
Public R & D in Malaysia - Current status

Mafauzy Mohamed

No abstract.


A bacteriological study of acute conjunctivitis

S. C. Reddy and Subramania Aiyar

Department of Ophthalmology and Microbiology & Parasitology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan.

A retrospective bacteriological study of 527 cases of acute conjunctivitis was done at Hospital Universiti Sains Malaysia over a period of two and half years. Of them, 218 were ophthalmia neonatorum and 309 were acute conjunctivitis cases. The age of patients ranged from newborn to 80 years. Pathogenic bacteria were isolated in 76.6% of ophthalmia neonatorum and in 44.5% of acute conjunctivitis patients. *Staphylococcus aureus* was the predominant bacterial isolate followed by *Staphylococcus epidermidis* in both diseases. The in-vitro antibiotic sensitivity results justify the conventional usage of chloramphenicol and gentamicin in the treatment of acute conjunctivitis.


Retinopathy in non-insulin dependent diabetes mellitus (NIDDM) patients – A preliminary repoort.


Department of Ophthalmology, Community Medicine, Medicine and Chemical Pathology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan.

Eighty eight non-insulin dependent diabetes mellitus (NIDDM) patients were examined for retinal changes. The overall prevalence of retinopathy was 43.2% with background retinopathy 20.5%, preproliferative 4.5%, proliferative 6.8% and maculopathy 11.4%. there was a significant correlation between prevalence of retinopathy and duration of diabetes, but not with glycaemic control.

Fine needle aspiration cytology (FNAC) on thyroid diseases; HUSM experience on 477 cases with histological correlation of 148 of them

Noor Hayati Othman, S. Selvarajan, Meor Zamari, Zainol Harun, Mukarramah Che Ayob

Department of Pathology, Hospital Universiti Sains Malaysia, Department of Pathology, Hospital Kota Bharu.

A total of 477 patients with thyroid diseases were examined by FNAC over a period of 3 years. Out of this 71.5% of the aspirates were cytopathologically classified as benign lesions, 2.5% as inflammatory (thyroiditis), 10.5% as follicular lesions and 10.5% were malignant. 4.8% of the aspiration were unsatisfactory. 148 of these cases underwent surgical removal. The accuracy of the cytologic diagnoses were compared with histopathological examination of the operated surgical specimens to determine the accuracy, sensitivity and specificity of the cytopathological diagnosis. A sensitivity of 80.0%, a specificity of 99.03% and an accuracy of 95.9% were noted. This strongly supports that FNAC is an important preoperative diagnostic tool for all thyroid diseases.


Postoperative pain management knowledge and attitudes among medical personnel in HUSM

W.A. Wan Asim, I. Zalina and A.G. Aminuldin

Department of Anaesthesia and Physiology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, and Alor Setar General Hospital.

The incidence and severity of postoperative pain continue to be a major concern despite the availability of a wide range of analgesics and methods of analgesia. The objective of this study was to evaluate the knowledge and attitudes of medical personnel regarding postoperative pain management. Questionnaires were given to medical personnel, the results of which indicate that there were obvious deficiencies and misconceptions in the understanding of postoperative pain which translated into poor pain management practices. Clearly there is a need for increased professional awareness of acute pain management practices in HUSM, in order to improve patient comfort and outcome.

**Treatment compliance in relapse schizophrenia.**

Mohd Razali Salleh

Department of Psychiatry, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan.

Non-compliance with treatment is a major problem, especially in psychiatric patients receiving a long-term medication. The aim of this study was to find causes of poor treatment compliance of Schizophrenic patients and how to overcome the problem. Compliance with drug regimen and follow up visits of 116 known cases of schizophrenia was assessed. About 27% of the patients met the criteria of good compliance. Defaulting follow up and taking inadequate dose of medication were common problem among poor compliance group. Although the compliance was not related to any of socio-demographic variable, it was found to be significantly related to the patients' view of usefulness of the medication, treatment duration of less than 5 years, dosage schedule of once or twice per day and the supervision of medication by the relatives. The importance of family support to ensure good compliance in schizophrenic patients was highlighted.


**Radiation protection considerations in outpatient treatment using 131-I radioiodine.**

A. Zakaria, M. Mohamad, W.M. Bebakar, W. Idris, H. Abdullah and I. Shuib

Department of Nuclear Medicine, Radiotherapy and Oncology and Department of Medicine, School of Medical Sciences, 16150 Kubang Kerian, Kelantan, Malaysia.

Thyrotoxic patients treated with radioiodine 131-I on outpatient basis create radiation hazard to the public especially their family members. These patients need to be restricted for certain number of days before they can resume their normal activities to ensure others will not be exposed to radiation. In this study the period of restrictions were determined based on the 24hr uptake and effective half-life of 131-I in the thyroid gland. The amount of radioiodine retained in the thyroid gland was measured over the period of 1-20 days after therapeutic administration of the radionuclide using scintillation uptake probe. The mean activity in the gland at day 1 was 74.7%, SD 8.5% of the administered activity and thereafter retention followed a single exponential effective half-life of 5.8 days, SE 0.5 day. From these results the restriction periods for administered activities of 200-1000 MBq were estimated. Information could be used to advise patients before they leave the hospital since no local guidelines are available at the moment.
Quantitative analysis of normal kidney function using radioisotope technique

A. Zakaria, Z. Darus, A.R. Mohamad, I. Shuib, H. Abdullah and W. Idris

Department of Nuclear Medicine, Radiotherapy and Oncology, Department of Medicine and Department of Radiology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan.

Kidney function study for 24 normal volunteers (13 males and 11 females; age 25-66 years) using radioisotope imaging (Gamma Camera Based Method) were undertaken. Normal range for GFR was estimated based on [TC-99m] DTPA uptake within the kidneys at 2-3 minutes interval after the arrival of the intravenously injected radiopharmaceutical. Normal value of GFR was 102.1 ml/min, SD 13.8ml/min with the range of 77.4-133.0 ml/min. When normalised to body surface area NGFR was 111.9 ml/min, SD 19.7 ml/min with the range 78.4-142 ml/min. The left kidney uptake was 4.1-6.6% giving the average value of 5.6%, SD 0.7%. The right kidney uptake was found to be 3.6-7.6% with the average value of 5.5%, SD 0.9%. The total uptake was found to be 11.1% SD 1.4%. The relative uptake function for the left kidney was 50.4% SD 1.6% and for the right kidney was 49.5% SD 1.7%. The time for the maximum activity in the kidney was 4.3 min SD 1.3 min for the left kidney and was 4.4 min SD 1.3 min for the right kidney. No blood or urine sample was required and each study took about 20 min. This method permits rapid and easy analysis of renal function and is ideal for routine work. The data will form as a baseline to help clinicians with their routine services in our hospital.

Multiple polypoid endometriosis: a rare complication following withdrawal of gonadotrophin releasing hormone (GnRH) agonist for severe endometriosis: A case report.

Nor Hayati Othman, MS Othman, AN Ismail, NZN Mohammad, Z. Ismail.

Departments of Pathology, Obstetric & Gynaecology and Physiology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan.

A 30-year-old female who initially had typical endometriosis treated according to the standard regimen later developed numerous highly vascular endometrial polypi on the vagina, cervix, ureter, serosal surfaces of the uterus, pouch of Douglas (POD) and other areas of pelvic peritoneum as well as the endometrium 8 months after withdrawal of the hormone treatment. We postulate that these polypi developed as a rebound phenomenon upon withdrawal of Zoladex, a gonadotropin releasing hormone (GnRH) agonist used for the disease. We believe this is the first report of rare complication following use of GnRH analogue.

Paediatric myelodysplastic syndrome: A case report.

Bina Menon and Nicholas Jackson

Departments of Paediatrics and Medicine, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan

A 11 year old boy presented with a 2 month history of fever, lethargy and bruising. Pallor petechiae and ecchymoses were found on examination. The blood count showed pancytopenia and bone marrow examination was consistent with myelodysplastic syndrome, refractory anaemia subtype under the FAB classification. He required regular blood product support over the next 15 months but he eventually died of intracerebral haemorrhage without evidence of progression to frank leukaemia. Current knowledge of the paediatric myelodysplastic syndromes is briefly reviewed.


Fulminant tumour lysis syndrome: A case report.

Mohd Ramli and Nicholas Jackson

Department of Medicine, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan.

A 14 years old Malay boy with fatal tumour lysis syndrome (TLS) is described. He was admitted with a two weeks history of a bleeding tendency and high grade fever. He was found to have lymphadenopathy and hepatosplenomegaly, and investigations confirmed him to have T-cell acute lymphoblastic leukaemia with a mediastinal mass and a high presenting white cell count (158x10^9/L). Eight hours after he was given the first doses of intravenous chemotherapy, he developed features of severe TLS, i.e. marked hyperkalaemia, hyperphosphataemia, hypocalcaemia, metabolic acidosis and renal impairment with pulmonary oedema. He died two hours later. Risk factors for the development of TLS, and ways of preventing and treating it are discussed.


General Paresis of Insane: A diagnostic dilemma

P. K. Mazumdar.

Department of Psychiatry, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.

Two atypical cases of General Paresis of Insane (G.P.I) with diagnostic difficulty is reported. They presented mainly as behavioural problems prior to the development of any physical sign. The physical signs were also few and not diagnostic per se of G.P.I. The diagnostic problem was further compounded by the lack of consent for lumber puncture which is common in this part of the country due to the prevailing cultural belief system. The diagnostic and therapeutic implications are discussed.
Neuropsychiatric S.L.E

PK Mazumdar, Aye Aye Yee

Department of Psychiatry, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.

The neuropsychiatric manifestation of SLE is described in a 32 year old female with a rare presentation of a mosaic of diversifying symptoms initially posing a serious diagnostic dilemma but later evolving into an organic brain syndrome. The implications and management are discussed.

Evaluation of the effectiveness of teaching pathophysiology in the phase II of a Problem Learning Curriculum

Shashi L Malik.

Department of Physiology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.

The school of Medical Sciences of Universiti Sains Malaysia, Malaysia is following a Problem Based Learning (PBL) Curriculum. In Phase II [comprising of year 2 and year 3] the PBL is entered around twelve organ system blocks. Each organ system block runs for five weeks and in each week a clinical problem acts as a trigger for teaching and learning, which through the week is mainly achieved by small group discussion, fixed learning modules, self study and lectures. One organ system block which consistently showed poor results (in terms of higher failure rate and poor grades), was nervous system (NS) block. A critical appraisal of the objectives and course content highlighted that our students, through self directed learning were unable to grasp the nuances of the functioning of the nervous system in health and disease. Thus in an endeavour to facilitate and guide students learning, six broad based lectures covering pathophysiology were delivered at appropriate time slots. The performance of the students in the end-of-block examination (in two consecutive years) was compared with the performance of the students before the introduction of pathophysiology lectures. The data revealed a marked over all improvement in the students grades and a drop in failure rate (from more than 20% to less than 8%) of students who attended pathophysiology lectures. A comparison of the students performance in NS with endocrine and gastro-intestinal (GIT) blocks (which ran concurrently) revealed a better performance in NS than GIT and similar performance as that of endocrine block. Thus, it is concluded that our medical students need assistance in the comprehension of successive links of chain of events which depict how normal function would present as physiological dysfunction in disease state. This is especially so in system blocks which require a proper understanding of their homeostatic regulatory function.
Career preferences of medical students of Universiti Sains Malaysia

Zulkifli Ahmad and Rogayah Ja'afar

Department of Community Medicine, Department of Medical Education, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan.

A total of 241 medical students from Universiti Sains Malaysia responded to a questionnaire on their career preferences and factors influencing their choice of specialty. Internal medicine (24.5%), obstetrics and gynaecology (19.7%), paediatrics (17.2%) and surgery (14.3%) were the most popular choices. General practice (4.6%), community medicine (4.2%) and medical administration (1.3%) were relatively unattractive. Service specialities such as anaesthesia (3.4%) and radiology (1.7%) were less attractive. Pathology (0.8%) was the least popular choice. In the choice of a career, direct contact with patients (36.5%) was the most important factor when compared to fixed hours of work (35.5%) social prestige (35.5%) and financial rewards (34.1%). Research prospects (6%) and teaching opportunity (5%) were relatively unimportant considerations. The students preferred employment in the government general hospital (29.3%) when compared to teaching in the clinical departments of medical schools (23.1%), private hospitals (15.1%) and private general practice (11.0%). Pre and para clinical departments of medical school attracted only 6.4% of students. A total of 51.6% of the students would like to practise in Kuala Lumpur or a state capital, while only 14.0% chose to seek employment in the district. Another 15.8% of the students would not mind working anywhere in Malaysia.

The biochemistry of falciparum malaria

Timothy M.E. Davis.

University of Western Australia, Department of Medicine, Fremantle Hospital, P.O. Box 480, Fremantle 6160, Western Australia, AUSTRALIA.

No abstract.

Eclampsia - An overview

Ni Ni Aung

Department of Obstetrics & Gynaecology, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan.

Eclampsia poses a major obstetric problem worldwide and has continued to be the leading case of both maternal and perinatal mortality and morbidity in developed as well as developing countries. The pathogenesis is still unsettled, thus management is controversial in the choice of the most appropriate anticonvulsant and antihypertensive. This review article might high light the better knowledge of pathophysiology and treatment modalities of eclampsia, so as to lower the mortality of both mother and fetus.
Science In Sports

Harbindar Jeet Singh

Department of Physiology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan.

No abstract.

Student Selection Into Medical School: Issues And Practices.

Rogayah Ja'afar

Department of Medical Education, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan.

Each year, medical schools around the world face the difficult task of selecting candidates into their programme from an ever increasing pool of eager applicants. A considerable amount of time, effort and money are spent on the selection process but are medical schools getting a good return on this investment? Do we get the sort of medical students and doctors that we want? Are we clear about what we want in the first place? Does it matter, anyway? Matching congruence between applicant's and institutional needs, improving predictivity and acceptability of selection process and establishing a code of practice are important issues that need to be addressed in the selection of students into medical school. Are there explicit examples of selection processes that attempt to address these needs? This paper highlights the practical issues surrounding student selection into medical school and reviews the selection practices and procedures of a number of leading medical schools in the world to address some of these issues.

Carbohydrate and fluid requirements for exercise.

Rabindarjeet Singh

Exercise Physiology Laboratory, Department of Physiology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan.

No abstract.
Helicobacter pylori in Gastric Malignancies.

Darnal H.K, Singh M.S, Kannan T., Kurl D.N.

Department of Pathology, Nuclear Medicine & Oncology and Microbiology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan. Malaysia.

*Helicobacter pylori* infection has transformed our concept of the pathophysiology of upper gastrointestinal disease, ranging from gastritis to gastric carcinoma and lymphoma. This article briefly reviews the latest development in the prevalence, incidence and pathogenetic mechanisms of *H-pylori* in the causation of gastrointestinal malignancies.

Association of Ha-ras but not c-myc Expression with Lymph Node Status and Histological Grade in Breast Cancer.

R. Naidu, M Yadav, M.K. Kutty

Department of Genetics and Cellular Biology, University of Malaya, 50603 Kuala Lumpur, Malaysia, and Subang Jaya Medical Centre, 47500 Subang Jaya, Malaysia.

We evaluated the association of Ha-ras and c-myc expression of 54 cases of breast cancer with clinical parameters such as estrogen receptor status, lymph node status, histological grade and menopausal status. In addition, we also analysed for a potential relationship between Ha-ras and c-myc expression. It was found that 56% of the intraductal carcinomas and 69% of the invasive ductal carcinomas were positive for Ha-ras oncprotein whereas 44% of the intraductal carcinomas and 35% of the invasive ductal carcinomas were positive for c-myc oncprotein. Expression of Ha-ras was correlated with lymph node status (p<0.05) and histological grade (p<0.05) but c-myc expression was independent of the clinical parameters. It was also noted that the expression of Ha-ras was not significantly associated with c-myc. We conclude that Ha-ras expression may be used as a prognostic marker for aggressive progression of breast carcinomas.
Histometric Analysis of Prostate in Reserpinized Albino Mice.

Dhruba Chakraborty.

Department of Anatomy, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.

As the effect of reserpine on prostate has not yet been studied, this experiment was done to see the effect of 2 mg/kg of body weight of reserpine administered intraperitoneally for 7 days on the volume of stroma and secretory epithelium along with the height of the epithelium of the ventral & dorsolateral prostate. In the control group the same volume of saline was administered intraperitoneally for the same number of days. In the experimental group there were significant increase in the volume of stroma and secretory epithelium along with height of the secretory epithelium of the dorsolateral prostate, but in the ventral prostate there was no significant changes. The changes in the dorsolateral prostate of the experimental group may be due to increased plasma level of ACTH which stimulates the zona reticularis of the adrenal cortex to secrete androgens; then androgens stimulates the dorsolateral prostate. Ventral prostate of the experimental group showed no changes, the reason of which is still unknown and regarding which research scope is still wide open.

Body Mass Index, Haemoglobin Level and Helminthic infection among the Active, Rural Elderly People in Kelantan.


Department of Community Medicine and pathology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan.

A study was carried out on the elderly people in rural villages of Kelantan to determine the prevalence of chronic energy deficiency (CED), anaemia and helminthic infection. A total of 155 respondents (N = 155), 75 male and 80 female, active, apparently health elderly aged 60 - 85 years participated in the study. Anthropometric measurements which include weight and height were carried out and blood and stool samples were collected. Haemoglobin level, serum iron and helminthic ova were determined. The prevalence of CED (BMI < 20.0 kg/m²), mild and moderate anemia (Hb level between 8-<12 gm/dl), and helminthic infection among the elderly are 36.6%, 33.2% and 57.3%, respectively.
Prevalence of Human Herpesvirus -6 (HHV-6) and Human Herpesvirus - 7 (HHV-7) in Saliva of Health Individuals

S. Nambiar and M. Yadav

Department of Genetics and Cellular Biology, Faculty of Sciences, University of Malaya, 50603 Kuala Lumpur.

HHV-6 and HHV-7 are two recently isolated novel viruses from the Herpesvirus family. Two virus types of HHV-6 exist namely type A and B. HHV-6 is the etiologic agent for exanthem subitum of infants but little is known of HHV-7 in human disease. The presence of HHV-6 and HHV-7 was investigated by Polymerase Chain Reaction (PCR) in saliva specimens from healthy donors. Of 60 samples analysed, 83.3% of Malaysians and 66.7% of Vietnamese had viral DNA for both HHV-6 and HHV-7 in the saliva. It was found that 90.0% and 93.3% of Malaysians and 73.3% and 90.0% of Vietnamese were positive for HHV-6 and HHV-7, respectively. Restriction endonuclease digestion on HHV-6 DNA amplicons revealed that all samples from both populations were HHV-6 variant type B. The study shows that HHV-7 was more frequently prevalent in the saliva of both population. The results indicate that the saliva is the main source of the two viruses and that it plays a major role in their transmissions.

Detection of mutation in Codon 41/42 of Beta Thalassemia Patients Using a Nonradioactive Technique.

Noor Rizan K, Harteni D, Adzemi M.Y. and Ariff M.H.

Clinical Research Centre, Institute for Medical Research, Kuala Lumpur.

Probes labelled with the fluorescein dUTP3’ - tail were used to detect the deletion at codon 41/42 of beta globin gene in beta thalassaemia patients. Most of the mutations at codon 41/42 were previously described in Chinese or Asian Indians. The method includes Polymerase Chain Reaction (PCR) using two specific primers to amplify the 1.4kb region containing exon 1 and exon 2 of the human beta globin gene. This was followed by dot - blot hybridization and detected with a nonradioactive method based on the Enhanced Chemiluminescin (ECL) labelled oligonucleotides probes. Three concentrations of probes (5, 10, 15 mg/ml) were studied in this project. With the probes, we studied 44 beta thalassaeamia chromosomes from 44 unrelated Malaysian patients. From our results, the probe for 4 bp deletion at codon 41/42 detected 16 patients, with 6 patients being homozygous and 10 were heterozygous. The most suitable concentration range of probe was 5-10 mg/ml.
Mycotic Keratitis: A review of ten cases from Hospital Universiti Sains Malaysia.

S.C. Reddy and Subramania Aiyar

Department of Ophthalmology and Microbiology & Parasitology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan.

Ten cases of fungal corneal ulcers treated in Hospital Universiti Sains Malaysia are reviewed. Male agricultural workers were a high risk group afflicted with this condition. A history of foreign body in the affected eye was a common predisposing factor. Mycelial fungi were regarded as causative agents in all cases, with Fusarium being the predominant genus. The prognosis of visual outcome depended on the location and size of the corneal ulcer, and complications during treatment. Two patients developed corneal perforation and conjunctival grafting was done to save the architecture of the globe. The role of surgical treatment in cases of failure of medical treatment is discussed.

Physical or Phychological? Three case reports from the Community Medicine Clinic.

Alison Jackson

Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.

Family physicians have to analyse their patients' physical and psychological problems simultaneously. Three cases are described from the Community Medicine Clinic, or Klinik Perubatan Masyarakat (KPM), Hospital Universiti Sains Malaysia (HUSM), to illustrate different relationships between physical and psychological problems. The first is a 61 - year-old male who had both diabetes mellitus and bipolar affective disorder. The second is a 53 - year-old female with asthma who complained of tiredness, which was initially suspected to have psychological cause, but which in fact was caused by dilated cardiomyopathy. The third is a 52-year-old female with a long-standing anxious personality who developed thyrotoxicosis. The holistic nature of family medicine has implications for medical education, and these are discussed.

Spontaneous rupture of uterine vein in pregnancy: a case report


Department of Obstetrics & Gynaecology, School of Medical Sciences, Universiti Sains Malaysia.

A case of rupture uterine vein in a 32 - year old lady in labour was described. Problems of diagnosis, possible aetiological factors and management strategies were discussed. This is the first case reported in this hospital and probably the first in this country. A high index of suspicions is required to diagnose this rare condition and thus preventing the catastrophe.
Medical education into the twenty first century.

Charles E. Engel

University College London Medical School, London.

No abstract.