

LIST OF PUBLICATIONS YEAR 2006

No.		Page
1	Abdullah A, Hazim MYS, Almyzan A, Jamilah AG, Roslin S, Ann MT, Borhan L, Sani A, Saim L, Boo NY. Newborn hearing screening: experience in a Malaysian hospital. Singapore Med J 2006; 47(1): 60-64	6
2	Ajay M, Achike FI, Mohd MA, Mustafa MR. Direct effects of quercetin on impaired reactivity of spontaneously hypertensive rat aortae: comparative study with ascorbic acid. Clin Exp Pharmacol Physiol 2006; 33:345-350	7
3	Ajay M, Achike FI, Mohd MA, Mustafa MR. Effect of quercetin on altered vascular reactivity in aortas isolated from streptozotocin-induced diabetic rats. Diabetes Res Clin Pract 2006; 73: 1-7	8
4	Balasundaram R, Reddy SC. Prevalence of colour vision deficiency among medical students and health personnel. Malaysian Fam Physician 2006; 1(2&3): 52-53	9
5	Boo NY, Chew EL. A randomised control trial of clingilm for prevention of hypothermia in term infants during phototherapy. Singapore Med J 2006; 47(9): 757-762	10
6	Boo NY, Mohd-Amin I, Bilkis AA, Yong-Junina F. Predictors of failed closure of patent ductus arteriosus with indomethacin. Singapore Med J 2006; 47(9): 763-768	11
7	Ding CH, Teng CL, Koh CN. Knowledge of diabetes mellitus among diabetic and non-diabetic patients in Klinik Kesihatan Seremban. Med J Malaysia 2006; 61(4): 399-404	12
8	George P, Parameswaran Ramasamy. Case report: common cultural medical complaint presenting as a delusion. Malaysian J Psychiatry 2006; 14(1): 41-42	13
9	Hla-Yee-Yee, Radhakrishnan AK, Ponnudurai G. Improving PBLs in the International Medical University: defining the 'good' PBL facilitator. Med Teacher 2006; 28(6): 558-560	14
10	Judson JP, Nadarajah VD, Bong YC, Subramaniam K, Nalliah S. A preliminary finding: immunohistochemical localisation and distribution of placental angiotensin II receptor subtypes in normal & pre-eclamptic pregnancies. Med J Malaysia 2006; 61(2): 173-180	15
11	Lai NM, Rajadurai SV, Tan K. Increased energy intake for preterm infants with (or developing) bronchopulmonary dysplasia/chronic lung disease. Cochrane Database Syst Rev 2006 Jul 19; 3:CD005093. Review. PMID: 16856077	16-17

LIST OF PUBLICATIONS YEAR 2006

No.		Page
12	Lai NM, Jutti RC. The product of outcome-based undergraduate medical education: competencies and readiness for internship. <i>Singapore Med J</i> 2006; 47(12): 1053-1062. PMID: 17139402	18
13	Lee LK, Chen PCY, Lee KK, Sidhu JK. Premarital sexual intercourse among adolescents in Malaysia: a cross-sectional Malaysian school survey. <i>Singapore Medical Journal</i> 2006; 47(6):476-481	19
14	Lee LK, Chen PCY, Lee KK, Sidhu JK. Menstruation among adolescent girls in Malaysia: a cross-sectional survey. <i>Singapore Med J</i> 2006; 47(10): 869-874	20
15	Leong KC, Chen WS, Leong KW, Mastura I, Mimi O, Sheikh Mohd Amin, Zailinawati AH, Ng CJ, Phua KL, Teng CL. The use of text messaging to improve attendance in primary care: a randomised controlled trial. <i>Fam Pract</i> 2006; 23(6): 699-705	21-22
16	Lim Meng Shi, B Davaraj, Palayan K. Endoscopic drainage of an empyema of the gallbladder through a concurrent cholecystoduodenal fistula. <i>Asian J Surg</i> 2006; 29(1):55-57	23
17	Loh KY. Fingernail dystrophy. <i>Aust Fam Physician</i> 2006; 35: 138	*
18	Loh KY. Exploring terminally ill patients' and their families' perceptions on holistic care in Malaysia. <i>Int J Palliat Nurs</i> 2006; 12(1): 38-41	24
19	Loh KY, Chan SC. Is there a role for aspirin in primary prevention of IHD? <i>Malaysian Fam Physician</i> 2006; 1(1): 27	*
20	Loh KY, Kwa SK, Nurjahan MI. Palliative medicine as an elective posting for undergraduates. <i>Med Edu</i> 2006; 40:1131-1132	*
21	Loh KY, Kew ST. Hepatitis B infection: what the primary care doctor should know. <i>Malaysian Fam Physician</i> 2006; 1(1): 8-10	25
22	Loh KY, Nalliah S. Urinary incontinence in the elderly population. <i>Med J Malaysia</i> 2006; 61(4): 506-511	26
23	Loh KY, Teng CL, Wong KC. How to analyse your research data? Illustrations with hands-on exercises using SPSS. <i>Malaysian Fam Physician</i> 2006; 1(2&3): 77-81	27

LIST OF PUBLICATIONS YEAR 2006

No.		Page
24	Loh LC. Community-acquired pneumonia in Malaysian patients: addition of macrolide and the use of BTS 'CURB' index to assess severity [Letter to Editor]. <i>Med J Malaysia</i> 2006; 61(1): 128-130	*
25	Loh LC. Assessment of disease control and its implication on treatment-comparing asthma and COPD. <i>Medical Progress</i> 2006; 33 (1): 37-42	*
26	Loh LC, Chan LY, Tan RY, Govindaraju S, Ratnavelu K, Kumar S, Raman S, Vijayasingham P, Thayaparan T. Time delay did not affect survival in patients with non-small cell lung cancer - a local Malaysian study. <i>Asian Pacific J Pub Hlth</i> 2006; 18(1): 69-71	28
27	Loh LC, Lo WH, Kanabar V, O'Connor BJ. Lack of neutrophil degranulation in low dose endotoxin inhalation based on a novel intracellular assay. <i>Asian Pacific J Allergy Immunol</i> 2006; 24: 153-160	29
28	Loh LC, PN Teh, KD Seth, S Raman, P Vijayasingham, T Thayaparan. Ethnicity as determinant of asthma-related quality of life in a multiracial country. <i>Asian Pacific J Pub Hlth</i> 2006; 18(1): 49-55	30
29	Loh LC, Yii CTJ, Lai KK, Seevaunnamtum SP, Pushparasah G, Tong JMG. <i>Acinetobacter baumannii</i> respiratory isolates in ventilated patients are associated with prolonged hospital stay [Correspondences]. <i>Clin Microbiol Infect</i> 2006; 12(6): 597-598	*
30	Lukman H, Beevi Z, Mohamadou G, Yeap R. Implementing an assessment-based communication skills training in pre-clinical phase: an IMU experience. <i>Med J Malaysia</i> 2006; 61(2): 214-216	31
31	Mala-Maung, Zoraini W Abas, Azman Abdullah. Utilisation of different resources for self-directed learning by students undergoing an integrated problem-based medical curriculum. <i>J Institutional Res in South East Asia (JIRSEA)</i> 2006; 4(1): 17-24	32
32	Nadarajah VD, Chai SH, Mohammed SM, Chan KK, Krishnan K. Malaysian mosquitocidal Soil Bacterium (<i>Bacillus thuringiensis</i>) strains with selective haemolytic and lectin activity against human and rat erythrocytes. <i>Southeast Asian J Trop Med Pub Hlth</i> 2006; 37(1): 67-78	33

LIST OF PUBLICATIONS YEAR 2006

No.		Page
33	Nagaraja HS, Anupama BK, Jeganathan PS. Stress responses in albino rats. <i>Thai J Physiol Sci</i> 2006; 19(2): 8-15	34
34	Ong CE, Teh LK, Rusli I. Pharmacogenetics in drug metabolism. <i>Mal J Pharmacy</i> 2006, 1(5): 162-173	35
35	Phua KL. The Japanese experience with population ageing and the financing of social security, health and other services for the elderly: lessons for other nations. <i>Asia J Soc Sci</i> 2006; 34(4): 618-629(12)	36
36	Reddy SC, Raju BD. Ocular lesions in the inmates of leprosy rehabilitation centre. <i>Int J of Biomed Sci</i> 2006; 2(3): 289-294	37
37	Tan EL, Looi LM, Sam CK. Evaluation of plasma Epstein-Barr virus DNA load as prognostic marker for nasopharyngeal carcinoma. <i>Singapore Med J</i> 2006; 47(9): 803-807	38
38	Tan EL, Selvaratnam G, Kananathan R, Sam CK. Quantification of Epstein-Barr virus DNA load, interleukin-6, interleukin-10, transforming growth factor-beta1 and stem cell factor in plasma of patients with nasopharyngeal carcinoma. <i>BMC Cancer</i> 2006; 6: 227-234	39-40
39	Teng CL, Achike FI, Phua KL, Nurjahan MI, Mastura I, Nor-Asiah H, Mariam AM, Narayanan S, Norsiah A, Sabariah I, Shariah I, Siti-Rokiah K, Siti-Zubaidah MA, Koh CN, Rosnah I. Modifying antibiotic prescribing: the effectiveness of academic detailing plus information leaflet in a Malaysian primary care setting. <i>Med J Malaysia</i> 2006; 61(3): 323-331	41
40	Teng CL, Nik-Sherina H, Ng CJ, Chia YC, Atiya AS. Antibiotic prescribing for childhood febrile illness by primary care doctors in Malaysia. <i>J Paediatr Child Hlth</i> 2006; 42: 612-617	42
41	Yadav H. Continuous Quality Improvement (CQI) in health care. <i>Malaysian J Pub Hlth</i> 2006;6(2):2-5	43
42	Yadav H. Measuring maternal mortality in Malaysia. <i>JUMMEC</i> 2006; 9(1): 30-34	44
43	Zailinawati AH, Nik-Sherina H, Teng CL. What study design should I choose? <i>Malaysian Fam Physician</i> 2006; 1(1): 29-31	45

LIST OF PUBLICATIONS YEAR 2006

No.		Page
44	Zailinawati AH, Teng CL, Kamil MA, Achike FI, Koh CN. Pain morbidity in primary care – preliminary observations from two different primary care settings. Med J Malaysia 2006 June; 61(2):162-167	46
45	Zainur Rashid Z, Loh KY. Postpartum morbidity – what we can do? Med J Malaysia 2006; 61(5): 651-657	47
*	Abstract not available	

Abdullah A, Hazim MYS, Almyzan A, Jamilah AG, Roslin S, Ann MT, Borhan L, Sani A, Saim L, Boo NY. Newborn hearing screening: experience in a Malaysian hospital. Singapore Med J 2006; 47(1): 60-64

Newborn hearing screening: experience in a Malaysian hospital

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Abstract

Introduction:

This study aims to determine the prevalence of hearing loss among newborns delivered at Hospital Universiti Kebangsaan Malaysia and to evaluate the usefulness of our hearing screening protocol.

Methods:

All infants born in the hospital over a nine-month period, between April to December 2003, were screened for hearing loss with a portable otoacoustic emission (OAE) before discharge. At the age of two months, a second OAE test was repeated on newborns who failed the initial test. Those who failed the second test were re-tested at three months of age. When these infants failed the third OAE test, a brainstem evoked response (BSER) test was performed.

Results:

During the study period, 4,219 infants were born in the hospital, and 3,762 (89.2 percent) underwent OAE screening. 620 (19.7 percent) of them failed the first screening test, and 506 (81.6 percent) of them came for a second stage-screening test. In the third stage screening at three months of age, only 39 (65 percent) patients turned up. Of these, ten infants passed the OAE test and 29 failed. However, when these infants underwent BSER, 13 had normal BSER and 16 have abnormal BSER. The prevalence of hearing loss in this study was 0.42 percent (16/3,762).

Conclusion: The large number of defaulters and false-positive results in this study suggest that this pilot hearing-screen programme requires fine-tuning to minimise these problems.

Key words: brainstem evoked response, hearing loss, newborn screening, otoacoustic emission

Ajay M, Achike FI, Mohd MA, Mustafa MR. Direct effects of quercetin on impaired reactivity of spontaneously hypertensive rat aortae: comparative study with ascorbic acid. *Clin Exp Pharmacol Physiol* 2006; 33:345-350

Direct effects of quercetin on impaired reactivity of spontaneously hypertensive rat aortae: comparative study with ascorbic acid

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Abstract

1. There is a growing interest in the anti-oxidant characteristics and use of flavonoids in the management of cardiovascular diseases. The cardiovascular mechanism of action of these plant derivatives remains controversial. This study compared the effects of the flavonoid quercetin with those of the anti-oxidant vitamin ascorbic acid (vitamin C) on the reactivity of aortic rings from spontaneously hypertensive rats (SHR).

2. The phenylephrine (PE)-induced contractile and the endothelium-dependent and independent relaxant responses of aortic rings from 21 to 22 week old SHR and age-matched normotensive Wistar (WKY) rats were observed in the presence of quercetin or ascorbic acid. All the experiments were performed in the presence of the cyclooxygenase inhibitor, indomethacin (10 mmol/L).

3. The endothelium-dependent and independent relaxations to acetylcholine (ACh) and sodium nitroprusside (SNP), respectively, were significantly lesser in the SHR compared to the WKY tissues whereas the contractile responses to PE were similar in both tissues. Pretreatment of WKY rings with quercetin or ascorbic acid had no effect on the responses to ACh or PE. In the SHR tissues, however, quercetin or ascorbic acid significantly improved the relaxation responses to ACh and reduced the contractions to PE with greater potency for quercetin. Both compounds lacked any effects on the responses to SNP in either aortic ring types. Nw-nitro-L-arginine methyl ester (l-NAME, 10 mmol/L) significantly attenuated the vasodepressor effects of quercetin and ascorbic acid, raising the responses to PE to a level similar to that observed in the control SHR tissues. In l-NAME pretreated aortic rings, quercetin and ascorbic acid inhibited the contractile responses to PE with the same magnitude in WKY and SHR tissues.

4. The present results suggest that acute exposure to quercetin improves endothelium-dependent relaxation and reduces the contractile responses of hypertensive aortae with a greater potency than ascorbic acid. This suggests a better vascular protection with this flavonoid than ascorbic acid in the SHR model of hypertension and possibly in human cardiovascular diseases.

Key words: anti-oxidants; ascorbic acid; endothelium; hypertension; nitric oxide; quercetin; SHR

Ajay M, Achike FI, Mohd MA, Mustafa MR. Effect of quercetin on altered vascular reactivity in aortas isolated from streptozotocin-induced diabetic rats. *Diabetes Res Clin Pract* 2006; 73: 1-7

Effect of quercetin on altered vascular reactivity in aortas isolated from streptozotocin-induced diabetic rats

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Abstract

The present work examined *ex vivo* the acute effect of quercetin on diabetic rat aortic ring reactivity in response to endothelium-dependent (acetylcholine, ACh) and endothelium-independent (sodium nitroprusside, SNP) relaxants, and to the α_1 -adrenergic agonist phenylephrine (PE). Responses were compared to those of aortic rings from age- and sex-matched euglycemic rats. Compared to euglycemic rat aortic rings, diabetic rings showed less relaxation in response to ACh and SNP, and greater contraction in response to PE. Pretreatment with quercetin (10 μ M, 20 min) increased ACh-induced relaxation and decreased PE-induced contraction in diabetic, but did not affect euglycemic rat aortic ring responses. Following pretreatment with the nitric oxide synthase inhibitor N ω -nitro-L-arginine methyl ester (L-NAME, 10 μ M), quercetin reduced PE-induced contractions in both aortic ring types, although L-NAME attenuated the reduction in the diabetic rings. Quercetin did not alter SNP vasodilatory effects in either ring type compared to their respective controls. These findings indicate that quercetin acutely improved vascular responsiveness in blood vessels from diabetic rats, and that these effects were mediated, at least in part, by enhanced endothelial nitric oxide bioavailability. These effects of quercetin suggest the possible beneficial effects of quercetin *in vivo* in experimental diabetes and possibly in other cardiovascular diseases.

Key words; Quercetin, Flavonoids, Free radicals, Nitric oxide, Endothelium, Diabetes

Balasundaram R, Reddy SC. Prevalence of colour vision deficiency among medical students and health personnel. *Malaysian Fam Physician* 2006; 1(2&3): 52-53

Prevalence of colour vision deficiency among medical students and health personnel

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Abstract

A survey of colour vision deficiency among 1427 medical students and healthcare personnel in Seremban revealed a prevalence of 3.2% with a marked male predominance (males 6.7%, females 0.4%). In view of the potential difficulties faced by such personnel in clinical works, early detection of this deficiency allowed appropriate counselling.

Key words: Colour blindness, prevalence, health care workers

Boo NY, Chew EL. A randomised control trial of clingilm for prevention of hypothermia in term infants during phototherapy. Singapore Med J 2006; 47(9): 757-762

A randomised control trial of clingilm for prevention of hypothermia in term infants during phototherapy

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Abstract

Introduction:

This study aimed to compare the core, abdominal wall, and plantar temperatures of well jaundiced term infants undergoing phototherapy with or without clingfilm covering the lower two-thirds of the upper end of their bassinets.

Methods:

This was a randomised controlled trial carried out in a tertiary university hospital on normal healthy term infants undergoing phototherapy. 106 eligible infants were randomised to receive phototherapy with (n=52) or without (n=54) the use of clingfilm during a two-hour period. Subsequently, after nappy change and feeding, they were crossed over to receive phototherapy without or with the clingfilm in place, respectively. Their body temperatures were measured at zero and two hours after phototherapy.

Results:

There was no significant difference in their core, abdominal wall and plantar temperatures at baseline and after two hours of phototherapy (p-value is greater than 0.05) between infants with and without the use of clingfilm. Irrespective of the use of clingfilm, there was significant (p-value is less than 0.001) increase in core body temperatures after two hours of continuous phototherapy, with resultant hyperthermia (greater than 37.5 degree Celsius) in 42 percent of infants when under clingfilm and 35.8 percent when without clingfilm. A few (2.8 percent) infants, though statistically not significant, became mildly hypothermic after two hours of phototherapy when clingfilm was not used (p-value is greater than 0.05).

Conclusion:

Hyperthermia was common during phototherapy, irrespective of the use of clingfilm. Hypothermia was rare and the preventive role of clingfilm is not certain.

Key words: clingfilm, hypothermia, neonatal hypothermia, phototherapy

Boo NY, Mohd-Amin I, Bilkis AA, Yong-Junina F. Predictors of failed closure of patent ductus arteriosus with indomethacin. Singapore Med J 2006; 47(9): 763-768

Predictors of failed closure of patent ductus arteriosus with indomethacin

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Abstract

Introduction:

The aim of this study was to determine predictors of failed closure of patent ductus arteriosus (PDA) following a single course of indomethacin in symptomatic preterm infants.

Methods:

This prospective observational study was carried out on 60 preterm infants weighing less than 1,750 g with symptomatic PDA confirmed by echocardiography. At a median age of 7.0 days (interquartile range 4.0), they were given indomethacin of 0.1 mg/kg/day intravenously daily for six days. Closure of PDA was reassessed by echocardiography upon completion of therapy.

Results:

The PDA of 40 percent (n=24) of these infants remained patent. Forward logistic regression analysis showed that the only significant predictors of failed PDA closure in these infants were: PDA size (adjusted odds-ratio [OR] is 7.0; 95 percent confidence interval [CI] of OR is 2.0, 24.8; p-value is 0.002), birth weight (adjusted OR is 0.996; 95 percent CI of OR is 0.993, 1.000; p-value is 0.03) and platelet count (adjusted OR is 0.987; 95 percent CI is 0.975, 1.000; p-value is 0.045). Gestational age, maternal age and left atrium/aorta ratios were not significant predictors.

Conclusion:

Larger PDA, lower birth weight and lower platelet count were significant predictors of high failure in indomethacin therapy given late at one week of life.

Key words: indomethacin therapy, patent ductus arteriosus, preterm infants

Ding CH, Teng CL, Koh CN. Knowledge of diabetes mellitus among diabetic and non-diabetic patients in Klinik Kesihatan Seremban. Med J Malaysia 2006; 61(4): 399-404

Knowledge of diabetes mellitus among diabetic and non-diabetic patients in Klinik Kesihatan Seremban

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Abstract

The Malaysian Ministry of Health has undertaken various campaigns on healthy lifestyle and health promotion over the years. The impact of these campaigns has been mixed and not well documented. This cross-sectional study evaluated the knowledge level of patients with and without diabetes in a large urban polyclinic using a 41-item questionnaire. One hundred and forty-nine adults (83 with diabetes, 66 without diabetes) participated in this study. Patients with diabetes had higher overall knowledge scores than those without diabetes (81.8% vs 64.0%, $p < 0.001$). While the overall knowledge of patients without diabetes appeared to be acceptable, several areas of knowledge deficiency were identified in this group--areas that should be filled by the on-going health promotion activities.

Key words: Diabetes mellitus, Knowledge, Primary health care

George P, Parameswaran Ramasamy. Case report: common cultural medical complaint presenting as a delusion. Malaysian J Psychiatry 2006; 14(1): 41- 42

Case report: common cultural medical complaint presenting as a delusion

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Abstract

Symptoms presented by patients suffering from Schizophrenia can be influenced by cultural factors. A case of Schizophrenia presenting with a common cultural medical complaint as a delusion, is described here. The appropriate assessment, identification and treatment have led to an improved outcome.

Key words: Schizophrenia, somatic delusion

Hla-Yee-Yee, Radhakrishnan AL, Ponnudurai G. Improving PBLs in the International Medical University: defining the 'good' PBL facilitator. *Med Teacher* 2006; 28(6): 558-560

Improving PBLs in the International Medical University: defining the 'good' PBL facilitator

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Abstract

Students' perception of the role and characteristics of a good problem-based learning (PBL) facilitator were assessed in the same study in which students were exposed to the 'Flying a Kite Approach' to PBL. A pre-tested anonymous questionnaire addressed the good qualities of a facilitator as well as the negative aspects. Although faculty and students' perceptions of 'good' and 'bad' attributes generally agreed, it is clear that students still prefer facilitators who talk more, i.e. explain unclear facts or correct them when their facts are wrong. Content experts are also preferred over non-content experts.

Judson JP, Nadarajah VD, Bong YC, Subramaniam K, Nalliah S. A preliminary finding: immunohistochemical localisation and distribution of placental angiotensin II receptor subtypes in normal and pre-eclamptic pregnancies. *Med J Mal* 2006; 61(2): 173-180

A preliminary finding: immunohistochemical localisation and distribution of placental angiotensin II receptor subtypes in normal and pre-eclamptic pregnancies

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Abstract

Pre-eclampsia or pregnancy induced hypertension (PIH) affects 6-8% of all pregnancies. Although the underlying mechanism of PIH is still unknown, it is widely believed that the placenta plays an important role. It was thought that an ischemic placenta due to poor perfusion can precipitate the signs and symptoms of PIH. This study aims to investigate the possible role of Type 1 (AT1) and Type 2 (AT2) angiotensin II receptor subtypes in the mechanism of PIH. AT1 receptor stimulation causes vasoconstriction and AT2 receptor stimulation causes vasodilatation. Investigating the interactions of these two receptors in the placenta provides an insight as to the balance that may exist between AT1 and AT2 receptors in normal pregnancy. Any disruption to the balance might cause a disruption of the blood flow in the placenta, leading to PIH. Placentas were collected from 11 PIH patients and 11 normal patients. Immunohistochemistry techniques were performed on the placental tissue to determine the distribution of AT1 and AT2 receptors in the placental tissue qualitatively and quantitatively. It was observed that in normal patients, the balance between AT1 and AT2 receptors is that the level of AT2 receptors is higher than the level of AT1 receptors. However in the PIH patient, it was observed that the normal balance was disrupted. In PIH patients the level of AT1 receptors was observed to be higher than the level of AT2 receptors. This study suggests that disruption of the balance between AT1 and AT2 receptors observed in PIH placentas might cause a decrease in blood flow to the placenta, causing it to be poorly perfused. This may cause placental ischemia which may lead to PIH.

Key words: Placenta, Angiostatin receptors, Pre-eclampsia, Immunohistochemistry

Lai NM, Rajadurai SV, Tan K. Increased energy intake for preterm infants with (or developing) bronchopulmonary dysplasia/chronic lung disease. Cochrane Database Syst Rev 2006; Issue 3: CD005093. Review. PMID:16856077

Increased energy intake for preterm infants with (or developing) bronchopulmonary dysplasia/chronic lung disease

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Abstract

Background:

Preterm infants with bronchopulmonary dysplasia (BPD)/chronic lung disease (CLD) have nutritional deficits that may contribute to short and long term morbidity and mortality. Increasing the daily energy intake for these infants may improve their respiratory, growth and neurodevelopmental outcomes.

Objectives:

To assess the effect of increased energy intake on mortality and respiratory, growth and neurodevelopmental outcomes for preterm infants with (or developing) CLD/BPD. Secondly, the review examines any adverse effects associated with increased energy intake.

Search methods:

The standard search strategy of the Cochrane Neonatal Review Group was used. This included searches of the Cochrane Central Register of Controlled Trials, MEDLINE (accessed via Ovid), references cited in previous relevant Cochrane reviews and in other relevant studies, review articles, standard textbooks, and manuals of neonatal medicine. Hand search results of the Cochrane Neonatal Review Group were also assessed. Search was updated in December 2010.

Selection criteria:

All randomised and quasi-randomised trials comparing the outcomes of preterm infants with (or developing) CLD/BPD who had either increased (> 135 kcal/kg/day) or standard energy intake (98 to 135 kcal/kg/day). Increasing energy intake might be achieved enterally and/or parenterally; enterally by increasing the energy content of the milk, increasing feed volume, or by nutrient supplementation with protein, carbohydrate or fat. The primary outcomes were the development of CLD and neonatal mortality; secondary outcomes included respiratory morbidities, growth, neurodevelopmental status and possible complications with increased energy intake.

Data collection and analysis:

We planned to extract data using the standard methods of the Cochrane Neonatal Review Group. Relevant trials would be scrutinized for methodological quality independently by the review authors to determine their eligibility for inclusion. Data of the included trials would be expressed as relative risk, risk difference, NNT and weighted mean difference where appropriate, using a fixed effect model.

Main results:

No eligible trials were identified. Fourteen studies that appeared to be relevant were excluded, as no study directly compared increased versus standard energy intakes in infants with CLD/BPD. However, two excluded trials provided some insights into the topic. One study showed that infants with CLD/BPD who were fed formula enriched with protein and minerals had improved growth parameters up until the cessation of the intervention at threemonths of corrected age. The other study compared different energy density of formula but identical energy intake by setting different feed volumes for both groups. It showed that both groups were unable to achieve the pre-designated feed volumes and that there were no differences in growth, respiratory outcomes, oedema and the diuretic requirements.

Authors' conclusions:

To date, no randomised controlled trials are available that examine the effects of increased versus standard energy intake for preterm infants with (or developing) CLD/BPD. Research should be directed at evaluating the effects of various levels of energy intake on this group of infants on clinically important outcomes like mortality, respiratory status, growth and neurodevelopment. The benefits and harms of various ways of increasing energy intake, including higher energy density of milk feed and/or fluid volume (clinically realistic target volume should be set), parenteral nutrition, and the use of various constituents of energy like carbohydrate, protein and fat for this purpose also need to be assessed.

Lai NM, Jutti RC. The product of outcome-based undergraduate medical education: competencies and readiness for internship. Singapore Med J 2006; 47(12): 1053-1062. PMID: 17139402

The product of outcome-based undergraduate medical education: competencies and readiness for internship

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Abstract

Introduction:

Outcome-based curriculum is adopted at the International Medical University (IMU), Malaysia, where specific learning objectives are laid out progressively under eight major outcomes. We present an outcome-guided, self-reported competency profile of our undergraduate students near the end of their training, focusing on elements that are considered most immediately relevant for their internship.

Methods:

Anonymous surveys were conducted on two cohorts of medical students in their final semester at IMU. The surveys covered a range of competencies, including practical skills, ward routines, generic attributes and evidence-based medicine, grouped under the exit outcomes as defined by the university.

Results:

A total of 92 students were assessed. In general, the students were confident of their ability on common practical skills and ward routines. They were comfortable with the level of professionalism and personal attributes required for internship, with the prospect of handling unexpected additional tasks and working away from home perceived as the main difficulties. Most students referred to at least three sources of clinical information to answer their clinical queries. However, they referred more to single journals than databases or collections. The majority could critically appraise journal articles to a variable extent, but nearly half took 30 minutes or longer to trace an abstract of interest.

Conclusion:

This report demonstrates the strength of outcome-based curriculum in its ability to produce competent students that are well prepared for their internship. Assessing students using this educational approach provides a clear picture of their strengths and weaknesses, and identifies stages in their training where additional inputs are required.

Key words: clinical competence, internship, medical education, outcome-based curriculum

Lee LK, Chen PCY, Lee KK, Sidhu JK. Premarital sexual intercourse among adolescents in Malaysia: a cross-sectional Malaysian school survey. Singapore Medical Journal 2006; 47(6):476-481

Premarital sexual intercourse among adolescents in Malaysia: a cross-sectional Malaysian school survey

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Abstract

Introduction:

Sexual intercourse among Malaysian adolescents is a major concern, especially with the worry of HIV/AIDS. This study was done to determine the prevalence of sexual intercourse among secondary school students aged 12 to 19 years in Negeri Sembilan, Malaysia.

Methods:

This is a cross-sectional school survey conducted on 4,500 adolescent students based on a structured questionnaire. Data were collected using the self-administered questionnaire (translated version of the Youth Risk Behaviour Surveillance in Bahasa Malaysia).

Results:

The study showed that 5.4 percent of the total sample were reported to have had sexual intercourse. The proportion among male students who had had sex was higher (8.3 percent) compared with female students (2.9 percent). The mean age at first sexual intercourse was 15 years. One percent of students reported that they had been pregnant or had made someone else pregnant. Adolescent sexual intercourse was significantly associated with (1) socio-demographical factors (age, gender); (2) environmental factors (staying with parents); and (3) substance use (alcohol use, cigarette smoking, drug use), even after adjustment for demographical factors. The survey showed that 20.8 percent of respondents had taken alcohol, 14.0 percent had smoked cigarettes, 2.5 percent had tried marijuana, 1.2 percent had tried ecstasy pills, 2.6 percent had tried glue sniffing, 0.7 percent had tried heroin, and 0.7 percent had intravenous drugs.

Conclusion:

Prevalence of sexual intercourse among Malaysian adolescents was relatively low compared to developed countries. However, certain groups of adolescents tend to be at higher risk of engaging in sexual intercourse. This problem should be addressed early by targeting these groups of high-risk adolescents.

Key words: adolescents, premarital sex behaviour, sexual intercourse, substance abuse

Lee LK, Chen PCY, Lee KK, Sidhu JK. Menstruation among adolescent girls in Malaysia: a cross-sectional survey. Singapore Med J 2006; 47(10): 869-874

Menstruation among adolescent girls in Malaysia: a cross-sectional survey

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Abstract

Introduction:

The onset of menstruation is part of the maturation process. However, variability in menstrual cycle characteristics and menstrual disorders are common. The purpose of this study was to determine the menstrual characteristics of adolescent females and factors associated with it.

Methods:

This is a cross-sectional descriptive study carried out on 2,411 secondary school adolescent females in Negeri Sembilan, Malaysia. Data were collected using a self-administered structured questionnaire on menstruation in Bahasa Malaysia.

Results:

Abnormal cycle length (menstrual cycle longer than 35 days or cycle length between 14 to 20 days or irregular pattern) was common and affected 37.2 percent of subjects. The majority (74.6 percent) experienced premenstrual syndrome and 69.4 percent had dysmenorrhoea. About 18 percent reported excessive menstrual loss (use two pads at a time to prevent blood from soaking through or confirmed by doctor to be anaemic due to heavy menstrual flow). Only 11.1 percent of schoolgirls sought medical consultation for their menstrual disorders. Mothers remained the most important source of information (80 percent). Menstrual disorders were significantly more common in female adolescents who smoke and have suicidal behaviours (p-value is less than 0.05).

Conclusion:

Menstrual problems among adolescent female are common. They are influenced by certain modifiable factors.

Key words: adolescents, dysmenorrhoea, female adolescents, menstruation, premenstrual syndrome

Leong KC, Chen WS, Leong KW, Mastura I, Mimi O, Sheikh Mohd Amin, Zailinawati AH, Ng CJ, Phua KL, Teng CL. The use of text messaging to improve attendance in primary care: a randomised controlled trial. *Fam Pract* 2006; 23(6): 699-705

The use of text messaging to improve attendance in primary care: a randomised controlled trial

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Abstract

Background:

Non-attendance is common in primary care and previous studies have reported that reminders were useful in reducing broken appointments.

Objective:

To determine the effectiveness of a text messaging reminder in improving attendance in primary care.

Design:

Multicentre three-arm randomized controlled trial.

Setting:

Seven primary care clinics in Malaysia.

Participants:

Patients (or their caregivers) who required follow-up at the clinics between 48 hours and 3 months from the recruitment date.

Interventions:

Two intervention arms consisted of text messaging and mobile phone reminders 24–48 hours prior to scheduled appointments. Control group did not receive any intervention.

Outcome measures:

Attendance rates and costs of interventions.

Results:

A total of 993 participants were eligible for analysis. Attendance rates of control, text messaging and mobile phone reminder groups were 48.1, 59.0 and 59.6%, respectively. The attendance rate of the text messaging reminder group was significantly higher compared with that of the control group (odds ratio 1.59, 95% confidence interval 1.17 to 2.17, P = 0.005). There was no statistically significant difference in attendance rates between text messaging and mobile phone reminder groups. The cost of text messaging reminder (RM 0.45 per attendance) was lower than mobile phone reminder (RM 0.82 per attendance).

Conclusions:

Text messaging reminder system was effective in improving attendance rate in primary care. It was more cost-effective compared with the mobile phone reminder.

Key words: Reminder, primary care, non-attendance, text messaging, randomized controlled trial (RCT)

Lim Meng Shi, B Davaraj, Palayan K. Endoscopic drainage of an empyema of the gallbladder through a concurrent cholecystoduodenal fistula. *Asian J Surg* 2006; 29(1):55-57

Endoscopic drainage of empyema of the gallbladder through a concurrent cholecystoduodenal fistula

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Abstract

The duodenum is the most common site of cholecystoenteric fistulation resulting from cholecystitis or empyema of the gallbladder. This rare condition is usually only diagnosed intraoperatively and managed incidentally. This paper presents the endoscopic diagnosis of a case of cholecystoduodenal fistula arising from the late presentation of empyema of the gallbladder and its subsequent drainage through the fistula. As far as we can determine, this is the only reported case of opportunistic drainage of an empyema of the gallbladder through a concurrent cholecystoduodenal fistula.

Key words; bilioenteric fistula; cholecystoduodenal fistula; cholecystoenteric fistula; empyema of gallbladder; endoscopic intervention

Loh KY. Exploring terminally ill patients' and their families' perceptions on holistic care in Malaysia. *Int J Palliat Nurs* 2006; 12(1): 38-41

Exploring terminally ill patients' and their families' perceptions on holistic care in Malaysia

Loh Keng Yin

International Medical University

Abstract

Aim:

To document the perception of terminally ill patients and their family members on the care provided to them, and to look at the components of holistic care that are viewed as inadequate.

Methods:

Thirty cancer patients from a 10-bedded palliative ward and their family members who were the chief carers were interviewed. They were asked to give their perceptions on four major areas of care: physical, social, psychological and spiritual. The participants were asked to report which area(s) of the service were inadequate.

Results:

Most patients and family members perceived that they received adequate physical care. However, the psycho-social and spiritual aspect of care were perceived as inadequate by the majority of patients and their families. None of the patients interviewed had ever been asked about spiritual distress.

Conclusion:

The holistic model of care in caring for terminally ill patients is not practised fully. Further development in the psychosocial and spiritual aspects of care is necessary. There is a need to conduct further research to address these domains.

Loh KY, Kew ST. Hepatitis B infection: what the primary care doctor should know. *Malaysian Fam Physician* 2006; 1(1): 8-10

Hepatitis B infection: what the primary care doctor should know

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²Department of Internal Medicine, International Medical University

EPIDEMIOLOGY. Hepatitis B infection is a global public health problem and causes significant morbidity and mortality. The worldwide prevalence of chronic hepatitis B infection is about 400 million people, and it causes 500 thousand deaths each year. The prevalence of chronic HBV infection is high (>8%) in certain part of Asia and Southeast Asia, including China, Korea, Indonesia, and the Philippines. In Malaysia about 1.1 million people are thought to be chronically infected with hepatitis B virus. The estimated prevalence of HBsAg among the population is approximately 4.7%. These data are obtained from Malaysian Liver Foundation in 1998. Hepatitis B infection is caused by the hepatitis B virus (HBV). The clinical manifestations of HBV infection (Figure 1) range in severity from asymptomatic subclinical infection (70%), symptomatic hepatitis (30%) to fulminant severe hepatitis with liver failure (0.10-0.5%). Following the exposure to HBV, up to about 10% of the patient will progress to chronic hepatitis B, which is defined as persistence of the infection for more than 6 months duration. The chronic hepatitis B then progress to liver cirrhosis and hepatocellular carcinoma in about 15-40% of the patients. The laboratory markers for hepatitis B infection and its interpretation are summarised in Table 1.

PREVENTION OF HEPATITIS B. In view of the magnitude and chronic complications, prevention of hepatitis B infection is paramount for the population in endemic regions and for those who are visiting endemic areas. Health care workers, medical laboratory workers and blood bank staff who handle blood, blood products and body fluid must strictly adhere to standard precautions regulations so as to minimise unwanted accidental needle prick injury and direct contact with blood products. Screening of all blood products for blood transfusion has also been shown to reduce the risk of transfusion associated hepatitis B infection.

HEPATITIS B VACCINATION. Among all the recommended strategies for preventing hepatitis B infection, vaccination is the most important one. Hepatitis B recombinant vaccine is available in most primary care clinics in Malaysia. The usual schedule of primary vaccination consists of three intramuscular doses of the vaccine. Universal neonatal vaccination against hepatitis B is effective and has been shown to favourably change the clinical course of hepatitis B infection especially in regions where this disease is endemic. According to the Ministry of Health Malaysia childhood immunisation programme, all babies are given first dose of hepatitis B vaccine at birth; followed by 2nd dose at first month and 3rd dose at fifth month. This vaccine is very safe and has very few adverse effects. Common mild side effects are pain at the injection site (3%-29%) and elevated temperature >37.7°C (1%-6%).⁸ All adults who are at high risk of infection such as health care workers, blood bank staffs, public health workers, patients who require multiple transfusion or blood products, haemodialysis patients, homosexual men and intravenous drug users must be vaccinated. Testing for hepatitis B surface antibody titre should be done 6-8 weeks after the last dose. The protection following vaccination lasts 10-15 years. After 15 years from the last vaccination, it is advisable to get a booster dose. Those with chronic renal failure, immunosuppressed patient, haemodialysis patients and elderly may have a lower response rates.

Loh KY, Nalliah S. Urinary incontinence in the elderly population. Med J Malaysia 2006; 61(4): 506-511

Urinary incontinence in the elderly population

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Abstract

Urinary incontinence is an important and common health care problem affecting the elderly population. Common types of incontinence affecting the elderly are: stress incontinence, urge incontinence, overflow incontinence and mixed type. The elderly patient suffering from urinary incontinence does not often seek treatment voluntarily due to a misconception that it is part of a normal ageing process. Without treatment, urinary incontinence may lead to serious psychological and social complications such as depression, anxiety, embarrassment, low self-esteem and social isolation. Overall it is associated with significant poor quality of life for the elderly. Life style modification and behavioural therapy with or without pharmacotherapy help in improving the symptoms. Pelvic floor muscles' training is beneficial for stress incontinence in up to fifty percent of the patients. Elderly patients with urinary incontinence should be encouraged to seek treatment early, as the problem can be treated and they will have a better quality of life.

Key words: Urinary incontinence, Elderly, Treatment, Quality of life

Loh KY, Teng CL, Wong KC. How to analyse your research data? Illustrations with hands-on exercises using SPSS. *Malaysian Fam Physician* 2006; 1(2&3): 77-81

How to analyse your research data? Illustrations with hands-on exercises using SPSS

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²University of Queensland, Australia

INTRODUCTION. Statistical analysis for a quantitative study is often perceived to be the most difficult step by a novice researcher. On the other hand, some researchers tend to over-analyse their research data in search of the illusive “significant” p-value. Some of these problems and pitfalls can be reduced if the researchers give some thoughts to their research objectives. Another issue that trouble the novice is how much statistical knowledge one needs to have. There is no straight answer to this question; we feel that the information provided in this article is probably the bare minimum needed by most, if not all, researchers embarking on a research project. What about performing your own statistical analysis using statistical software? Although ability to handle statistical software is desirable, it is not mandatory as it is now possible to outsource to people who can do this properly. The researcher should, however, be able to tell the statistician what analysis is needed and to interpret statistical results. Take note that the statistician cannot undo the errors in the data (e.g. inadequate research design, inappropriate definition of research variables, inaccurate measurement during data collection, or data entry errors) – hence great care must be exercised during these earlier steps of research process. There are several statistical packages available to assist you in data analysis. SPSS software is applied in the following example. You can download a free trial version from www.spss.com (prior registration necessary).

DESCRIPTIVE STATISTICS. We shall start by this example: You have conducted a survey of 160 diabetic patients in your clinic. The mean HbA1c of these patients was 8.9% (SD=2.2, range 5.2-15.7). The gender breakdown is males 44.4%, and females 55.6%. The ethnicity breakdown is Malays 28.1%, Chinese 41.3%, and Indians 30.6%. Other summarised data are given in Table 1.

Loh LC, Chan LY, Tan RY, Govindaraju S, Ratnavelu K, Kumar S, Raman S, Vijayasingham P, Thayaparan T. Time delay did not affect survival in patients with non-small cell lung cancer- a local Malaysian study. Asian Pacific J Pub Hlth 2006; 18(1): 69-71

Time delay did not affect survival in patients with non-small cell lung cancer- a local Malaysian study

Loh LC¹, Chan LY¹, Tan RY¹, Govindaraju S², Ratnavelu K², Kumar S³, Raman S⁴, Vijayasingham P⁴, Thayaparan T⁴

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⁴Department of Medicine, Seremban Hospital, Seremban, Malaysia

Abstract

The prognosis of lung cancer remains poor with overall five year survival figures varying between five and 10% worldwide, However, it has been shown that surgery in patients with early stage disease in non-small cell lung cancer can achieve five year survival rates up to 80%, suggesting that early or delay diagnosis can influence prognosis. Nevertheless, studies addressing this have been inconclusive and mostly derived from Western countries.

Key words: Lung cancer, patients, diagnosis, survival rates, prognosis

Loh LC, Lo WH, Kanabar V, O'Connor BJ. Lack of neutrophil degranulation in low dose endotoxin inhalation based on a novel intracellular assay. *Asian Pacific J Allergy Immunol* 2006; 24: 153-160

Lack of neutrophil degranulation in low dose endotoxin inhalation based on a novel intracellular assay

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¹Department of Medicine, International Medical University, Malaysia

²Department of Respiratory Medicine and Allergy, Denmark Hill Campus, Guy's King's and St Thomas's School of Medicine, London, United Kingdom

Abstract

To study the nature of endotoxin or lipopolysaccharide (LPS) induced inflammation, we developed a method of quantifying intracellular human neutrophil elastase (HNE) in lysed sputum polymorphs as a means to study the degranulation status of LPS-recruited neutrophils. Induced sputum, blood and exhaled nitric oxide (NO) were collected from 10 healthy non-atopic human subjects after inhaling a single 15 µg dose of *Escherichia coli* LPS in an open study. At 6 hours, LPS inhalation caused significant increase of sputum and blood neutrophils but without parallel increase in myeloperoxidase, HNE or interleukin-8 (IL-8) in sputum sol and blood, or exhaled NO. Intracellular HNE in lysed sputum polymorphs or purified blood neutrophils did not show any significant changes between inhaled LPS and saline, nor was there any appreciable change in percentage HNE release induced by N-Formyl-Met-Leu-Phe (fMLP) *in vitro*. We concluded that in healthy humans, the transient neutrophilic inflammation induced by a single dose of inhaled 15 µg LPS is mainly characterized by cell recruitment, not enhanced secretion of granular mediators or increased exhaled NO based on our experimental conditions.

Key words: Lung cancer, patients, diagnosis, survival rates, prognosis

Loh LC, PN Teh, KD Seth, S Raman, P Vijayasingham, T Thayaparan. Ethnicity as determinant of asthma-related quality of life in a multiracial country. *Asian Pacific J Pub Hlth* 2006; 18(1): 49-55

Ethnicity as a determinant of asthma-related quality of life in a multiracial country

L.C. Loh¹, P.N. Teh¹, K.D. Seth², S. Raman², P. Vijayasingham² and T. Thayaparan²

¹International Medical University Lung Research, International Medical University, Kuala Lumpur,
²Department of Medicine, Hospital Seremban, Seremban, Malaysia

Abstract

In a multiracial country like Malaysia, ethnicity may influence the measurement of health related quality of life (HRQL) in asthmatic patients. We invited 131 adult patients [44 Malays, 42 Chinese and 45 Indians; mean (95% CI) age: 43 (40.2-45.7) yrs; 28.2% male] with moderate-to severe persistent asthma followed up in an urban-based hospital outpatient clinic to complete a disease-specific HRQL questionnaire [St Georges' Respiratory Questionnaire (SGRQ)] and to provide socio-demographic and asthma-related data. Indians reported significantly worse SGRQ total score, compared to Malays [mean (95% CI) difference: 10.15 (0.51–19.78); p=0.037] and SGRQ activity score, compared to Malays [13.50 (1.95–25.05); p=0.019] and Chinese [11.88 (0.19–25.05); p=0.046]. Further analysis using multivariate linear regression showed that Indian ethnicity remained independently associated with SGRQ scores. Our finding highlights the relevance of ethnicity in assessing HRQL of asthmatic patients in a multiracial country such as Malaysia.

Key words: Asthma, quality of life, St Georges' Respiratory Questionnaire, ethnicity, Indians, Malaysia.

Lukman H, Beevi Z, Mohamadou G, Yeap R. Implementing an assessment-based communication skills training in pre-clinical phase: an IMU experience. Med J Malaysia 2006; 61(2): 214-216

Implementing an assessment-based communication skills training in pre-clinical phase: an IMU experience

Lukman H, Beevi Z, Mohamadou G, Yeap R

Behavioural Sciences Section, International Medical University, Plaza Komanwel, Bukit Jalil, 57000 Kuala Lumpur

Abstract

This article describes the communication skills programme of the International Medical University, which adopts an integrated medical curriculum. The programme, implemented in February 2005, is based on a systematic framework aimed at teaching students basic interpersonal communication skills progressively and continuously throughout the pre-clinical phase.

Key words: Communication skills, Medical education, Pre-clinical students

Mala-Maung, Zoraini W Abas, Azman Abdullah. Utilisation of different resources for self-directed learning by students undergoing an integrated problem-based medical curriculum. *J Institutional Res in South East Asia (JIRSEA)* 2006; 4(1): 17-24

Utilisation of different resources for self-directed learning by students undergoing an integrated problem-based medical curriculum

Mala Maung, Zoraini W Abas, Azman Abdullah

International Medical University, Plaza Komanwel, Bukit Jalil, 57000 Kuala Lumpur

Abstract

As the success of self-directed learning depends not only on the learner, but importantly, on the right balance of learning opportunities, utilization of different resources for self-directed learning was assessed in students undergoing the medical programme at the International Medical University. Utilisation of each resource was correlated with the semesters, students' learning style and their pre-university education. Resources included printed materials, clinical skills (CSU), problem-based learning (PBL), communication with peers, communication with experts, library, museum, laboratory session, assigned independent reading (AIR), structured independent learning online system (SILOS), and online learning interactive system (OLIS). Of the 708 students assessed, 98% and 49% found printed materials and AIR useful for self-directed learning, respectively. While printed material was ranked highest, AIR was ranked lowest by students of all semesters. Only PBL, CSU and OLIS have positive correlation with semester. Utilisation of printed materials was scored highest and AIR lowest irrespective of whether learners were active/reflective, sensing/intuitive, visual/verbal or sequential/global. Students scored printed materials highest and AIR lowest regardless of their pre-university education. Utilisation of other resources was also addressed. Resources relevant to learners' need are highly appreciated and novel resources should ensure sustainability of learner interest and enthusiasm. The results also indicate that the learning environment is conducive for the development of independence and self-reliance in learners. These findings are invaluable in planning resources and if necessary in promoting relevant traits of self-directed learning, and should convey important feedback to learners as well as implementers to further enhance the learning process.

Nadarajah VD, Chai SH, Mohammed SM, Chan KK, Krishnan K. Malaysian mosquitocidal Soil Bacterium (*Bacillus thuringiensis*) strains with selective haemolytic and lectin activity against human and rat erythrocytes. *Southeast Asian J Trop Med Pub Hlth* 2006; 37(1): 67-78

Malaysian mosquitocidal Soil Bacterium (*Bacillus thuringiensis*) strains with selective haemolytic and lectin activity against human and rat erythrocytes

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²IMU Research Laboratory, School of Postgraduate Studies and Research, International Medical University, Kuala Lumpur, Malaysia

Abstract

The objective of this study is to determine the role of carbohydrates on the toxic effect of parasporal inclusion proteins isolated from Malaysian mosquitocidal *Bacillus thuringiensis* (Bt) strains on erythrocytes (human and rat). Dose response analyses on the effect of these parasporal inclusions on human and rat erythrocytes suggest that toxin action is selective depending on bacterial strains and source of erythrocytes. Results from this study suggest Bt toxin is a lectin which recognizes specific plasma membrane glycoconjugate receptor(s) with a terminal residue of either Dmannose (Man), N-acetyl-D-galactosamine (GalNAc), N-acetyl-D glucosamine (GlcNAc) or even a combination of these monosaccharides.

Nagaraja HS, Anupama BK, Jeganathan PS. Stress responses in albino rats. Thai J Physiol Sci 2006; 19(2): 8-15

Stress responses in albino rats

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³Department of Physiology, Kasturba Medical College, Mangalore, India

Abstract

Since antiquity, people have observed a complex relationship between alcohol and stress. Apart from stress response dampening effect, long-term ethanol is known to produce remarkable morphological and neurochemical abnormalities in the central nervous system. The present study compared the effect of isolation stress and chronic ethanol administration in modulating various physiological and biochemical parameters in rats. Two groups of Wistar strain adult Albino rats were kept under stress by isolation method for a period of 7 days and 14 days, respectively. Another two groups of rats were treated with ethanol in two dosages, 1 g and 2g/Kg body weight for a period of 7 days and 14 days. The effects of stress and ethanol on body and organ weights, neutrophil and eosinophil counts, blood sugar, serum cholesterol, and serum transaminase levels were studied. Despite decreasing body weights, both isolated stress and ethanol treatment significantly increased liver, heart, kidney, and adrenal weights (expressed as percent of body weight). Blood sugar, serum cholesterol, neutrophils, and eosinophils significantly decreased in both isolation and ethanol groups. In addition, serum transaminase levels increased significantly in all the study groups. The present study indicates that isolation stress and chronic ethanol treatment induce similar physiological and biochemical responses in rats.

Key words: Stress, isolation, ethanol, organ weights, white blood cells

Pharmacogenetics in drug metabolism

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Abstract

Genomic technologies are evolving rapidly at an exponential pace similar to the development of computer technology over the past 20 years. Knowledge in the field of pharmacogenomics has grown rapidly and can now be applied to both drug development and clinical practice. Our increasing knowledge of the mechanism of drug action and the understanding of genetic factors that determine our response to drugs may allow us to design drugs or individualise treatment regimens that are specifically targeted towards particular populations or that avoid genetic variability in the therapeutic response. Presently, major genetic polymorphisms associated with both phase 1 and phase II drug metabolism are known and therapeutic failures or adverse drug reactions caused by polymorphic genes can, to a great extent, be foreseen. Healthcare providers need to be aware of whether a drug they are prescribing is subject to pharmacogenetic variation and know how to use this knowledge. The purpose of this review is to acquaint the healthcare professionals with the latest updates of pharmacogenetics in important drug-metabolising enzymes, their possible impact on drug therapy, and the potential use of pharmacogenetic testing to improve the efficacy and safety of drug prescribing and dispensing.

Key words: pharmacogenomics, pharmacogenetics, drug metabolism, enzyme polymorphism

Phua KL. The Japanese experience with population ageing and the financing of social security, health and other social services for the elderly: lessons for other nations. *Asian J Soc Sci* 2006; 34(4): 618-629 (12)

The Japanese experience with population ageing and the financing of social security, health and other social services for the elderly: lessons for other nations

Lit, Phua Kai

Abstract

This article discusses population ageing and its impact on the financing of social security, health and other social services for the Japanese elderly. These lessons include: the importance of avoiding fragmentation and complexity in public programmes; the need to anticipate the possibility of escalating costs and how to deal with this challenge; dealing with non-compliance with the law in mandatory schemes; reducing financial pressure on firms and individuals (especially during times of economic downturn); and anticipating possible service shortages either because of increased demand or because of mal-distribution of facilities and personnel.

Reddy SC, Raju BD. Ocular lesions in the inmates of leprosy rehabilitation centre. *Int J of Biomed Sci* 2006; 2(3): 289-294

Ocular lesions in the inmates of leprosy rehabilitation centre

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³Zonal Leprosy Officer, National Leprosy Eradication Program, Kakinada, Andhra, Pradesh, India

Abstract

A detailed eye examination of 145 inmates of a leprosy rehabilitation centre was done to determine the prevalence of ocular involvement. Age, gender of patients, type and duration of leprosy, systemic disabilities were noted. The mean age of patients was 45.8 years (range 19-70 years); 72.4% were males; 55.2% were suffering from paucibacillary leprosy. The mean duration of leprosy was 18.2 years in multibacillary type and 13.1 years in paucibacillary type. Ocular lesions related to leprosy were seen in 85.5% of patients; more often in multibacillary leprosy (92.3%). Corneal changes (80.7%) were the most frequently observed lesions followed by eye lid lesions (48.2%). Potentially sight threatening lesions such as lagophthalmos (23.4%), corneal anaesthesia (43.4%), and iridocyclitis (8.9%) were seen in both types of leprosy. Nine out of 26 (34.6%) patients with history of erythema nodosum leprosum reaction showed eye changes related to this reaction. Blindness in one eye due to lesions related to leprosy was seen in 2.7% of eyes. Age related cataract was the most common cause of blindness in patients of leprosy. The prevalence of ocular lesions was found to be high in the inmates of leprosy rehabilitation centre, and they were seen more frequently in patients with longer duration of the disease. Potentially sight threatening lesions were more often associated with systemic disabilities in these patients.

Key words: ocular lesions; leprosy; lagophthalmos; corneal anaesthesia; iridocyclitis; cataract

Tan EL, Looi LM, Sam CK. Evaluation of plasma Epstein-Barr virus DNA load as prognostic marker for nasopharyngeal carcinoma. Singapore Med J 2006; 47(9): 803-807

Evaluation of plasma Epstein-Barr virus DNA load as prognostic marker for nasopharyngeal carcinoma

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²Department of Pathology, University of Malaya, Kuala Lumpur 50603 Malaysia

Abstract

Introduction:

Nasopharyngeal carcinoma (NPC) is an important cancer in Malaysia and is one of the major causes of cancer mortality in this country. This study evaluates the diagnostic and prognostic values in the quantitative relationship between the cell-free Epstein-Barr virus (EBV) deoxyribonucleic acid (DNA) load and the tumour burden.

Methods:

Blood plasma from 18 untreated NPC patients, 20 NPC patients who had been treated with radiotherapy, and 12 healthy individuals were evaluated. EBV copy number was determined following DNA extraction using real-time quantitative polymerase chain reaction.

Results:

The cell-free EBV DNA load was shown to be proportionately related to the presence of malignant disease. While the EBV copy number in untreated NPC patients had a median of 2,043 copies/ml, viral load in plasma of healthy controls was significantly lower (median of 0 copy/ml). A significant decrease in EBV load was observed in patients who had undergone radiotherapy while a high viral load indicated in one patient correlated to tumour relapse and presence of distant metastasis upon clinical investigation.

Conclusion:

The blood plasma EBV DNA load was shown to be proportionately related to the presence of malignant disease. This preliminary study underscores the prognostic value of cell-free EBV DNA quantification.

Key words: DNA, Epstein-Barr virus, human herpes virus, nasopharyngeal carcinoma

Tan EL, Selvaratnam G, Kananathan R, Sam CK. Quantification of Epstein-Barr virus DNA load, interleukin-6, interleukin-10, transforming growth factor-beta1 and stem cell factor in plasma of patients with nasopharyngeal carcinoma. *BMC Cancer* 2006; 6: 227-234

Quantification of Epstein-Barr virus DNA load, interleukin-6, interleukin-10, transforming growth factor-beta1 and stem cell factor in plasma of patients with nasopharyngeal carcinoma

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Abstract

Background:

Nasopharyngeal carcinoma (NPC) is a common epithelial neoplasm among the Chinese populations in Southern China and South East Asia. Epstein-Barr virus (EBV) is known to be an important etiologic agent of NPC and the viral gene products are frequently detected in NPC tissues along with elevated antibody titres to the viral proteins (VCA and EA) in a majority of patients. Elevated plasma EBV DNA load is regarded as an important marker for the presence of the disease and for the monitoring of disease progression. However, other serum/plasma parameters such as the levels of certain interleukins and growth factors have also been implicated in NPC. The objectives of the present study are, 1) to investigate the correlations between plasma EBV DNA load and the levels of interleukin (IL)-6, IL-10, TGF- β 1 and SCF (steel factor) and 2) to relate these parameters to the stages of NPC and the effect of treatment.

Methods:

A total of 78 untreated NPC patients were enrolled in this study. Of these, 51 were followed-up after treatment. The remaining patients had irregular or were lost to follow up. Plasma EBV DNA was quantified using real-time quantitative PCR. The levels of plasma interleukins and growth factors were quantified using ELISA.

Results:

A significant decrease in EBV DNA load was detected in plasma of untreated NPC patients (1669 ± 637 copies/mL; $n = 51$) following treatment (57 ± 37 copies/mL, $p < 0.05$; $n = 51$). Plasma EBV DNA load was shown to be a good prognosticator for disease progression and clinical outcome in five of the follow-up patients. A significant difference in IL-6 levels was noted between the untreated patients (164 ± 37 pg/mL; $n = 51$) and following treatment (58 ± 16 pg/mL, $p < 0.05$; $n = 51$). Positive correlations between EBV DNA load and IL-10 ($r(49) = 0.535$, $p < 0.01$), between IL6 and IL-10 ($r(49) = 0.474$, $p < 0.01$) and between TGF and SCF ($r(49) = 0.464$, $p < 0.01$) were observed in patients following treatment. None of the parameters tested including IgA-VCA were associated with tumour stages.

Conclusion:

We conclude that among the parameters investigated, EBV DNA load and IL-6 levels were promising markers for the presence of NPC and for the assessment of treatment outcome.

Teng CL, Achike FI, Phua KL, Nurjahan MI, Mastura I, Nor-Asiah H, Mariam AM, Narayanan S, Norsiah A, Sabariah I, Shariah I, Siti-Rokiah K, Siti-Zubaidah MA, Koh CN, Rosnah I. Modifying antibiotic prescribing: the effectiveness of academic detailing plus information leaflet in a Malaysian primary care setting. *Med J Malaysia* 2006; 61(3): 323-331

Modifying antibiotic prescribing: the effectiveness of academic detailing plus information leaflet in a Malaysian primary care setting

Teng CL¹, Achike FI¹, Phua KL¹, Nurjahan MI¹, Mastura I², Nor-Asiah H², Mariam AM², Narayanan S², Norsiah A², Sabariah I², Shariah I², Siti-Rokiah K², Siti-Zubaidah MA², Koh CN³, Rosnah I⁴

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Abstract

We assessed the effectiveness of an educational intervention in reducing antibiotic prescribing in public primary care clinics in Malaysia. Twenty-nine medical officers in nine clinics received an educational intervention consisting of academic detailing from the resident Family Medicine Specialist, as well as an information leaflet. The antibiotic prescribing rates were assessed for six months - three months before and three months after the intervention. A total of 28,562 prescriptions were analyzed. Among participating doctors, general antibiotic prescribing rates for pre- and post-intervention phases were 14.3% and 11.0% (post-intervention vs pre-intervention RR 0.77, 95% CI 0.72 to 0.83). The URTI-specific antibiotic prescribing rates for pre- and post-intervention phases were 27.7% and 16.6%, respectively (post-intervention vs pre-intervention RR 0.60, 95% CI 0.54 to 0.66). No significant change in antibiotic prescribing rates was observed among primary care practitioners who did not participate in the study. This low cost educational intervention using both active and passive strategies focusing on URTI produced a statistically significant (and clinically important) reduction in antibiotic prescribing.

Key words: Prescribing, Primary care, Upper respiratory tract infection, Academic detailing, Information leaflet

Teng CL, Nik-Sherina H, Ng CJ, Chia YC, Atiya AS. Antibiotic prescribing for childhood febrile illness by primary care doctors in Malaysia. *J Paediatr Child Hlth* 2006; 42: 612-617

Antibiotic prescribing for childhood febrile illness by primary care doctors in Malaysia

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Abstract

Aim:

Fever in children, a mostly benign and self-limiting illness, is often viewed with consternation by the care givers. It results in early consultation and excessive use of antipyretics and antibiotics. In this study, we document the prescribing practice of doctors from three primary care settings in Malaysia and identify the predictors of antibiotic prescription.

Methods:

Interview of care givers bringing febrile children (age \leq 12 years) to three primary care settings: public primary care clinics, private general practice clinics and a university-based primary care clinic.

Results:

Data from 649 children were analysed. Mean age of children 4.1 years and 55% were boys. One-third of the children had prior consultation for the same episode of fever. About 80% of the febrile children were diagnosed to have upper respiratory tract infection, viral fever and gastroenteritis. Overall antibiotic prescribing rate was 36.6% (public primary care clinic 26.8%, private general practice clinic 70.0% and university-based primary care clinic 32.2%). Independent predictors of antibiotic prescription were: clinic setting, longer duration of fever (>7 days), higher temperature ($>38^{\circ}\text{C}$) and the diagnosis of upper respiratory tract infections. After controlling for demographic and clinical factors, antibiotic prescription in private general practice clinic was seven times higher than public primary care clinic (odds ratio 7.1, 95% confidence interval 4.0–12.7), and 1.6 times higher than university-based primary care clinic (odds ratio 1.6, 95% confidence interval 1.0–2.5).

Conclusion:

Differences in the patients' demographic and clinical characteristics could not adequately explain the high antibiotic prescribing rate in private general practice clinics. This inappropriately high antibiotic prescribing for febrile children in private general practice clinics is a suitable target for future intervention.

Key words: antibiotic; children; fever; primary care

Continuous Quality Improvement (CQI) in health care

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Abstract

This paper defines quality and how quality was introduced in Japan. During the post 2nd World War period Japan wanted to pursue the economic goals. They brought in Quality experts from United States. Two of the famous Quality gurus brought in were Deming and Juran. Deming argued that variability in a product can be eradicated. He also introduced the Statistical and Process Control Chart (SPC), Quality Control Circles (QCC) and the concept of Plan, Do, Check Action or the PDCA cycle. He returned to the United States and proposed the fourteen point's strategy to overcome variability. Continuous Quality Improvement (CQI) is defined as the on-going organisation wide frame work in which the employees are committed to and involved in monitoring and evaluating institutions activities. The key concepts of CQI are (1) Customer satisfaction (2) Employee empowerment (3) Continuous improvement. Continuous quality improvement in health care involves, firstly identifying the characteristic that our clients consider as quality. Secondly identifying what our stake holders consider as quality? Some of the characteristics that are considered may be accuracy, standard setting, and alertness. For each characteristic identified, a standard is set. Once the standards are set, the staff are informed and trained regarding the characteristics and the standards set. Monitoring and evaluation of the standards needs to be done from time to time so that necessary changes can be made to improve quality. Departments must break down barriers between them, have open communication and must work as a team. Leadership in the organisation is important and there must be educational and self improvement programme. Everyone in the organisation must be made to work for improving the quality and it should not be left to a few people. Quality is everyone's responsibility and therefore all must take part in it.

Key words: Quality, Continuous Quality Improvement (CQI), Quality in Health Care

Measuring maternal mortality in Malaysia

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Abstract

There has been a significant decline in maternal mortality in Malaysia since independence. The issue of measuring maternal mortality accurately is a problem in all countries. Another major problem is whether we can reduce the mortality further. The definition of maternal mortality includes two major components, which are causation of death and the time of death. To improve data collection on maternal deaths, we need to collect all data on maternal deaths, which are omitted or misclassified. Deaths from accidental causes that are not normally used in the calculations of maternal mortality need to be carefully reexamined to be excluded. The time of death means that in maternal mortality calculations, it includes up to six weeks after delivery, but recent World Health Organization (WHO) publication (ICD-10) suggests that the collection of maternal deaths even after six weeks should be reviewed because there are many maternal deaths which occur after six weeks. Measuring maternal mortality rate should be encouraged rather than maternal mortality ratio. Another measurement of maternal mortality is the lifetime risk of the women. The lifetime risk is the measure of maternal mortality that takes into account the probability of becoming pregnant and the probability of dying as a result of pregnancy. Many countries have started reporting the lifetime risk, which is considered to be better indicator to measure maternal health.

Key words: Maternal mortality rate, maternal mortality ratio, lifetime risk

Zailinawati AH, Nik-Sherina H, Teng CL. What study design should I choose?
Malaysian Fam Physician 2006; 1(1): 29-31

What study design should I choose?

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THE PROBLEM. You are a general practitioner in a five-doctor group practice. Recently you and your colleagues decided to reserve Tuesday afternoons for your diabetic patients, so as to provide more comprehensive care to them. To your dismay, you found that only half of your scheduled patients turned up for their appointments. A few questions come to your mind: 1. Why are the patients not attending? 2. How many of them are not attending and what are the associated factors? 3. Does default result in poor outcome e.g. diabetic control? 4. Which intervention is useful to reduce the non-attendance? All the above questions can be answered using different research methods. Question 1 can be answered using qualitative study and question 2 is to determine the prevalence for non-attendance therefore a cross-sectional study is appropriate. In question 3, we are looking for the association between the cause and effect, either case-control or cohort design could be used. In the fourth question, we are testing the usefulness of the intervention, hence a randomized control trial study design may be appropriate. To answer your questions you decided to look through the published literature, looking for "What are the characteristics of patients who miss their diabetic appointments and why do they miss it?" Studies in the West identified these characteristics of patients who are likely to miss their appointments: younger patients, those from lower socio-economic class, those patients who has appointments with junior doctors, and long waiting time.^{1,2} Other reasons quoted were: problems with the appointment system, inaccessible health care, clinic administrative errors, bad weather, lack of insurance coverage and problem with transportation. However, you are not sure if the above reasons and associated factors are applicable to your clinic. To satisfy your curiosity you decide to conduct a study among your patients. You feel that finding the answers from your own clinic is more likely to bring about a solution for your problem.

QUALITATIVE STUDY. Why are the patients not attending? Your initial exploration may be a qualitative study. Qualitative study is a good research method if you want to understand the views and opinions of patients. Qualitative study may take several forms, all of which aim to allow the research subjects to reveal their thoughts and feelings about specific issues with as little interference as possible from the researchers (Box 1). Thus the words expressed by the research subjects are the "data" - these will need to be captured in some way for subsequent analysis.

Zailinawati AH, Teng CL, Kamil MA, Achike FI, Koh CN. Pain morbidity in primary care - preliminary observations from two different primary care settings. Med J Malaysia 2006 June; 61(2):162-167

Pain morbidity in primary care preliminary observations from two different primary care settings

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Abstract

The prevalence of pain complaints as a reason for patient-doctor encounters in the local primary care setting is unknown. We performed a cross-sectional survey of such encounters in one public primary care clinic (KK) and 17 general practice clinics (GP), from the city of Seremban, Negeri Sembilan, Malaysia. Reasons for visits were recorded by doctors in KK and medical students in GP using a structured questionnaire. Morbidity data was coded using the International Classification of Primary Care (ICPC-2). A total of 2234 encounters were recorded (80.9% from KK, 19.1% from GP). The overall prevalence of pain complaints was 31.9% with a significant difference between the two cohorts (KK 28.7% and GP 45.2%, $p < 0.001$). Musculoskeletal pain complaints were more common in KK than GP (40.9% versus 29.7%, $p < 0.05$). Of the 3 main ethnic groups in Malaysia (Malay, Chinese and Indian) the Indian patients at KK had the highest prevalence of pain complaints and the Chinese at the GP had the lowest. Thus pain was a common complaint in the two different primary care settings studied. Some of the differences observed are probably due to the differences in the healthcare seeking behaviour of patients consulting at these two settings as well as differences in the payment systems.

Key words: Pain, Prevalence, Primary care, General practice

Zainur Rashid Z, Loh KY. Postpartum morbidity – what we can do? Med J Malaysia 2006; 61(5): 651-657

Postpartum morbidity – what we can do?

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Abstract

Postpartum is a crucial period for a mother. During this period a mother is going through the physiological process of uterine involution and at the same time adapting to her new role in the family. Many postpartum complications occur during this period. Among the important obstetric morbidities are postpartum hemorrhage, pregnancy related hypertension, pulmonary embolism and puerperal sepsis. Common surgical complications are wound breakdown, breast abscess and urinary fecal incontinence. Medical conditions such as anemia, headache, backache, constipation and sexual problems may also be present. Unrecognized postpartum disorders can lead to physical discomfort, psychological distress and a poor quality of life for the mothers. Providing quality postnatal care including earlier identification of the problems (correction) and proper intervention will help the mother to achieve full recovery and restore her functional status back to the pre-pregnancy state sooner.

Key words: Postpartum, Morbidity, Obstetric, Complication, Health