

1. *Mal. J. Med. Scien. 1997, January; 4(1):5-9*

A New Challenge in R&D: Commercialization

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No abstract.

2. *Mal. J. Med. Scien. 1997, January;4(1): 10-30*

Application of Molecular Tools and Techniques in Tuberculosis

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No Abstract.

3. *Mal. J. Med. Scien. 1997, January;4(1):31-34*

Monoclonal Antibodies in Diagnosis and Treatment

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Monoclonal antibodies till about a decade ago were being used only as research and diagnostic tools. But today they are being used in the therapy of many haematopoietic and solid tumours and also infections and inflammatory conditions with a good margin of success. This article briefly review a few of their therapeutic applications. A lot more research has yet to be done before this tool can become the mainstay of treatment. The use of monoclonal antibodies in nuclear medicine is still in its infancy.

4. *Mal. J. Med. Scien. 1997, January;4(1):35-40*

Who are our patients? A profile at a clinic in Kelantan

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Family physicians aim to provide whole-patient care. This includes having an interest in the social background of patients, and also providing health education to patients. A questionnaire study was performed on 456 patients attending Klinik Peubatan Masyarakat, Hospital Universiti Sains Malaysia Kubang Kerian, Kelantan. Factors assessed included: age, sex, race, religion, marital status, home district, distance traveled to clinic, occupation, household income, household size, education, and literacy in Roman and Jawi script. Average household size was 6 members, with 62 subjects (14%) living in households of 10 or more. Many patients live below the poverty line: 139 (32%) had a monthly family income of less than RM350. However, there is a bias towards the higher social classes compared to the census findings on distribution of occupation among the Kelantanese. Many older patients, especially women, did not attend school and are not literate. The relevance of these findings to various aspects of health care and health education is discussed.

5. *Mal. J. Med. Scien. 1997, January;4(1):41-44*

Body Mass Index In The Institutionalised Elderly People in Rumah Sri Kenangan Kemumin Kelantan, Malaysia

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Anthropometric measurements of weight, height and body mass index was taken from 34 institutionalised elderly people, consisting of 24 male and 10 female, aged 55 to 90 years (mean 69.3 years), 20 Malay, 7 Chinese and 7 Indian, at Rumah Sri Kenangan Kelantan. The prevalence of low BMI ($<20.0 \text{ kg/m}^2$) was 50.0% and 17.6% of them had BMI below 17.5 kg/m^2 . There was no significant difference in the prevalence of low BMI between age (old and young elderly), gender (male and female) and ethnicity (Malay, Chinese and Indian). It can be concluded that the institutionalised elderly are suffering from chronic energy deficiency or subclinical malnutrition.

6. *Mal. J. Med. Scien. 1997, January;4(1):45-50*

Pap Smears - is it an effective screening method for cervical neoplasia? - An experience with 2289 cases

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A total of 2289 consecutive Pap smears received by pathology departments of 2 Institutions, Hospital Universiti Sains Malaysia (HUSM) (596 smears) and Hospital Kota Bharu (HKB) (1693 smears) were analysed. Based on the Bethesda system on analysing Pap smears, only 832 (36.3%) smears were found to be adequate while 1356 (59.2%) smears were inadequate and 101 (4.1%) smears were not possible to be interpreted cytologically due to poor fixation. Of the 832 adequate smears, 68 (8.2%) smears had cervical intraepithelial neoplasia (CIN) changes and 1.1% showed frank cancer while the rest of these smears showed inflammatory lesions. The cause of the inflammatory process in descending order were infection by Human Papilloma virus 21.2% (94 smears) candida 7.8% (34 smears), trichomonas 3.2% (14 smears) while in the majority the organisms were not identified. Inadequate smears were seen in all age groups and in descending order were from age groups 31 to 40 years: 40.8%; 21 to 30 years: 37.6%; 41 to 50 years 13.8%; 17 to 20 years: 4.1%; 61 to 70 years 0.6% and above 71 years 0.5%. The inferences which could be drawn from this study were: (i) there is a deficiency in knowledge of correct Pap smear sampling technique, (ii) The conventional tool used for sampling (wooden Ayre spatula) is not optimum, (iii) refresher course on how to obtain adequate cervical samples is needed, (iv) the use of cytobrush would improve endocervical sampling.

7. *Mal. J. Med. Scien. 1997, January;4(1):51-53*

Diffraction multifocal intraocular lens implantation.

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Multifocal intraocular lens implantation was done in 15 eyes of 11 patients, aged 21-60 years. Distant vision 6/6 and near vision N6 were achieved in 10 eyes (67%). However, functional vision (6/12 or better for distance and N8 or better for near) was achieved in all fifteen eyes (100%). The multifocal intraocular lens provides specific advantages in spectacle- free status and bifocal vision, achieving satisfactory distant and near vision.

8. *Mal. J. Med. Scien. 1997, January;4(1):54-58*

Smoking and discipline problems among rural secondary school students in Kelantan

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A study was conducted among four rural secondary school students in Kelantan to determine the prevalence of smoking, and its association with other discipline problems. A total of 224 students in Form four were selected by a random cluster sampling of the classes. The selected students were assessed on their smoking behaviour and discipline problems by a questionnaire. The prevalence of smoking was 44.2% among the boys. None of the girls smoked. The smokers tend to have more discipline problems other than smoking. They were involved more in 'being disobedient to teachers', 'fighting among students' and 'vice'. It was often difficult to take disciplinary action on the students since a number of teachers were themselves smokers. Role models should be set both in schools and at home.

9. *Mal. J. Med. Scien. 1997, January;4(1):59-70*

A profile of women seeking pregnancy terminations in a clinic in Urban Malaysia.

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This article profiles women who have had abortions in a clinic in a large city in Malaysia. It is limited to a single clinic sample of primarily working-class Chinese, Malay and Indian women. The profile of women who have abortions at this clinic, from statistical records gathered over a six and a half year period, indicates that they tend to be Chinese, in their late twenties, married, having their first abortion, and to have used contraception in the past. There are trends towards an increasing rate of Malay women and for younger women of all ethnicities to be coming in for abortions, menstrual regulations or 'washouts' as they are locally called. Educational information on sexuality and contraception, and abortion counselling are two areas which appear to be of need to working-class women.

10. *Mal. J. Med. Scien.* 1997, January; 4(1):71-73

Detection of Human Herpesvirus - 6 in Carcinomas

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Human herpesvirus-6 (HHV-6), an ubiquitous virus, is the causative agent for exanthem subitum in children, and is frequently associated with lymphoproliferative disorders, including lymphomas. Recently, HHV-6 was reported in oral carcinoma tissue suggesting that it may be a copathogen in these tissues. The objective of this study was to examine the presence of HHV-6 DNA in selected epithelial cell tumours namely, oral carcinoma, salivary gland carcinoma, breast carcinoma and cervical carcinoma. Formalin-fixed, paraffin-embedded archival tissue were examined for the presence of HHV-6 by in situ DNA hybridization. Variant-specific oligonucleotide probes that distinguish HHV-6 type A from type B were used to further classify the viral DNA present. Hybridization studies showed 18/20 (90%) oral carcinoma cases contained HHV-6 DNA. Of the 8 salivary gland tumours, 6 (75%) were positive. A total of 6/20 (30%) cervical carcinoma cases were positive for HHV-6. It was observed that HHV-6 B was the predominant variant in these tissues. All of the 10 breast carcinoma cases were HHV-6 negative. HHV-6 DNA was found in most of the oral carcinoma tissue and in almost a third of the cervical carcinoma tissues studied suggesting a possible role for the agent in these tumours. HHV-6 genome contains at least two genes which may have an oncogenic potential. Also, the virus has the ability to transactivate Human papillomavirus and Human Immunodeficiency virus. Our observations suggest that HHV-6 may be an important cofactor in the pathogenesis of some carcinomas.

11. *Mal. J. Med. Scien.* 1997, January;4(1):74-78

Nutrient intakes of Kelantan state athletes.

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Dietary status was evaluated in thirteen male Kelantan State athletes. Each athlete kept a 7-day weighed food intake record. Diets were analysed for nutrient content using a computerised software package. Mean daily energy intake averaged $10.7 \pm 3.7 \text{ MJ d}^{-1}$ ($2567 \pm 887 \text{ kcal d}^{-1}$) or $175 \pm 60 \text{ kJ kg BM}^{-1} \text{ d}^{-1}$. Carbohydrate, protein and fat intake averaged $6.4 \pm 2.1 \text{ g kg BM}^{-1}$, $1.6 \pm 0.6 \text{ g kg BM}^{-1}$ and $1.1 \pm 0.5 \text{ g kg BM}^{-1}$, respectively. The energy derived from carbohydrate, fat and protein respectively, averaged $61.9 \pm 8.5\%$, $23.0 \pm 6.5\%$, $23.0 \pm 6.5\%$ and $15.1 \pm 3.6\%$ of the total energy intake. Most of the selected vitamins and mineral intake were below United States Recommended Dietary Allowances except for riboflavin, vitamin C and iron.

12. *Mal. J. Med. Scien. 1997, January;4(1):79-80*

Misalignment of Radiation Field and Light Field in a Radiographic X-Ray Unit - A Case Study

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This case of misalignment of radiation field and light field in a radiographic x-ray unit has been recorded during first ever implemented quality control program in the Department of Radiology at Universiti Sains Malaysia. A maximum difference of 1.27 centimeters between radiation field and light field is acceptable for quality control purposes in diagnostic radiology. The total misalignment of 3.2 centimeters light field was found on the longitudinal axis. The total misalignment of light field on transverse axis was 1.5 centimeters. The total misalignment of radiation field on longitudinal axis was 2.5 centimeters. The total misalignment of radiation field on transverse axis was 2.5 centimeters. There is always a need to implement a structured quality control program to provide better diagnostic results in addition to the safe use of radiation for patients and radiation workers.

13. *Mal. J. Med. Scien. 1997, January;4(1):83-86*

Progressive limb weakness in a 51 years old Chinese man.

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A 51 years old Chinese man, a chronic smoker presented with a four months history of progressive weakness which started in the lower limbs. Examination reveals a mixed sensorimotor neuropathy. He was initially diagnosed to have chronic inflammatory demyelinating polyradiculoneuropathy but later readmitted and discovered to have a small cell lung carcinoma with lymph node metastasis. Reevaluation of the patient then suggested that the initial presentation was that of paraneoplastic sensorimotor neuropathy due to underlying small cell carcinoma. The background of paraneoplastic sensorimotor neuropathy is briefly reviewed.

14. *Mal. J. Med. Scien. 1997, January;4(1):89-93*

Attitude formation and ethnics among medical students- strategies adopted by the School of Medical Sciences Universiti Sains Malaysia

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No abstract.

15. Mal. J. Med. Scien. July 1997;4(2):5-8

Social accountability of Medical School - between reality and fantasy

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No abstract.

16. Mal. J. Med. Scien. July 1997;4(2):9-13

Asthma education of children - What is the best strategy?

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No abstract.

17. Mal. J. Med. Scien. July 1997;4(2):14-19

Coxsackie virus infection in children - Cutaneous and cardiac manifestations.

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No abstract.

18. Mal. J. Med. Scien. July 1997;4(2):20-22

Endoscopic findings in patients with suspected upper gastrointestinal haemorrhage in Terengganu, Malaysia

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From January 1994 to December 1995, 147 patients with a clinical diagnosis of upper gastrointestinal haemorrhage underwent oesophago gastro duodenoscopy in Hospital Kuala Trengganu. Our study retrospectively surveys the demographic characteristics and the endoscopic findings in this group of patients.

There were more male patients in this group, with only 36.7% being females. Ethnically, most patients were Malays (85%) with the rest being made up of Chinese (12.9%) and Indians (2.1%). The mean age was 55 years (range 6-90 years).

Other local studies have found duodenal ulcer to be commonest cause of bleeding, but in our survey, oesophageal varices (21.8%) and gastric ulcers (21.8%) were the most frequent findings, with duodenal ulcers (20.4%) coming in third. The relatively high proportion of patients with oesophageal varices is unexpected and all 32 patients found to have this condition happened to be Malays. A small proportion of patients (6.8%) had more than one abnormality. This study, carried out on a predominantly Malay group of patients on the East Coast of Malaysia, clearly shows some variations as compared to surveys done elsewhere.

19. Mal. J. Med. Scien. July 1997;4(2):23-27

Simple and sensitive high-performance liquid chromatography (HPLC) method with ultraviolet (UV) detection for the determination of plasma propranolol concentration.

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We report a simple, inexpensive and sensitive method for quantifying plasma propranolol concentration using HPLC with ultraviolet detection. Previous publications for determination of plasma propranolol concentrations uses HPLC with fluorescent detectors.

Propranolol and oxprenolol (internal standard) were extracted from plasma using heptane followed by heptane evaporation and reconstitution of residue. Separation was achieved using a Waters C18 analytical column and mobile phase comprising of a mixture of water, methanol, acetonitrile, acetic acid and triethylamine (210:80:70:2.5:0.1, v/v) at flow rate of 0.5mls/min. detection wavelength was set at 295nm.

Standard curves were linear for concentrations of propranolol between 10 to 200ng/ml. Method sensitivity was 5ng/ml and recovery averaged at 90%. Coefficient of variation within day and between days ranged from 4.25-9.6%.

The ionic mechanism associated with the action of Gamma-Aminobutyric Acid (GABA) on Achatina Fulica Ferussac Neurons.

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It is now established that γ -aminobutyric acid (GABA) is an important inhibitory neurotransmitter in the central nervous system of both vertebrates and invertebrates. On the basis of electrophysiological studies, GABA receptors are classified into three types: GABA_A, GABA_B, and GABA_C. In this study, the effect of GABA on 34 identified *Achatina fulica* Ferussac neurons (locally known as *siput babi*) were examined using conventional electrophysiological recording techniques. Results obtained from this study indicate that GABA induces 3 different responses in *Achatina fulica* Ferussac neurons, similar to those reported on the neurons of other mollusks *Aplysia* and *Helix*.

- i. GABA_A receptor. GABA induced a rapid and transient hyperpolarizing response on eight neurons TAN, TAN-1, TAN-2, LAPN, v-VLN, v-RPLN, d-LpeLN and d-LBMN. This effect was mimicked by muscimol and enhanced by pentobarbitone. Picrotoxin reduced this response. In Cl⁻-free saline, a depolarizing response was observed and this suggests a role for Cl⁻ in the generation of the above response.
- ii. GABA_B receptor. GABA induced a slow hyperpolarizing response on six neurons - RPeNLN, LPeNLN, RAPN, LVMN, RVMN and BAPN. This effect was mimicked by baclofen and antagonised by phaclofen. In Cl⁻-free, Ca²⁺-free and 20% Na⁺ saline, the response remained unchanged. On the other hand, the response was slightly reduced in 200% K⁺ and slightly enhanced in 50% K⁺ saline. On the basis of these observations, the slow hyperpolarizing response induced by GABA could be attributed to K⁺.
- iii. GABA_C receptor. GABA induced a depolarizing response on seven neurons - FAN, v-VNAN, d-RpeAN, v-RCDN, d-LBAN and d-LBPN. Muscimol induced a similar response. This effect remained unchanged in both Ca²⁺ free and Cl⁻-free saline. However, in 20% Na⁺ saline, this excitatory effect was abolished. Thus, it could be postulated that Na⁺ may be implicated in the depolarizing response induced by GABA.

21. *Mal. J. Med. Scien. July 1997;4(2):38-41*

A psychosocial study of females dependent on drugs at a rehabilitation centre.

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One hundred and seventy one females dependent on drugs at a drug rehabilitation centre were studied. 127 (74.3%) inmates were from urban areas and 82 (48%) were sex workers. 11.7% were illiterate and only 59.1% had primary level education. 156 (91.2%) were dependent on opiates, 53.8% on alcohol and 36.8% on benzodiazepines. 60.1% inmates never used condoms, 6.1% used sometimes, while the rest used it always. 60.8% inmates were found to be positive for psychiatric symptoms

22. *Mal. J. Med. Scien. July 1997;4(2):42-51*

Computer programme for diet analysis using portion - size or weighed - food intake for general and clinical usage.

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A diet analysis computer programme written in DBASE™ which can analyse diet taken from one to seven days using portion size or weighed-food intake has been designed for both general and clinical usage. The programme is capable of calculating the energy in kilocalories or in Megajoules and amount in grams of protein, carbohydrate, fat, five minerals, five vitamins content for one to seven days by either using weighed-food intake or portion size was designed and produced. The programme accepts data in the form of weight, portion size, length of certain foods and measurements of liquid equivalent to a standard glass. The values for each meal (breakfast, lunch, dinner and snacks), average values per day as well as total average over a period of one to seven days can be calculated and printed. The programme also calculates the content and percent of kilocalories from protein, fat and carbohydrate. Results can be presented as histograms for the average daily intake or as weekly energy intake for each meal. In conclusion, this dietary programme can be useful in assessing the intake of energy and nutrients by using portion size.

Lipid peroxidation, uric acid and xanthine oxidase activity in essential hypertension: mysterious role of uric acid.

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This study was designed to determine, whether there is hyperuricaemia and increased xanthine oxidase activity in essential hypertensive patients in relation to increased free radical generation and to identify uric acid as one of the predictors of hypertension compared to the other blood pressure related factors such as cholesterol, urea and creatinine. Total fifty two mild to moderate hypertensive (male- 29, female- 23, treated-45, untreated-7, mean age 50.41 ± 10.73 yr.) and 52 normotensive (male-19, female-33, mean age 44.25 ± 7.44 yr.) samples were studied. All the samples were selected without any family history of gout, hypertension, diabetes as well as any debilitating disease. Five ml of venous blood were collected, and plasma obtained by using EDTA were used for xanthine oxidase activity. Serum uric acid, urea and creatinine were measured by using auto analyser, while plasma xanthine oxidase were via spectrophotometry. Serum lipid peroxide were measured as thiobarbituric acid reaction product by spectrofluorometry. Computer program STATISTICA was used for overall data analysis. Results from our study showed that serum uric acid were consistently higher in hypertensive (H) compared to normotensive (N) [N: 301.33 ± 80.19 $\mu\text{mol/l}$, H: 396.00 ± 107.71 $\mu\text{mol/ml}$; $p < 0.001$]. Xanthine oxidase enzyme activity was significantly higher in normotensive than the hypertensive samples (N: 2.43 ± 1.12 nmol O_2 / ml plasma/min, H: 1.67 ± 1.12 nmol O_2 /ml plasma/ min: $p < 0.001$). Lipid peroxides were significantly higher in hypertensive than the normal (N: 3.31 ± 0.33 , H: 4.49 ± 0.2 nmol MDA equiv/ml; $p < 0.001$). For correlation study we found mean arterial pressure (MAP) significantly correlated with uric acid ($r = 0.51$, $p < 0.001$) and xanthine oxidase activity ($r = 0.39$, $p < 0.005$) in normal sample. Absence of similar correlation in hypertensive samples suggest that uric acid production in hypertensives may serve a different purpose. In conclusion from this study were found that hypertensives with a normal renal function have higher serum uric acid and lipid peroxide but low xanthine oxidase enzyme activity.

Knowledge of childhood asthma among final year medical and pharmacy students

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The aim of this study is to assess and compare the knowledge of childhood asthma between final year medical and pharmacy students in Universiti Sains Malaysia and identify areas of weakness so that future education programmes could be improved. A validated asthma knowledge questionnaire was distributed to all final year medical and pharmacy students following a lecture session. Verbal consent was obtained and filling of questionnaires was voluntary. Each question is given a maximum score of one giving a total maximum score of 31. The mean score of medical students 23.4 (95% CI 22.8-24.0) was significantly better than that of pharmacy students 20.3 (95% CI 19.5-21.0). Medical students performed better than pharmacy students in 12 questions. Pharmacy students performed better than medical students in only two questions. However only 44.6% of medical students and 20.0% of pharmacy students knew that infection is a common trigger of childhood asthma. In therapeutic questions only 30.1% medical students and 6.7% of pharmacy students could name two preventive medications, and 49.4 % of medical students and 44.3 % of pharmacy students thought that salbutamol could damage the heart. Only 18.1% medical students and 16.7% of pharmacy students knew the management of exercise induced asthma. Even though medical students' knowledge of childhood asthma was significantly better than pharmacy students, several areas of deficient knowledge were identified in both groups, especially regarding trigger factors and preventive medications of asthma. More emphasis should probably placed in these areas in the medical and pharmacy curriculum.

25. *Mal. J. Med. Scien. July 1997;4(2):65-69*

Miliary tuberculosis and disseminated histoplasmosis in an HIV-negative patient with a low CD4+ lymphocyte counts. A case report.

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A 46 year-old Malay gentleman who was premorbidly well and healthy presented with 3 months history of prolonged fever and marked constitutional symptoms in April 1996. Microbiological and radiological findings were compatible with a diagnosis of disseminated tuberculosis for which he was treated for nine months with anti tuberculous therapy but he defaulted follow up in February 1997. He was readmitted with worsening of his symptoms in 1997. A new problem at that time was multiple skin abscesses from which *Histoplasma capsulatum* was isolated but tuberculous screening was negative. Lytic lesions were noted on the skull x-ray. Peripheral blood lymphocyte immunophenotyping showed a CD4+ lymphocytopenia. However, screening for antibodies to human immunodeficiency virus (HIV) was negative on 4 occasions. The lytic lesions on the skull disappeared and the psoas and skin abscesses resolved following treatment with anti tuberculous therapy and amphotericin B. However, despite these improvement and haemodynamically he was noted to be stable before his family requested to be discharged. He passed away at home on the next day.

26. *Mal. J. Med. Scien. July 1997;4(2):70-73*

Malignant cerebral infarct : A case report

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Cerebral infarcts with space occupying brain oedema are termed as 'malignant' due to poor prognosis associated with them. Recent advances in aggressive management of cerebral oedema and attempts to reperfuse the ischaemic zone have helped only selected patients. We document a patient with 'malignant' cerebral infarct with poor outcome.