
**Multimedia technology and the medical profession**

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No abstract.


**The kidneys, salt and hypertension**

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Although sodium has been implicated in the pathogenesis of hypertension, it has not been settled whether the adverse pressor responses to high salt intake are limited to certain conditions like reduced renal mass or whether some forms of hypertension are truly "essential". In view of the widespread practice of advising salt restriction in patient with raised blood pressure, identification of the "salt-sensitive" individuals (if they do exist) may influence the management of these patients. From the preventive aspect also, it may be worthwhile read dressing the issue of how much salt restriction should be advised to the population at large.
Principles of treatment of epilepsy.

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Epilepsy is a common chronic neurological condition with a prevalence of 4-8 per thousand (Hauser, 1990). The present classification of epilepsy is based on two pillars: the aetiology, which distinguishes symptomatic epilepsies from those that are idiopathic and cryptogenic, and the localisation of the disorder in the brain, separating the generalised seizures form epilepsies with partial of focal onset. The majority of the patients with epilepsy will go into remission, and two-thirds will remain so, two years after drug withdrawal.

The impact of epilepsy on individual patients varies. Employment, driving and learning may constitute major problems. There is a small, but definite increase in mortality in patients suffering from epilepsy.

Treatment of epilepsy usually involves long term medical treatment, and the ultimate aim will be no seizures and no drugs. Before starting treatment, the diagnosis of epilepsy should be secure. Initiation of antiepileptic drug therapy needs a full and adequate discussion with the patient, and the choice of the minimum effective dose of an appropriate monotherapy. Non-pharmacological treatments may demand consideration at a relatively early stage, if pharmacological treatment is ineffective.

In choosing between different drugs, judgements about the efficacy of the drug for an individual patient and its tolerability, contribute to the overall effectiveness of an antiepileptic drug. There is good evidence from many studies that the chief factor determining relative effectiveness is likely to be the spectrum and incidence of adverse effects of antiepileptic drugs.

Some 20% of patients developing epilepsy have a chronic disorder, uncontrolled by drugs. In patients receiving, and complying with, optimal doses of a single antiepileptic drug, the addition of further agents is likely to result in a significant improvement in seizure control in only approximately 10% of patients, but inevitably it increases the risks of dose-related, idiosyncratic, and chronic toxicity due to both pharmacokinetic and pharmacodynamic drug interactions. For this group of patients an appropriate aim may not be complete remission of seizures but a compromise of reduced seizure frequency with less severe seizures, to be achieved with one, or at most two, drugs. The management of these patients with unremitting seizures constitute a treatment challenge for epileptologists.
Choice of specialty and training institutions among doctors in Malaysia

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The choice of specialty and training institutions among Malaysian doctors applying for postgraduate training at one of the local universities in 1995 and 1996 was obtained. A postal survey was done on a random sample of these doctors on factors affecting the choice of specialty and the choice of training institutions. Surgery, obstetrics and gynaecology and family medicine were the three most popular specialties with pathology, psychiatry and otorhinolaryngology being the most unpopular. Interest/enjoyment in the specialty, the clinical nature of the specialty and working experience in the specialty were the most important reasons for their choice. The ability to do community work was the most unimportant reason. The male doctors ranked "interest in the specialty" and "the clinical nature of the specialty" significantly higher while the female doctors ranked "marriage and family considerations" higher. Important factors in choosing the training institutions were the "availability of facilities and teachers" and the "location in a central place or nearer to home". The perception of ease of passing the examinations were least important. Consideration of these responses are important for institutions to attract potential candidates.

Analysis of BCL 1 Polymorphism in the human factor VIII gene

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The study involved fragment analysis of intron 18 of the factor VIII gene which contained the restriction site for Bcl 1 enzyme in two haemophilia A families. The fragment was amplified using polymerase chain reaction (PCR) technique. Digestion with the appropriate enzyme revealed that in family A, only a 99bp fragment was obtained and therefore is not informative for carrier detection. However, family B showed presence of a 142bp and 99bp fragments in the mother. This 142bp fragment is inherited by her haemophilic son and this fragment is also found in her daughter suggesting that she is a carrier of the affected X, responsible for the haemophilia A. These contrasting findings in the two families illustrate the usefulness of this polymorphic marker in detection of carriers in the female sibling of the families studied.
Smoking among factory workers in Kota Bharu, Kelantan.

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A survey of 192 factory workers in Kota Bharu Kelantan was carried out to determine the prevalence of smoking and factors associated with it, using a self administered questionnaire. The prevalence of smoking were 58.1 % for male workers and 3.1% for female workers. The majority of smokers started their habits while in primary school. 32.5% of the smokers were classified as heavy smokers and 67.5% as regular smokers. The main reasons cited for smoking were 'smoking helps to release tension' and 'smoking helps them face their problems'. Although a bigger number of the smokers (37.5%) smokes mainly at home, 25.0% mainly smokes at the workplace. This is quite alarming in terms of risks of smoking at the workplace and the issue of workplace environmental tobacco smoke (ETS). Measures to control smoking in the workplace should be component of workplace health practice and be strictly enforced.

The incidence of central nervous system (CNS) lesions in Malaysia: A histopathological study of 1064 cases from the year 1991 till 1994

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A study on the incidence of the CNS lesions over a period of 4 years was conducted in two major hospitals in Malaysia. Once is a University Hospital (HUSM) located at the north-eastern part of west Malaysia (referral centre for northeastern region), while the other is Neurology Institute (NI) a general hospital located at the central region and is a national neurological referral centre.

During the period, a total of 1064 (histologically verified) consecutive lesions were seen involving the brain and the spinal cord. Of these, 872 (82.0%) cases were neoplasms of which 293 (33.6%) were malignant. 108 (10.2%) cases were inflammatory, 69 (6.5%) were congenital and the rest was of miscellaneous in nature. In descending order, out of 872 neoplastic cases tumours of the neuroglial origin were 203 (23.3%), of meningothelial origin 193 (22.1%), nerves and nerve sheaths origin 90 (10.3%), vascular origin 70 (8.0%), primitive and undifferentiated cells 68 (7.8%), pituitary adenomas 66 (7.9%), metastatic tumours 57 (6.5%), malformative tumours 54 (6.2%), germ cell tumours 12 (1.4%), non Hodgkin lymphomas 11 (1.3%) and neuronal tumours were 5 (0.6%). The miscellaneous tumours were 43 (4.9%) cases.

Of the 108 inflammatory lesion, 55 (50.9%) were due to pyogenic abscesses, 16 (14.8%) were due to Tuberculosis, 10 (9.3%) due to cryptococcosis while the microorganisms were not detected or identified in the rest of the inflammatory lesions. Of the 64 congenital lesions, meningoencephaloceles formed the majority, 85.9% (55 cases).

Malaysian comprise of three major ethnic groups, the Malays, the Indians and the Chinese. Of interest to note that in all the five main primary brain tumours; meningiomas, astrocytomas, schwannommas, pituitary adenomas and medulloblastomas, the incidence among the ethnic Malays in the highest, 54.7% (293/536), followed by the Chinese, 27.6% (148/532) and lest among the Indians, 11.7%. The incidence of all CNS lesions per 100,000 population was 1.5, while the incidence of malignant neoplasms of CNS was 0.5. These figures are compared with the incidence of CNS lesions in other countries.

The efficacy and safety of cyclic antidepressants

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Cyclic antidepressants are widely used as the first line antidepressants in developing country. Ninety six depressed out-patients with minimum baseline Hamilton Depressive Rating Scale (HDS) score of 11 entered an open clinical trial. The maximum daily dose allowed was equivalent to 150 mg of imipramine. The highest effective dose was continued for 6 weeks. Most (96%) of the patients tolerated cyclic antidepressants and only 4 required new generation of antidepressants. Eighty six (94%) patients responded to the treatment regime while the other 6 required higher doses of antidepressants. About 69% of the patients improved with the equivalent daily dose of 75 to 100 mg of imipramine. It is concluded that majority of the depressed out-patients tolerated and required a moderate dose of tricyclic antidepressants. It seems that the routine first line treatment with newer antidepressants at current price is not cost-effective.


Identification of Hb Constant Spring: Using a PCR based technique.

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Since Hb Constant Spring is the major cause of Hb H disease in SEA, accurate detection of high risk couples carrying the Hb Constant Spring genes will help genetic counseling and prenatal diagnosis. Hb CS-Hb H disease is associated with a more severe clinical state than Hb-H-deletional Hb H disease. We utilised a non radioactive method based on polymerase Chain Reaction to detect the Hb Constant Spring allele in normal and Hb H Constant Spring samples. The procedure involved 2 pairs of primer, namely A7 + A1B and δG2 +δG4 to amplify the 314 and 191bp fragments from the normal and the Hb Constant Spring determinants respectively. Amplification was successfully done giving the 191bp fragment from the Hb Constant Spring allele and 314bp fragment from normal sample. We conclude that this procedure can be easily established as a screening test in the laboratory for detection of Hb Constant Spring genes.
Innervation of Dentine

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Dentine is a specialised mineralised tissue which often becomes exposed by disease or restorative procedure. Once exposed dentine can be very sensitive. Although the present of nerves in dentine is implicated as one of the hypotheses to this clinical feature, its present and extent into dentine is still controversial. This is a review on the present knowledge of the nerve terminal (intratubular axon) in dentine.

Hypopituitarism following surgical resection and cranial radiotherapy for craniopharyngioma. A case report.

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A 33-year old Malay lady was admitted in August 1988 with a 5-year history of headache and hypopigmentation. She had primary amenorrhoea. Six months prior to admission she developed left hemiparesis and blurring of vision. On examination, hirsutism and underdevelopment of secondary sexual characteristics were noted. Eye examination showed bitemporal hemianopia and bilateral optic atrophy. CT- scan showed suprasellar calcification with enlarged sella turcica, compression of the third ventricle. A diagnosis of craniopharyngioma with hydrocephalus was made but she refused surgery and defaulted follow-up. In September 1991, she was again admitted with worsening of vision though her left hemiparesis had resolved completely. Craniotomy was performed. The optic chiasma was found to be prefixed and stretched but no visible tumour tissue was seen. Cystic craniopharyngioma was identified protruding through the dilated right foramen of Monro and was removed. Postoperative course was uneventful following that, she underwent 25 courses of radiotherapy. Her visual defects, however, did not improved. Subsequent endocrine investigations revealed hypopituitarism and she was started on hormone replacement therapy.

Adrenal Adenoma : A Common Cause of Secondary Hypertension

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A case of hypertension due to an adrenal adenoma in a 38-year-old patient was described. The methods of diagnosis and surgical treatment were discussed. Although secondary hypertension is uncommon, if the cause of hypertension can be detected, the patient could be cured of the hypertension and its sequelae can be avoided.

**Molecular genetics of thalassemias in Malaysia - implications for prevention and control programmes.**

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No abstract.


**Management of subarachnoid haemorrhage in developing areas of South East Asia.**

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No abstract.


**Apoptosis - A new target for cancer therapy.**

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Apoptosis or physiology cell death has generated great interest in recent years particularly in the field cancer. Many human cancers are associated with changes in the number of cells undergoing apoptosis. Genetic mutations that prevent cell death cause cells to accumulate and can eventually lead to malignancy. Most chemotherapeutic drugs work by inducing apoptosis death in the target tumour cells. Many of the genes involved in the regulation of the apoptotic pathway have been identified. This has allowed the exploration of therapeutic strategies which attempt to increase the propensity of malignant cells to die by apoptosis and to mitigate side effects by reducing apoptosis in non-malignant cells.

Use of arms in the diagnosis of point mutations in Beta thalassemia patients

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Amplification Refractory Mutation System (ARMS) using allele-specific primers allows direct identification of point mutations and small insertions or deletions by PCR amplifications. Two primers differing only at the site of mutation are used to amplify the test samples in separate reactions. These sequence specific PCR primers allow amplification of test DNA only when the target allele is contained within the sample and will not amplify the non-target allele. In this project, (thalassemia) patients diagnosed with the 41/42 mutation were subjected to this method of detection. We demonstrate that the ARMS technique is a simple and reliable method for detecting this point mutation.


Detection of HB E by restriction site analysis of PCR-amplified DNA fragments

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There are many tests to detect haemoglobin E (Hb E) disease however interpretation may be difficult because Hb E co-migrates with Hb A2 in conventional electrophoresis or HPLC method. Here we report a simple and rapid technique for the identification of patients with Hb E disease by visual examination of restriction enzyme patterns of *Mnl* I digestion on a 0.63 kb DNA fragment. The method includes Polymerase Chain Reaction (PCR) by using two specific primers S1 and S3. In Hb E disease, *Mnl* I produces restriction fragment patterns that can distinguish these cases from normals. A 230bp DNA fragments were was found to be associated with the mutant locus, whereas 171 bp and 60 bp fragments were generated from the normal loci has improved discriminatory power in the genotype analysis of Hb E mutations. We studied 10 patients with Hb E disease from unrelated Malaysian patients. From our results *Mnl* I detected one patient being homozygous and 9 patients were heterozygous.
An audit on the placement of central venous catheters.

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Central venous catheter have been in use for a long time. How safe it is in practice depends on the skill of the user. As the need for longterm use of central venous catheters rises mostly on patients who suffer from advanced malignancy for adjunctive or palliative chemotherapy, it is long overdue to audit its use in clinical practice.

This study was made in a general surgical unit at the Western General Hospital in Edinburgh, Scotland, from 1st December 1996 to 28th February 1997, during which the author was attached to the unit as a visiting surgeon. Fourteen males and 12 females required central venous access mostly for the delivery of chemotherapy. A vascuport was inserted in 1 patient and percutaneous cuffed venous catheters in 25 patients. It was successful in 23 out of 28 attempts and failed in 5, because of previous neck surgery and lack of patient's co-operation. Only 4 complications (14.28%) were noted. Thus, despite being a commonly performed minor surgical operation, placement of central venous catheters for prolonged therapeutic use is still safe if important steps of the procedure are strictly followed.

The influence of infarct site on rate of recovery of baroreflex sensitivity after acute myocardial infarction.

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Depression of baroreflex sensitivity (BRS) after myocardial infarction (MI) is a well known phenomenon. However, the mechanism involved is complex and unclear. There has been contradicting data on the magnitude of depression of BRS in anterior vs inferior MI. Little is known about the effects of infarct site on the improvement of BRS after MI although it has been shown to improve as early as 3 weeks and become near normal values at about 6 months after MI.

We have studied the influence of infarct site on the early improvement of BRS after MI. Forty one first MI patients (average age 64±20 years, 29 male and 15 anterior) we recruited in the study. Infarct site was determined using standard electrocardiographic criteria and BRS was measured using phenylephrine test at pre-discharge (average day 7 post MI) and repeated at follow-up (average day 42 post MI).

Average BRS in the whole study population was 6.7 ± 1.0 (S.E.M.) ms/mmHg predischarge had significantly improved to 8.3 ± 1.2 ms/mmHg at follow-up (p<0.05, paired t-test). However, when infarct site was taken into account, we found a significant improvement of BRS only in the anterior group (from 6.6 ± 2.3 to 9.0 ± 2.8 ms/mmHg, p<0.05, paired t-test). There was negligible improvement in the inferior MI group (from 6.7±1.3 to 7.9±1.4 ms/mmHg, p = n.s.)

The results of our study suggest that BRS depression after MI could possibly be caused by a different mechanisms in inferior MI when compared with anterior MI. Direct damage to cardiac nerve endings may be the predominant pathophysiology in inferior MI causing a
delay in recovery whereas in anterior. MI, BRS depression is mainly due to mechanical effects of 'pump failure' which recovers early with reperfusion.


Epidemiology of childhood poisoning in Kelantan.

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Accidental poisoning in children is a common problem worldwide and continues to be one of the major causes of mortality and morbidity in young children. This study describes the characteristic of children admitted for ingested poison, the types of poison ingested, circumstances where poisoning occurs, and the outcome of these children in Hospital Universiti Sains Malaysia. A retrospective review of 184 medical records of children less than 12 years old admitted to Hospital Universiti Sains Malaysia between 1st January 1988 and 31st December 1993 with a discharge diagnosis of poisoning. One hundred and eight-four children were admitted to the Hospital Universiti Sains Malaysia during the period 1988-93 for ingestion of poison. This represents 1.7% of all paediatric admissions. One hundred and five (57.1%) children were boys giving a male:female ratio of 1.3:1. Most children (76%) were between 1-5 years old. In 119 (65%) of cases poisoning occurred in the child's own home. Only 44 (25.4%) of cases presented within one hour of ingestion or appearance of symptoms. The type of poison ingested included household products 107 (58.2%), medications 42 (22.8%) and others 35 (19%). Kerosene was the commonest agent (43.5%) followed by detergents and/or bleach (10.8%). Common medications ingested were analgesic drugs 11 (7.7%) and antipsychotic drugs 9 (6.3%). No children received ipecac before arrival and 17(9.2%) children had mechanically induced vomiting, including seven cases of kerosene and three cases of bleach ingestion. Four cases (2%) required intensive care and there were no fatalities. The total family income was less than RM300 per month in 75% of cases and only 7% of fathers and 2% of mothers had received tertiary education. Accidental poisoning, affecting predominantly toddlers between 1-5 years of age, was a common preventable condition in this hospital. Improved education for medical personnel and the public should diminish the number of children presenting with accidental ingestion of poison and their immediate management.
Body mass index of the elderly and young adult derived from height and knee height.

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Body mass index (BMI) is the widely accepted indicator to determine chronic energy deficiency (CED), and to a lesser extent underweight and overweight. BMI formula WT(kg)/HT(m^2) required the measurement of height (standing height). The question was raised about the appropriateness of height measurement in scoliotic people especially the elderly. Armspan was suggested as a surrogate for height. In the elderly the degenerative changes may occur around the shoulder joints and thus armspan measurement is also questionable. Knee height has been advanced as an another surrogate for height. In this study 43 elderly (age 62-89 years) and 129 young adult (age 22-23 years) were examined to determine the relationship between BMI and BMK (BMI deriving from knee height).

It seemed that BMI and BMK correlate very well in both elderly and young adult, male and female with correlation coefficient for the regression were: r = 0.93 (elderly male), r = 0.86 (elderly female), r = 0.90 (young adult male) and r = 0.97 (young adult female). Knee height is a useful measurement to BMK in scoliotic, frail or other diseased elderly.

Psychiatric OSCEs in USM: Developmental background and scope.

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A majority of the earlier psychiatric OSCE stations produced by the Department of Psychiatry at the School of Medical Sciences for the phase III examination were not valid OSCE because they did not assess students' clinical skills. The types of OSCE questions produced then were more appropriately called OSPEs (Objectives Structured Practical Exams). When the initial pressure to produce a large number of OSCE questions was overcome and video facilities became available in the department, the more appropriate OSCE questions were produced. The use of video facility was the only solution to the problem of assessing psychiatric students structured clinical skills in a large number. The uses of videotaped material not only help overcome the logistic problem but also the problem of poor inter-rater reliability and inter-patient variability. When used together with a checklist, the variability of the examiners and patients were to large extent removed. It is close to the ideal assessment situation, where all students are examined on the same patient and assessed by the same examiners. The use of real of simulated patients would be suitable in the OSCEs if the number of students was small.
Herpes simplex encephalitis - problems in diagnosis and recent advances.

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Herpes simplex encephalitis (HSE) is an uncommon but serious condition, with an untreated mortality rate of up to 75 percent. Early treatment with acyclovir is both safe and affective and is associated with significant improvement in outcome. However, considerable diagnostic difficulties may be encountered, leading to delay in treatment. Mild forms of herpes simplex encephalitis have been described and our patient may be an example of such a case.

A thirteen year old Malay boy presented with 5 days prodromal symptoms of diarrhoea followed by fever and vomiting. He had altered sensorium 2 days prior to admission. Even though the CSF study and serology for herpes simplex virus were negative, a presumptive diagnosis of HSE was made based on an abnormal EEG and evidence of focality on neuroradiological imaging (SPECT). The patient responded to acyclovir. The problems in diagnosing HSE using routine investigations without brain biopsy is discussed and recent diagnostic advances are highlighted.

Prolonged confusion following generalized seizures in a 13 years old girl.

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A 13 years old girl with a previous history of generalized tonic epileptic seizures was admitted for frequent fits. Despite initial control of the convulsive seizures, the patient did not regain full consciousness and had repeated involuntary repetitive movements. She was suspected to have complex partial status epilepticus and responded to more aggressive anti-epileptic drug therapy.