society.

RESULTS: The data were analysed with SPSS 16.0 version. Left ear wave V (r=0.864) IPL I-V (r=0.826) and right ear wave V (r=0.919), IPL I=V (r=0.951). The assessment of the relationship between duration of the disease and BAEP parameters using Pearson’s correlation (r) showed a significant correlation.

CONCLUSION: There is a significant correlation between the duration of the disease and BAEP which might be due to subclinical ischemia in auditory pathway, which may contribute to the neuropathy and might result in the sensorineural hearing loss. This signifies that BAEP can be used as a routine noninvasive investigative tool in all individuals with type 2 DM. This will help to detect subclinical neuropathy and prevent progression to sensorineural hearing loss in these patients.

Prevalence of Anemia in Geriatric Age Group in Tertiary Care Hospital, Puducherry

Gayathri Devi V

BACKGROUND: Anemia is common in the elderly. The prevalence increases with increase in age. However, the process is not entirely physiological. Apart from the process of aging, the findings of anemia generally suggest other causes even though there is a decrease in hematopoietic function in old age. We aimed to study the prevalence and morphological patterns of anemia in geriatric patients.

METHODOLOGY: This is a cross sectional, hospital-based study includes 200 adults more than and equal to 60 years of age attending the in and outpatient departments in tertiary care hospital, Puducherry. Hematological investigations were done to find out the anemia and its type.
RESULTS: Out of 200 cases, 168 (84%) cases were anemic. The prevalence of anemia was found to be very high particularly in the hospitalized older adults. Among males, 88.2% were anemic and among females, 80.1% were anemic. The prevalence of anemia according to the age group was 80.73% among 60-65 years, 86.95% among 66-70 years, 92.59% among 70-75 years, 90.90% among 76-80 years and 93.03% in more than 80 years of age group. The morphological patterns of anemia among the geriatric age group were normocytic normochromic-43.7%, microcytic hypochromic-40.2%, macrocytic anemia-4.7% and dimorphic anemia-11.2%.

CONCLUSION: The prevalence of anemia increases with age in the elderly individuals with male predominance. Normocytic normochromic anemia is common and it is followed by microcytic hypochromic anemia most probably due to anemia of chronic disorders and iron deficiency respectively.

Pattern of Supra Condylar Fractures and the Outcome Among Children

A.E. Ajay Gowtham

1Department of Orthopedics, Chennai Medical College and Research Center, India

BACKGROUND: Supra condylar fracture (SC#) of the Humerus is one of the commonest injuries in children. Outcome depends upon pattern of injury, factors related to patients and therapeutic modalities. The objectives of the study were to find out the pattern of the supra condylar fracture and to analyze the therapeutic response to various treatment options.

METHODOLOGY: A retrospective study was designed after an approval from institutional ethics committee to review the records of SC# observed in children between 3 and 10 years treated from June 2011 to July 2013. Those who had fractures other than supra condylar and those suffering from moribund illness or on immune-suppressives were excluded. The socio-demographic, clinical, radiological, therapeutic and outcome aspects were collected. The pattern of supra condylar fracture were classified [Gartland] as Grade I, II, III. The data were analyzed by simple descriptive statistics.

RESULTS: A total of 32 children (M:F = 2:1) with age ranging from 3 to 10 years were treated for SC#. Maximum belonged to 4 and 6 years. The pattern of SC# noticed was Grade I in 8, II in 13 and III in 11 cases. Obese children were more prone for displacement. Among the 32 cases 21 were treated by non-operative method (close reduction with pop application), 7 by closed reduction and percutaneous K wire fixation, and 4 by open reduction and internal fixation with K wires. Mal-union noticed in 6 who had Grade II and Grade III fractures treated by non-operative methods (due to unwillingness), whereas union was satisfactory in the rest. Radial nerve palsy occurred in two cases. There was no vascular injury.

CONCLUSION: To overcome mal-union especially in Grade II and III SC#, it is suggested to opt for closed/open reduction with K wire fixation than non-operative methods. To achieve this doctor patient communication is essential.

A Clinical Study to Evaluate the Efficacy of Oral Flavonoid in the Healing of Venous Leg Ulcers

Rupesh Kumar N

1Department of vascular surgery, Madras Medical College, Chennai, India

BACKGROUND: The limitations of current modalities of ulcer management have raised interest in pharmacological treatment to promote healing. Among these numerous agents, micronized purified flavonoid fraction (MPFF) has shown promising results. To evaluate the efficacy of micronized purified flavonoid fraction [Daflon 500mg] in the healing of venous leg ulcer in comparison with standard [compression bandaging] therapy.

METHODOLOGY: A randomized, open label, comparative, prospective study was conducted in the Outpatient Clinic, Department of Vascular surgery, Madras Medical College& Rajiv Gandhi Government General Hospital. Sixty patients aged 18 to 65 years with venous ulcers, present for at least 2 weeks, measuring 4 – 150 cm² were enrolled. Out of these, 30 received standard compression therapy plus local care alone & 30 received two tablets of MPFF 500mg daily in addition to the above treatment for 6 weeks. Main outcome measure was healing of ulcers assessed by percent reduction in surface area after 6 weeks of treatment.

RESULTS: Out of 60 patients who were enrolled, 57 completed the study. The mean reduction in ulcer area was found to be greater in patients treated with MPFF in addition to standard local and compressive treatment (54.70%) than in the control group treated with standard therapy alone (39.80%)(t=2.143, p=0.037 with 95% confidence). The main effect of MPFF was evident in ulcers >3cm in length (p=0.022), >10 cm² in area (p=0.027) and present for less
than 6 months duration (p=0.032). Adverse effects were minimal, seen in 2 patients (6.90%) in study group and 1 patient (3.57%) in control group and there was no necessity for discontinuation.

CONCLUSIONS: These results indicate that MPFF [Daflon 500 mg] at a daily dose of two tablets, in addition to compression bandaging, significantly improves the healing rate in patients with venous ulcer by as early as 6 weeks of treatment. Thus, Flavonoids are a suitable alternative for treating venous ulcers, especially in places where a tropical climate makes adherence to long-term compression treatment difficult.

Epidemiology, KABP and Reasons for Defaulting Among Pulmonary Tuberculosis Patients being Treated at Chest OP, Chengalpattu Government Medical College (CMC) Hospital

Sudharsan P V

1Department of Community Medicine, Chengalpattu Govt. Medical College, Chengalpattu, India

BACKGROUND: The top priority areas of TB research include epidemiology, health services research and basic research. This research project strives to fulfill these research needs.

METHODOLOGY: 188 pulmonary TB patients, attending chest OP in CMC Hospital were interviewed using a pre-designed pre-tested structured questionnaire. Their medical records available at the RNTCP centre in the hospital were used to assess their clinical profile. Convenience sampling was used and data analysed using SPSS Inc. Version 18.0.

RESULTS: In this study, 54% of the patients affected were in the age group of 16-40 years of age, and 70% were males. The distance to the tertiary care centre (for initial diagnosis and other investigations) didn’t have a role to play in defaulting (P value – 0.034) but is found to be a major player for delay in diagnosis of tuberculosis (P < 0.001). The highest defaulting was seen during the 2nd month of the treatment, especially when 85% of the patients had felt a significant improvement of their symptoms. Also, it was found that 67.1% patients are not directly observed as per DOTS provisions. With regard to the KAPB aspect of the study, 60% were either unsure of the cause of TB or thought it was related to smoking, however, 79% knew that they prevent their disease from spreading to others by covering their mouth, while coughing/sneezing, with a handkerchief. 19.7% patients said they had faced discrimination from others owing to their disease.

CONCLUSION: Being a male (3-fold risk), alcoholism (2-fold; P value- <0.03), smoking (2-fold; P value - <0.001) and an improvement in symptoms (p = 0.032) tend to have a higher risk of defaulting. Other factors – age, education level, and employment, type of house, social stigma or poor treatment supervision do not have a role to play in defaulting. The KAPB of given population is poor and hence has to be addressed by proper IEC activities, through appropriate media.

Profile on Complications of Dengue and Prescriptive Analysis of the Drugs Used in Management

Varun Kumar J

1Department of Internal Medicine, Chennai Medical College Hospital and Research Centre, Chennai, India

BACKGROUND: Dengue is one of the most fast rising mosquito born disease. Dengue nowadays produces complications other than hemorrhagic fever and shock syndrome. The aim of our study was to study the pattern of complications in dengue patients and to analyze the prescription of drugs made to treat the patients.

METHODOLOGY: Study Design: Cross sectional retrospective study. Study Period: Dengue outbreak of 2012 between the months July –September. Setting: Department of Medicine & Paediatrics, CMCH&RC, Irungalur, Trichy. Unit of study: Patients who were diagnosed and tested positive for dengue by ELISA, IgM positive or IgG positive ,and admitted to the Medicine ward of a teaching Hospital were considered for the study. Data collection: The various aspects such as age, gender, clinical information, laboratory results of the patient and the prescriptions made for them were collected and recorded with the help of the medical records; case sheets. The data collected was analysed using simple descriptive structure.

RESULTS: Of the 30 cases admitted during this period a total of 12 patients (1/3rd) developed one or the other complication. All age groups were affected and male to female ratio was 1:1 in the complicated cases. All complications developed within a week of onset of disease. Among the 30, one patient (female, aged 58) who had icterus and breathing insufficiency finally developed meningoencephalitis and expired. Co-morbid condition such
as diabetes mellitus was noticed in 2 patients who developed complications. Prescription analysis: Patients with complications received one or the other antibiotic either through needle or oral route. All received Paracetemol and symptomatic treatment like antiemetics and rehydration therapy. Steroids where administered in four patients. Blood transfusion was required in 2 patients but Blood and Platelet transfusion was done in 1 patient.

**CONCLUSION:** Complications developed in both genders and all age groups. Dengue fever cases with multiple organ involvement have poor prognosis. We recommend early recognition and appropriate intervention helps in better recovery of the patients.

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**Role of Malignant Transformation in the Progress of Evolutionary Process**

T.Abina,y,

*Third year MBBS, Department of community medicine, Madurai Medical College, Tamilnada, India*

**BACKGROUND:** Adaptation is one of the most powerful tools, used by living organisms to overcome the survival threats posed on them. Evolution results from complex adaptations to stress at cellular levels. Malignant transformation is yet to be developed as an adaptational mechanism.

**METHODOLOGY:** Microenvironment, consisting of both cancer cells and normal cells is considered. All the cells are exposed to stresses like deprivation of oxygen, nutrients and growth factors. Cells are screened for complex evolutionary phenomena like mutation, gene flow, natural selection. The number of dead cells, both among the cancer cells and the normal cells is noted. The structural and functional changes, in cancer cells and normal cells were deduced.

**RESULTS:** Significant mechanisms of microevolution like mutation, gene flow, natural selection are evident in cancer cells. Malignant transformation is a microevolutionary process. From evolutionary perspective, macroevolution is regarded as the outcome of long periods of microevolutions. Despite its superiority over normal cells, the cancer cells have not yet attained the functional capacity pertaining to the niche. This is the main cause for the morbidity and mortality associated with cancer. But in due course of time, if the cancer cells manage to accumulate independent somatic mutations along with the functional capacity of normal cells, the cancer cells would become the ‘successfully evolved cells’, which is otherwise the evolution of the whole organism.

**CONCLUSION:** To reduce the mortality associated with cancer, studies like molecular genetics and cell biology can be focused, to manipulate the cancer cells, to attain the functional abilities of the normal cell.

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**A Study on Serum High Sensitivity C - reactive protein (hs-CRP) and Uric Acid in Patients of Acute Myocardial Infarction**

Prakash Purshnani¹

¹Department of Biochemistry, BLDE's Shri B. M. Patil College, Hospital and Research centre, India

**BACKGROUND:** Cardiovascular diseases are the leading cause of death worldwide. Inflammation plays role in development of atherosclerosis hence precipitating MI. hs-CRP is an inflammatory factor. The objectives of this study were to assess serum hs-CRP and uric acid levels in AMI to ascertain the usefulness of these parameters in identification, progress and prognosis of heart failure and mortality after MI.

**METHODOLOGY:** The study comprises of 30 AMI cases as test group and 30 normal healthy subjects as control group. Only clinically diagnosed AMI cases were included, excluding patients suffering from other diseases such as active inflammatory diseases, pulmonary tuberculosis, renal failure, diabetes mellitus and pregnant women. Immediately after admission to the hospital, 5ml venous blood samples were collected in plain bulb from subjects under aseptic conditions, before starting appropriate treatment. Serum was centrifuged at 3000 rpm for 10 minutes at room temperature and then placed at 4°C. Estimation of hs-CRP was done by Nephelometry. Estimation of serum uric acid was done by enzymatic colorimetric test – Photometry. The biochemical parameters obtained from study groups were statistically compared on basis of mean values and standard deviation using unpaired student t-test at corresponding degrees of freedom.

**RESULTS:** The results of study on patients aged 18-55 years (80% male, 20% female) demonstrated significant increase (p<0.001) in hs-CRP level in AMI subjects as compared to controls. In the study most patients had normal serum uric acid level but it’s also noteworthy that there was slightly significant increase (p<0.2) in serum uric acid level in AMI cases as compared to control subjects.

**CONCLUSION:** Our study reveals an association between hs-CRP, uric acid and ventricular dysfunction in AMI. Levels of serum hs-CRP were significantly increased in AMI cases, therefore we encourage it’s use as a diagnostic
tool for MI patients in daily clinical practice. It has thus been proposed that increased use of the monitoring of inflammatory and other diagnostic markers could be of use in screening and prediction of risk of infarction.

### P100 Latency, the Most Significant VEP Parameter for Assessment of Ocular Changes in Diabetes Mellitus

Pavithra A

1Department of Physiology, Govt Villupuram Medical College & Hospital, India

**BACKGROUND:** Diabetes Mellitus (DM), phenotyped by hyperglycemia is well-known to affect the peripheral nerves. However, its impact on the central nervous system has gained much attention recently. Visual evoked potential (VEP), which reflects the optic nerve and visual cortical activity, detects CNS(optic nerve) dysfunction, that occurs early in DM. Thus VEP is hypothesized to detect subclinical optic nerve involvement in DM. Our study was aimed at comparing the significance and reliability of the VEP parameters for assessing ocular changes in DM.

**METHODOLOGY:** The VEP recordings were performed using MEDICAID POLYRITE, by standard procedure, comparing 60 diabetic cases aged 47±7yrs and 60 age and gender matched controls. The statistical analysis was done by student independent unpaired ‘t’ test using IBM.SPSS software 19.0 version.

**RESULTS:** The study showed very highly significant delay in the P100 latencies of VEP(p<0.001***in cases. Though N75 and N145 latencies were also delayed, it was not as marked as in P100 waves. The other parameter assessed, was the amplitude of the P100-N75 wave, which showed no significance in the diabetic cases (p>0.5).

**CONCLUSION:** Thus our study showed significant delay in VEP latencies in diabetic individuals while the amplitude was highly variable and insignificant. The delay in the VEP latencies can be substantiated by the following postulates that demyelination of the optic nerve fibres, which is not able to conduct the signals in physiological frequency, resulting in the delay in latencies, suggestive of an optic neuropathy.

The ischemic neuronal and retinal structural damage generated by microangiopathy is one of the major causes of neurophysiologic changes. By retinal ganglion cell damage theory, the rise in VEP latencies may be due to retinal ganglion damage which is a pre-clinical sign of diabetic retinopathy. Since all these ocular abnormalities were excluded during the time of procedure, the increased VEP latencies are indicative of impending ocular damage. However, from our study it was clear that of all the VEP parameters, P100 was the most significant and reliable parameter to assess these ocular changes in diabetic patients.

### Retrospective Review of Hydrostatic Reduction of Intussusception in Pediatric Age Group

Mishall Prasannan

1Department of Pediatrics, PSG Coimabtore, India

**BACKGROUND:** Intussusception is the acquired invagination of one portion of the intestine into the adjacent bowel. Although spontaneous reduction occurs, natural history of an intussusception is to progress to a fatal outcome comprising of ischemia and bowel wall necrosis. Existing treatment options are hydrostatic reduction, pneumatic reduction and surgical management.

**METHODOLOGY:** Pediatric patients who were diagnosed with intussusception between the period - 1/06/2008 and 13/06/2013 were included in the study. A retrospective review of the case sheets was done and details were entered in an excel case sheet. Patients who were treated by hydrostatic reduction were studied in greater detail. Recurrences of intussusception were noted to find out the effectiveness of hydrostatic reduction. If operated, it was noted whether it was due to lead point or delay in treatment.

**RESULTS:** Ninety patients were encountered during this study period (1/06/2008 and 13/06/2013). There was a ninety percent success rate of hydrostatic reduction in our hospital. Failure rate was noted with presentation after twenty four hours or presence of lead point. Recurrences were managed with repeat hydrostatic reduction, laparoscopy or laparotomy.

**CONCLUSION:** Hydrostatic reduction of intussusception is an effective method of managing idiopathic intussusceptions in children. By this technique the risk associated with surgery and anaesthesia is not present. In addition there is no radiation involved as it is done under ultrasound guidance. Early diagnosis is crucial for this to be effective.
Study of the Thyroid Function in Type 2 Diabetic Patients

Lokessh Kumar.V
1Department of Biochemistry, Melmaruvathur Adiparasakthi Institute Of Medical Sciences & Research, India

BACKGROUND: The influence of other endocrine glands on diabetes mellitus is documented. The major alterations are a reduction in the TSH stimulation, T4 to T3 conversion in peripheral tissues is decreased and may also induce a “Low T3 state” characterized by isolated low serum T3 levels. Finding a relation may help to know the disease better and in efficient treatment and monitoring.

METHODOLOGY: Conducted at biochemistry department, MAPIMS, spanning from March-April ’12 among 50 type II diabetic subjects and 50 control subjects. Study included normal healthy control group of either sex and test group- patients with type II Diabetes for > 5 yrs. Patients with thyroid disorders or on anti-thyroid medication are excluded. 5 ml of fasting venous blood, 2ml fluoride sample for estimating blood glucose (FBS) [ GOD POD method], 3ml heparinized sample for estimating ft3 , ft4, TSH via ELISA . Another 2 ml fluoride sample for the estimation of postprandial blood sugar, urea and creatinine was done. All the biochemical tests were done by Miura automated analyzer and the thyroid function (FT3, FT4, and TSH) will be assessed using Eliscan ELISA kits and automated Anthas ELISA reader.

RESULTS: Analysis were performed using independent ‘t’ test.TSH was significantly higher ( t-value:1.63, p<0.05) in type II diabetics as compared to control but FT3 and FT4 did not show statistical significance. Among type II diabetic cases, 34% showed abnormal thyroid hormone levels (12% had Subclinical hyperthyroidism and 8 % had Subclinical hypothyroidism with equal sex distribution followed by 8% low t3 syndrome and 6% and primary hypothyroidism . No case of Primary Hyperthyroidism. Significantly higher levels of FPG, PPG and blood urea were noted but serum creatinine did not show significance compared to control subjects..

CONCLUSION: This study concluded high incidence of abnormal thyroid hormone level among type II diabetic subjects compared to controls. Regular exercise and diet improves the glycemic status and insulin resistance minimizing thyroid dysfunction. Screening should be made mandatory to detect asymptomatic thyroid dysfunction to improve the quality and expectancy of life.

Studying Behavioral Problems in Children with Dyslexia and without Dyslexia

K.Lakshmi Aishwarya
1Department of Community Medicine, ACS Medical College and Hospital, Chennai, India

BACKGROUND: To compare the behavior of children with and without dyslexia. And to assess the agreement between the primary and secondary caregiver regarding the behavior of children. To provide guidelines to teachers and parents in supporting children with dyslexia.

METHODS: A case control study along with qualitative research was carried out to study the relationship between dyslexia and child behavior among 3 to 7 years children. Child behavior scale was used to study the behavior as rated by mothers as primary caregivers, fathers as secondary caregivers and teachers, whereas qualitative research was carried out with in-depth interview and focus group discussion. Statistical analysis was done with parametric tests e.g. ‘t’ and ANOVA and agreement between primary and secondary caregivers was tested with Kappa.

RESULTS: 61 cases and 70 controls participated in study. The results showed statistically significant difference between the cases and controls in their behaviors as the behaviors were not well developed in cases. When behaviors were rated by different observers there was statistically significant difference in their ratings in cases. When agreement was tested with Kappa Coefficient there was poor to fair agreement in cases and fair to good agreement in controls. This might be because there was no stability of behaviors in cases. Statistically significant difference was seen in negative affect p=0.001.and effortful control p=0.00001.

CONCLUSION: Children with dyslexia encounter many difficulties in their journeys, and must be encouraged not to give up. Parents and teachers can play a big part in helping their child to find alternative routes and methods to reach his/her goals.

A Study on Lipid Profile and a Therogenic Index in Patients with Gallstones

Kapil R. Potekar
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BACKGROUND: Numerous studies have indicated that gallstone formation occurs more frequently among obese than normal weight subjects. The other risk factors for gallstones include high fat diet and hyperlipidemia. However, it is still controversial whether serum cholesterol should be considered as a risk factor for gallstone disease. Hence the objective of this study was to measure the serum lipids levels and atherogenic index in cholelithiasis patients and its comparison with control groups and also to know its correlation with different types of gallstones.

METHODS: A cross sectional study was carried out in Shri B. M. Patil Medical College, Hospital & Research Centre Bijapur. The serum samples of controls (N=39) and gall stone patients (N=40) were collected and assessed for serum lipid profile by enzyme kit method. Atherogenic index was calculated and was compared using mean values, standard deviation, student t-test and chi square test.

RESULTS: There was significant increase in the triglycerides, total cholesterol, LDL cholesterol and atherogenic index, whereas a significant decrease was observed in HDL cholesterol in cholelithiasis patients as compared to the control subjects.

CONCLUSION: Present study demonstrates elevated serum total cholesterol, LDL cholesterol and triglycerides and decreased levels of HDL cholesterol in gallstone patients which may play a major role in the pathogenesis of gallstone and patients with gallstones are more likely to have additional risk factors for heart disease because of high atherogenic index. Hence the altered lipid metabolism should also be taken into account while treating these patients.

Randomized Controlled Trial of Pregabalin and Gabapentin for Postoperative Pain in Lower Limb Surgery Patients

R. Induja

BACKGROUND: High quality pain control after surgeries is utmost important but still remains a challenge. Although earlier studies have reported independent analgesic effects of Pregabalin and Gabapentin in surgical settings, only a few trails have compared the effectiveness of these two drugs. Hence, this study was planned to compare preoperative use of these drugs in the management of postoperative pain for lower limb surgeries. We aimed to compare the effectiveness and safety profile of preoperative Pregabalin and Gabapentin, in reducing postoperative pain among patients undergoing lower limb surgeries.

METHODS: Ninety patients posted for lower limb surgery in SVMCH, were randomly divided into 3 groups (30 / group). Group A was taken as control, Group B received Gabapentin 900 mg and Group C received Pregabalin 300mg preoperatively. All the patients received spinal anesthesia using 0.5% bupivacaine and test drugs were given 1-2 hrs prior to surgery to the concerned groups. Post operatively, pain score was marked on a VAS scale (0-10) for 72 hrs. Injection Tramadol 100mg IM was given as rescue analgesic, if pain score was >7.

RESULTS: The postoperative pain score was less with Pregabalin in comparison to other groups (p<0.005). The duration of requirement of first analgesic was prolonged in both Pregabalin and Gabapentin groups. Compared to Gabapentin, the number of rescue analgesic used and side effects with Pregabalin were less.

CONCLUSION: A single oral dose of Pregabalin 300mg is effective in relieving postoperative pain for patients undergoing lower limb surgeries.

Efficacy of Anti-Bacterial Activity of Calotropis Gigantea Latex Extract- An In-Vitro Study

Hemapriya J

BACKGROUND: Due to increase in multi-drug resistance and toxicity among microbes, search for a novel antibiotic from a medicinal plant is on rise. One among them is Calotropis gigantea, a medium-sized shrub, 2 to 3 meters in height. It was also reported that alcoholic root extract of Calotropis gigantea showed analgesic, anticonvulsant, anxiolytic and sedative effect in albino rats. Its root, bark are used in the treatment of leprosy, piles, wounds, tumors, parasitic infections and dysentery. Our aim is to evaluate the antibacterial effect of Calotropis gigantea latex extract on several established drug resistant human pathogenic bacteria.
METHODOLOGY: 15 samples were collected from our hospital and tested against antibacterial activity of C.gigantea for duration of 3 months. Fresh latex of C.gigantea was aseptically collected in sterile glass tubes containing distilled water. Samples were centrifuged at 3000rpm and supernatant was decanted. The decanted fraction was subjected to filtration using DIALYSING MEMBRANE. ETHANOL extract were used. Inhibitory effect was assessed by well diffusion method. 1.06g/ml MIC (Minimum Inhibitory Concentration) was determined by serial dilution method. Suitable concentration of antibiotics was used as reference drugs.

RESULTS: The following picture depicts the resistance & sensitive zone with MIC:

PROTEUS MIRABILIS: 1)1060mg/ml-32mm, 2)530mg/ml-25mm, 3)265mg/ml-24mm

PSEUDOMONAS AERUGINOSA: 1)1060mg/ml-24mm, 2)530mg/ml-22mm, 3)265mg/ml-6mm

STAPH.AUREUS: 1)1060mg/ml-17mm, 2)530mg/ml-11mm, 3)265mg/ml-6mm.

1060mg/ml concentration showed MAXIMUM DIAMETER ZONE when compared with other concentrations.

CONCLUSION: The ETHANOL extract of Calotropis gigantea showed extensive sensitive zone for Gram negative bacilli like Proteus, Pseudomonas in comparison with Gram positive bacteria like Staphylococcus aureus where resistant zone was demonstrated. Therefore we recommend the use of Calotropis as an Antibacterial agent for Gram negative bacilli which are Multi Drug Resistant in nature and a nuisance in Hospital acquired infection.
with ESBL and Metallo beta-lactamase production. Thus Calotropis can be used as an adjunct in the treatment of MDR Gram negative infections as proved by our study.

**Wormian Bones With OS INCA- A Rare Dissection Finding**

Dinkar Sreekumar¹

¹Department of Anatomy, Chengapet Medical College, India

**BACKGROUND:** A large Wormian bone at the ‘LAMBDA’ is often referred to as INCA BONE (OS INCAE/OS PARIETALE) [Le Double, 1903] is the topic of interest of this study. The New World Populations have generally high-frequency of the Inca bone whereas lower frequency occurs in North East Asians, with lesser frequency in Indians - especially in south Indians. The squamous part of the occipital bone consists of two parts – supra-occipital and interparietal. Embryologically, the interparietal portion ossifies intra-membranously and in rare cases, may be separated from the supra-occipital part by a suture. It is then called as interparietal or Inca bone. Wormian bones, also known as “extra” sutural bones are extra bone pieces that occur within a suture in the cranium.

**METHODOLOGY:** An Os Inca accompanied by sutural bones on either side was found in a male cadaver of approximately sixty-five years of age, of the south-Indian population, during the conventional method of dissection. The calvarium was also subjected to radiological examination.

**RESULTS:** An incomplete, divided, median Os Inca was found with multiple wormian bones placed laterally on it’s both sides. The radiological anatomy of this Inca bone will be revealed during the poster presentation.

**CONCLUSION:** The knowledge of Inca ossicles and wormian bones in the human skulls play an important role, clinically, for the Neuro-surgeons, Orthopaedic surgeons, Anthropologists, radiologists; the anatomists in view of teaching; Forensic experts with respect to reporting. Also, wormian bones are a marker for various diseases and important in the primary diagnosis of Osteogenesisimperfecta. Wormain bones are also seen in Pyknodystosis, rickets, cleidocranialdysostosis, hypo-parathyroidism, Down’s syndrome, etc. The embryology, genetic, and aetiological factors of diseases associated with Os Inca and wormian bones will be listed at the valuable time of presentation.

**A Study of Cervical Epithelial Lesions by Pap’s Smear in a Teaching Hospital at Puducherry**

Gajashree.S¹

¹Department of Pathology, Sri Venkateswaraa Medical College and Research Center, Ariyur, Puducherry

**BACKGROUND:** Cervical cancer is the second most common cancer among the women in the developing countries (India). It is preventable by regular screening of women by Pap smear and treat them accordingly depending upon the type of lesion. We aimed to study the abnormal epithelial lesions and their prevalence among different age groups.

**METHODOLOGY:** This is a cross sectional, hospital based study done in a tertiary care hospital at Puducherry. This retrospective study was carried for a period of one year (2012). The patients presented with complaints of vaginal discharge, backache, pain hypogastrium, dyspareunia and post coital bleeding were included. Unsatisfactory smears, age < 21 yrs, pregnancy, women who underwent hysterectomy, women with vaginal bleeding were excluded. The smears were reported according to the 2001 Bethesda system.

**RESULTS:** out of 261 cases, 21(8.04%) cases were found to be abnormal paps smears in which 15(5.74%) were LSIL, 2(0.76%) were HSIL and 4(1.53%) were ASCUS. out of 261 cases 240(91.95%) were reported as Negative for intraepithelial lesion. Their prevalence among different age group are in reproductive age group 161(61.68%), in perimenopausal age group 55(21%), postmenopausal age group 45(17.24%).

**CONCLUSION:** Abnormal cervical lesions can be diagnosed early by Pap smear examination. The prevalence of the abnormal smears is quit high among perimenopausal age group followed by postmenopausal and then the reproductive age groups. Detected cases of epithelial lesions were sent for further management.