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29	Loh LC, V Kanabar, M D'Amato, NC Barnes, BJ O'Connor. Sputum induction in corticosteroid-dependant asthmatics: risks and airway cellular profile. <i>Asian Pacific J Allergy Immunol</i> 2005; 23:189-196	26
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Achike FI, Nain N. Promoting problem-based learning (PBL) in nursing education: a Malaysian experience. *J Nurse Edu in Practice* 2005; 5(5): 302 – 311

Promoting problem-based learning (PBL) in nursing education: a Malaysian experience

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Abstract

Since the introduction of problem-based learning (PBL) into medical education in the late 1960s, several new and old medical schools have adopted this approach the main attraction of which includes the promotion of student-centered and life-long learning, team spirit, communication skills and enquiry. With an ever-increasing information base and changing attitudes in the health sciences, these are highly desirable characteristics of the health worker of the future, who will be required to grapple with these phenomenal changes. From medical education, the PBL approach has inevitably spread to other disciplines, especially the health-related disciplines. In the Asia-pacific region (Malaysia in particular), PBL was introduced into medical education in the early 1970s, but the growth has been slow; the reasons are discussed. Only recently (in the 1990s) have more medical and non-medical schools started to adopt PBL. The management of the Pantai Institute of Health Science and Nursing decided to adopt PBL for the Nursing curriculum. A one-day introductory workshop was, therefore, organized to expedite the process. Post-workshop feedback obtained through a five-point Likert scale questionnaire indicated a successful outcome. The workshop process is, therefore, documented as reference especially for Nursing colleges in places where PBL expertise is in short supply.

Key words: PBL, Nursing education, Malaysia

Anupama N, Vishnu Sharma M, Nagaraja HS, Ramesh Bhat M. The serum immunoglobulin E level reflects the severity of bronchial asthma. Thai J Physiol Sci 2005; 18(3): 35-40

The serum immunoglobulin E level reflects the severity of bronchial asthma

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Abstract

Bronchial asthma is a major public health concern affecting 100-150 million people worldwide. Elevated total serum immunoglobulin E (IgE) is considered as an objective marker of allergy and has been associated with a number of respiratory disorders. The present study tests the hypothesis that serum IgE levels reflect the severity of asthma. The serum IgE levels were investigated in 132 asthma patients and their severities of asthma were determined by pulmonary function tests. Serum IgE levels were also compared with the severity of asthma by history. The data indicated that 27% patients developed symptoms of bronchial asthma before 30 years of age; 17% patients between 31 to 45 years and only 5% patients developed asthmatic symptoms after the age of 45 years. Serum IgE levels significantly increased in all groups of asthma when compared to control subjects ($p < 0.001$). The IgE levels were proportionately higher in patients with more severe airflow obstruction. The present study suggests that the serum IgE level may reflect the severity of bronchial asthma assessed by pulmonary function tests and clinical history.

Key words: Immunoglobulin E, Asthma, Atopy

Baber ZD, Ibrahim MIM, Bukhari NI. A pricing analysis of cardiovascular and blood products after privatization of drug distribution system in Malaysia. J Pharmaceutical Finance, Economics & Policy 2005, 14(3): 3-25

A pricing analysis of cardiovascular and blood products after privatization of drug distribution system in Malaysia

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Abstract

This study reviews privatization effect of Malaysian drug distribution system on prices of cardiovascular and blood products. After privatization prices show variable pattern, increased to (5%) after a year of privatization, decreased to 0.098% in 1997-2000 and again increased to 80% in year 2001-2003. The increase in prices after privatization could not be correlated with inflation rate and was not explained by any pricing mechanism. Comparison with International Reference Prices showed tremendously higher prices for most of the drugs. The findings invite enacting of price control mechanisms and adapting a reference and differential medicine pricing system to curb public expenditures.

Key words: Drug prices, privatization, cardiovascular, blood products, international reference prices

Medicine utilisation and pricing in Malaysia: the findings of a household survey

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Abstract

The objectives of this study were to identify the most commonly used medicines for mainly prevalent ailments and to compare retail sector prices (RSPs), public sector prices (PSPs) and international reference prices (IRPs). A convenient sampling method was employed to survey 33 households in a metropolitan city. Each family was followed once a week for eight weeks to observe their diseases and medication usage. The RSPs and PSPs for per unit doses and defined daily doses (DDDs) were compared with the IRPs. The most common ailments identified were cardiovascular and endocrine disorders followed by central nervous system and musculoskeletal disorders. Accordingly, the most common drugs used were for the treatment of the above ailments. Among 81 commonly used medicines, 63 were branded and 18 were generic. Of the 81 drugs, 26 were essential drugs. Angiotensin-converting enzyme (ACE) inhibitors, beta-blockers and calcium channel blockers were among the most commonly used medicines. The differential between the prices of branded medicines and IRPs were found to be remarkable. This study further revealed that the majority of patients also used traditional medicines and nutritional supplements alongside their modern medicines. Wide variations were observed in RSPs and IRPs, warranting critical evaluation, regulation and emphasis on the economic aspects of drug policy. Widespread use of branded medicines in the absence of a national health insurance programme can lead to high out-of-pocket expenditures. Concomitant use of traditional medicines and nutritional supplements may have drug interaction potential, invoking detailed investigation for relevance.

Key words: drug prices, drug utilisation, defined daily doses, international reference prices, drug policy, medicine price index

Birth defects, the challenges ahead for Malaysia

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Abstract

Birth defects are structural abnormalities which develop in foetuses during their intrauterine life. Depending on the underlying cause, birth defects may affect one or more organ systems and sometimes present as recognizable syndromes. According to large series studies, defects of the heart (affecting about 1 in every 100 to 200 livebirths), neural tube (affecting 1 of every 1000 pregnancies), lip and palate (affecting 1 in 700 to 1000 livebirths), and male genitalia, and Down Syndrome are by far the most common 1-4.

Because of the social, economic, psychological and educational cost associated with birth defects, knowing their incidence in a community and the associated risk factors will greatly help a country in carrying out preventive measures and cost-effective management of this group of medical conditions. Although most major birth defects can be detected during antenatal period in pregnant women by imaging techniques and/or blood testing, some are detectable only after birth. An efficient, reliable and cost-effective system of screening services during both the antenatal and postnatal period is, therefore, of paramount importance to help determine the actual incidence of various birth defects in a particular community. Such a system encompasses not only competently trained personnel, adequate number of equipment for screening purpose, and a clear line of referral pathway for suspicious cases, but also online linkage of findings to provide reliable national data for preventive measures and management without duplication of workload.

Bukhari NI, Zafar A, Shamsi WR, Bashir MA, Raza AA. Bioequivalence assessment of enteric-coated aspirin brands (Nu-seals and Loprin) after a single oral dose of 150 mg in healthy male adults. *Therapie* 2005; 60 (2): 167 – 173

Bioequivalence assessment of two enteric-coated aspirin brands, Nu-Seals and Loprin, after a single oral dose of 150 mg in healthy male adults

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Abstract

Aim:

The bioequivalence of aspirin from two enteric-coated brands, Nu-seals and Loprin, identified as the reference (R) and test (T) products, respectively, was assessed.

Methods:

A two-period randomised crossover design with a washout interval of 15 days was used in this study. The study results were determined in 16 healthy volunteers, all males with ages ranging from 19-28 (23.33 +/- 3.74) years and bodyweights of 52-92 (65.89 +/- 11.39) kg. After oral ingestion of 150mg of the either brand with 200 mL of water, serial blood samples were obtained over a period of 24 hours. Plasma, harvested from blood was analysed for the concentration of salicylic acid, a deacetylated metabolite of aspirin, by a validated high performance liquid chromatography (HPLC) method. Pharmacokinetic parameters were determined for both formulations by an interactive computer-assisted PK II procedure. A general linear model for repeated measures and 90% confidence intervals (CI) was employed to assess the sequence of treatment effects and to exclude differences between the parameters due to the product and period of administration, respectively.

Results:

The observed 90% CI ratios (Loprin/Nu-seals) for peak concentration, time to reach the peak and area under the plasma-concentration time curve from zero to infinity of 1.03,1.08; 1.04,1.05 and 1.01,1.15, respectively, were within the bioequivalence range (0.80,1.25) stipulated by the US Food and Drug Administration.

Conclusion:

On the basis of the findings, the test (Loprin) and reference drug (Nu-seals) were deemed bioequivalent.

Chan GC, Teng CL. Primary care doctors' perceptions towards evidence-based medicine in Melaka state: a questionnaire study. Med J Malaysia 2005; 60(2):130-133

Primary care doctors' perceptions towards evidence-based medicine in Melaka State: a questionnaire study

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Abstract

A cross sectional study using a self-administered questionnaire to determine the perceptions of primary care doctors towards evidence-based medicine (EBM) was conducted in Melaka state. About 78% of the primary care doctors were aware of EBM and agreed it could improve patient care. Only 6.7% of them had ever conducted a Medline literature search. They had a low level of awareness of review publications and databases relevant to EBM; only about 33% of them were aware of the Cochrane Database of Systemic Reviews. Over half of the respondents had at least some understanding of the technical terms used in EBM. Ninety percent of the respondents had Internet access and the majority of them used it at home. The main barriers to practicing EBM were lack of personal time and lack of Internet access in the primary care clinics.

Key words: Evidence based medicine, Primary care, perception

Chen PCY, Lee LK, Wong KC, Jagmohni K. Factors relating to adolescent suicidal behaviour: a cross-sectional Malaysian school survey. *J Adolescent Hlth.* 2005, 37: 337e 11-337.e16

Factors relating to adolescent suicidal behavior: a cross-sectional Malaysian school survey

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Abstract

Purpose:

This study was undertaken to examine factors relating to adolescent suicide behavior.

Method:

This was a cross-sectional school survey of 4,500 adolescent students based on a structured questionnaire. Data were collected using the supervised self-administered questionnaire (modified version of the Youth Risk Behavior Surveillance in the Malaysian National Language, Bahasa Malaysia).

Results:

Seven percent (312 of 4,454) of the adolescent students had seriously considered attempting suicide. Among the adolescents, 4.6% had attempted suicide at least once during the 12 months preceding the survey. Female adolescents were more likely to put their suicidal thoughts into suicidal action than were male adolescents. Malay and Indian people are more likely than the Chinese to respond, "Felt sad and hopeless." However, Malay adolescents had the lowest rate of attempted suicide. Based on multiple logistic regression, factors significantly related to urban adolescents' suicide behavior are "Felt sad or hopeless," "Number of days felt unsafe to go to school," "Riding with a driver who had been drinking alcohol," "Physical fight," and "Number of days absent from school." In comparison, factors relating to rural adolescents' suicide behavior are "Felt sad or hopeless," "Physical fight," "Physical fight resulting in injury," and "Drive a vehicle after drinking alcohol."

Conclusion:

Adolescent suicide behavior should be viewed as a serious problem. Measures can be taken to prevent suicide by looking at the factors significantly linked to suicidal behavior among adolescents. Steps can then be taken to identify adolescents who have serious suicidal ideation so that intervention can be taken to reduce the suicidal rate.

Key words: Adolescents , Behavior , Malaysia , Suicide

Elango S, Jutti RC, Lee LK. Portfolio as a learning tool: students' perspective. Ann Acad Med Singapore 2005; 34: 511- 514

Portfolio as a learning tool: students' perspective

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Abstract

Portfolio writing is a method of encouraging reflective learning among professionals. Although portfolio-based learning is popular among educators, not many studies have been done to determine students' perceptions of portfolio as a learning tool. A questionnaire survey was conducted among 143 medical students to find out their perceptions of the portfolio as a learning tool. A majority of the students felt that the portfolio is a good learning tool. However, they also perceived that it is stressful and time-consuming to develop a proper portfolio. The study indicates that students need appropriate guidance from the academic staff for the system to succeed.

Key words: Adult learning, Portfolio, Reflective learning, Students' perception

Antibiotics for mastitis in breastfeeding women

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Abstract

Background:

Mastitis can be caused by ineffective positioning of the baby at the breast or restricted feeding. Infective mastitis is commonly caused by *Staphylococcus Aureus*. Incidence of mastitis in breastfeeding women may reach 33%. Effective milk removal, pain medication and antibiotic therapy have been the mainstays of treatment.

Objectives:

This review aims to examine the effectiveness of antibiotic therapies in relieving symptoms for breastfeeding women with mastitis with or without laboratory investigation.

Search strategy:

We searched the Cochrane Pregnancy and Childbirth Group's Trials Register (December 2007), the Cochrane Central Register of Clinical Trials (The Cochrane Library 2007, Issue 4), MEDLINE (1996 to 2007) and EMBASE (January 1985 to 2007). We contacted investigators and other content experts known to us for unpublished trials and scanned the reference lists of retrieved articles

Selection criteria:

Randomized and quasi-randomized clinical trials comparing the effectiveness of various types of antibiotic therapies or antibiotic therapy versus alternative therapies for the treatment of mastitis were selected.

Data collection and analysis:

Two authors independently assessed trial quality and extracted data. When in dispute, we consulted a third author.

Main results:

Two trials met the inclusion criteria. One small trial (n = 25) compared amoxicillin with cephadrine and found no significant difference between the two antibiotics in terms of symptom relief and abscess formation. Another, older study compared breast emptying alone as "supportive therapy" versus antibiotic therapy plus supportive therapy, and no therapy. The findings of the latter study suggested faster clearance of symptoms for women using antibiotics, although the study design was problematic.

Authors' conclusions:

There is insufficient evidence to confirm or refute the effectiveness of antibiotic therapy for the treatment of lactational mastitis. There is an urgent need to conduct high-quality, double-blinded randomized clinical trials to determine whether antibiotics should be used in this common postpartum condition.

Jau MH, Yew SP, Toh PSY, Chong ASC, Chu WL, Phang SM, Najimudin N, Sudesh K. Biosynthesis and mobilization of poly (3-hydroxybutyrate) [P (3HB)] by *Spirulina platensis*. *Inter J Biol Macromolecules* 2005; 36: 144 – 151

Biosynthesis and mobilization of poly(3-hydroxybutyrate) [P(3HB)] by *Spirulina platensis*

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Abstract

Three strains of *Spirulina platensis* isolated from different locations showed capability of synthesizing poly(3-hydroxybutyrate) [P(3HB)] under nitrogen-starved conditions with a maximum accumulation of up to 10 wt.% of the cell dry weight (CDW) under mixotrophic culture conditions. Intracellular degradation (mobilization) of P(3HB) granules by *S. platensis* was initiated by the restoration of nitrogen source. This mobilization process was affected by both illumination and culture pH. The mobilization of P(3HB) was better under illumination (80% degradation) than in dark conditions (40% degradation) over a period of 4 days. Alkaline conditions (pH 10–11) were optimal for both biosynthesis and mobilization of P(3HB) at which 90% of the accumulated P(3HB) was mobilized. Transmission electron microscopy (TEM) revealed that the mobilization of P(3HB) involved changes in granule quantity and morphology. The P(3HB) granules became irregular in shape and the boundary region was less defined. In contrast to bacteria, in *S. platensis* the intracellular mobilization of P(3HB) seems to be faster than the biosynthesis process. This is because in cyanobacteria chlorosis delays the P(3HB) accumulation process.

Key words; Polyhydroxyalkanoates (PHAs); *Spirulina platensis*; pH; Illumination; Mobilization

Smoking among secondary school students in Negeri Sembilan

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Abstract

This study was done to determine the prevalence of smoking and factors influencing cigarette smoking among secondary school students in Negeri Sembilan, Malaysia. This is a cross-sectional school survey conducted on 4500 adolescent students based on a structured questionnaire. Data was collected using the supervised self-administered questionnaire the Youth Risk Behaviour Surveillance in the Malaysian National Language Bahasa Malaysia. The prevalence of smoking among the students was 14.0%. About a third of the students (37.8%) started smoking at 13 to 14 years of age. The prevalence of smoking among the male students was higher (26.6%) compared to the female students (3.1%). Adolescent smoking was associated with (1) sociodemographic factors (age, ethnicity, rural/urban status); (2) environmental factors (parental smoking, staying with parents); (3) behavioural factors (playing truant and risk-taking behaviours such as physical fighting, drug use, alcohol use, sexual activity, lack of seatbelt use, riding with a drunk driver); (4) lifestyle behaviours (being on diet and lack of exercise); (5) personal factors (feeling sad and suicidal behaviours). In conclusion, smoking is a major problem among Malaysian adolescents. Certain groups of adolescents tend to be at higher risk of smoking. This problem should be curbed early by targeting these groups of high risk adolescents.

Key words: Adolescents, smoking, prevalence, factors, Malaysia.

Lee LK, Ismail NH. Implication of the prevalence of needlestick injuries in a general hospital in Malaysia and its risk in clinical practice. *Journal of Environmental Health and Preventive Medicine* 2005; 10(1): 33-41

Implication of the prevalence of needlestick injuries in a general hospital in Malaysia and its risk in clinical practice

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Abstract

Objectives:

To determine the prevalence of cases and episodes of needlestick injury among three groups of health care workers in the past one-year, the level of knowledge on blood-borne diseases and universal precautions and the practice of universal precautions. Other factors associated with the occurrence of needlestick injuries and the reporting of needlestick injuries were also analysed.

Methods:

A cross-sectional study was conducted in May 2003 to study the needlestick injuries among 285 health care workers (doctors, nurses, medical students) in a public teaching hospital in Negeri Sembilan, Malaysia.

Results:

The prevalence of needlestick injuries among the respondents was 24.6% involving 71 cases i.e. 48.0% among doctors, 22.4% among medical students, and 18.7% among nurses and the difference was statistically significant ($p < 0.001$). There were a total of 174 episodes of needlestick injury. Prevalence of episode of needlestick injuries was highest among doctors (146%), followed by nurses (50.7%) and medical students (29.4%). Cases of needlestick injuries attained lower scores on practice of universal precautions compared to non-cases ($p < 0.001$). About 59% of cases of needlestick injury did not report their injuries.

Conclusions:

The study showed that needlestick injuries pose a high risk to health care workers and it is underreported most of the time. Many needlestick injuries can be prevented by strictly following the practice of universal precautions.

Key words: needlestick injury, health care workers, prevalence, underreporting, Malaysia

Hearing impairment in the elderly

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Abstract

Hearing impairment is one of the most important health problems of the elderly above 60. Very often it leads to verbal communication difficulty and without treatment it can cause serious psychological and social complications such as depression and social isolation. Prebycusis remains a leading cause of sensorineural deafness in the elderly. Elderly patient must be encouraged to seek proper hearing assessment if they face hearing difficulty. Active screening by health care workers and patient self-evaluation by answering a simple list of screening questions are possible for early detection and treatment of hearing loss in the elderly. Although hearing loss in the elderly may not have a cure, early rehabilitation helps to restore better quality of life if the problem is detected early.

Key words: elderly hearing impairment, prebycusis, screening

Loh KY, O Khairani, Norlaili. The Prevalence of functional impairment among elderly aged 60 years and above attending Klinik Kesihatan Batu 9 Ulu Langat, Selangor. Med J Malaysia 2005; 60: 188-193

The prevalence of functional impairment among elderly aged 60 years and above attending Klinik Kkesihatan Batu 9 Ulu Langat, Selangor

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Abstract

The aim of this study was to determine the prevalence of functional impairment and its associated factors among patients aged 60 years and above attending Klinik Kesihatan Batu 9 Ulu Langat, Selangor. This is a cross sectional community health clinic based study. A total of 260 elderly patients attending the community health clinic were interviewed. They were clinically assessed for functional impairment by using the 9 item Instrumental Activities of Daily Living (IADL) scale. There were 118 (45.4%) elderly male and 142 (54.6%) elderly female with age ranging from 60 years to 92 years with the mean age of 67.5 and 65.5 years for male and female respectively. Chinese form the largest population (42.3%) followed by Malay (36.5%), Indian (19.2%) and others (2.0%). The overall prevalence of functional impairment among elderly aged 60 years and above in this study was 33.5%. Among the functionally impaired, two patients (0.8%) were totally dependent. There were significant associations between functional impairment and older age ($p = 0.025$), lower income group ($p = 0.010$), lower education level ($p = 0.030$) and history of chronic medical illness ($p = 0.020$). Functional impairment had no significant association with ethnic group, gender, occupation and living arrangement. For daily activities that were assessed, the commonest impairment was inability to perform shopping (40%) followed by impairment in climbing up staircase (36.6%) and impairment in taking medication (35%). Advanced age, lower income, lower education and history of medical illness are associated with functional impairment. Functional impairment is an important consideration in caring for the elderly patients in the community. These findings have implications in caring of the elderly in which attention need to be paid to activities such as shopping, climbing stairs and taking medication. The use of the IADL scale is feasible for screening of functional impairment among the elderly population in the community.

Key words; Elderly, Functional impairment, IADL

Understanding hyperemesis gravidarum

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Abstract

Nausea and vomiting are common in early pregnancy affecting 70-80 percent of pregnant mothers. In a majority of women vomiting begins between 4-7 weeks of pregnancy. Nausea and vomiting are usually mild and self-limiting, however some of the mothers have a more profound course which lead to hyperemesis gravidarum. Careful clinical evaluation is necessary to exclude underlying medical illnesses or non pregnancy related causes of severe vomiting. Hyperemesis gravidarum poses health risk to both mother and baby, therefore prompt treatment should be initiated without delay. Non pharmacotherapy such as dietary modification and emotional support are useful. Pharmacotherapy with antiemetics, pyridoxine, methylprednisolone are effective and relatively safe. Severe hyperemesis with dehydration and electrolyte imbalance may need hospitalisation for electrolyte and fluid replacement.

Key words; Hyperemesis gravidarum, Vomiting, pregnancy

Loh LC. "Unplugging" of a bronchial occlusion with a fatal outcome. J Bronchology 2005; 12(2): 108-110

"Unplugging" of a bronchial occlusion with a fatal outcome

Loh, Li-Cher MD

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Abstract

We report a case of an elderly man who presented with a right upper lobe abscess. A mucous plug completely occluding the right upper lobe bronchus was found and removed at bronchoscopy. As a result, the patient developed extensive pneumonia and later died of septic shock. This case illustrates the real possibility of pus spillage from an abscess after unplugging and raises the need for caution in high-risk patients.

Key words; mucous plug, bronchoscopy, bronchial occlusion, fatal

Changing paradigms in the treatment of asthma

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Abstract

Significant changes have occurred in relation to how chronic asthma is being treated. Emphasis has now shifted from viewing asthma as a condition of smooth muscle dysfunction to one of chronic inflammation. As such, anti-inflammatory therapy forming the cornerstone of treatment represents the first important milestone in the evolution of asthma treatment. For this purpose, inhaled corticosteroid (ICS) is by far the most effective anti-inflammatory therapy. Another important milestone is the recognition of the superiority of adding long-acting β_2 -agonist (LABA) to ICS over escalating ICS dose alone or other forms of add-on therapies in treating asthmatic patients not responding to regular ICS alone. The effectiveness of adding LABA to ICS in treating asthma logically led to combining the two drugs into one single inhaler (salmeterol/fluticasone and budesonide/formoterol) that has the attractiveness of being user-friendly and ensuring that ICS is not missed out. The unique property of formoterol that allows for repetitive flexible dosing paved way to the concept of using Symbicort for both regular maintenance dosing and as required rescue medication. This revolutionary approach has been recently shown to provide improved asthma outcome, achieved at an overall lower or at least comparable corticosteroid intake, and may represent another evolutionary step in the treatment strategy of chronic asthma.

Loh LC, SZ Abdul Samah, A Zainudin, GLS Wong, WH Gan, WS Yusuf, P Vijayasingham (2005). Pulmonary disease empirically treated as tuberculosis- a retrospective study of 107 cases. Medical J Malaysia 2005; 60(1): 62-70

Pulmonary disease empirically treated as tuberculosis-a retrospective study of 107 cases

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Abstract

Pulmonary disease is sometimes treated empirically as tuberculosis (TB) in the absence of microbial confirmation if the clinical suspicion of active TB is high. In a country of relatively high TB and low HIV burden, we retrospectively studied 107 patients (69.2% male; mean age (SD): 45 (17) years) who received empirical anti-TB treatment for intrapulmonary opacities or pleural effusions suspected of active TB in our hospitals between 1998 and 2002. The diagnosis of definite or probable 'smear-negative' pulmonary TB was made based on treatment outcome at two months with rifampicin, isoniazid, pyrazinamide and ethambutol (or streptomycin). At this endpoint, 81 patients (84.4%) had both clinical and radiological improvement (definite cases), 12 (12.5%) had clinical improvement alone and 3 (3.1%) had radiological improvement alone (probable cases). Confirmation of acid-fast bacilli was subsequently obtained in 12 patients (all definite cases) from culture of initial pulmonary specimens.

Eleven patients (10.5%) were diagnosed as 'non-TB' based on absence of both clinical and radiological improvement or discovery of another cause for the pulmonary condition at or before this two-month study endpoint. In the 'non-TB' group, 2 had carcinoma, 2 had HIV-related pulmonary diseases, 1 had bronchiectasis, and while in 6 causes were indeterminate. Six (6.3%) and 3 (27.3%) patients reported adverse effects from anti-TB drugs from the 'TB' and 'non-TB' groups respectively. Our findings suggest that empirical anti-TB treatment is an acceptable practice if clinical suspicion is high in patients coming in our region.

Key words: Pulmonary tuberculosis, Smear-negative, Empirical treatment, Malaysia

Loh LC, SK Chan, KI Ch'ng, LZ Tan, P Vijayasingham, T Thayaparan. Influence of co-morbidity in the interpretation of tuberculin skin reactivity in multi-ethnic adult patients with tuberculosis. *Med J Malaysia* 2005; 60(4): 426-431

Influence of co-morbidity in the interpretation of tuberculin skin reactivity in multi-ethnic adult patients with tuberculosis

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Abstract

In the Malaysian setting of multi-ethnicity and high BCG coverage, interpretation of Tuberculin Skin Testing (TST) may be difficult. Between January 2001 and December 2003, a retrospective study on all adult patients with documented TST results treated for tuberculosis (TB) in chest clinics of two government hospitals was conducted to determine the reliability of TST and factors affecting its interpretation. One hundred and three patients [mean age (SD): 43 (17); male: 67%] were eligible for data collection: 72% and 57% of patients had positive TST results based on cut-off points of 10mm and 15mm respectively. The only significant univariate association with TST results was the severity of co-morbidity. A patient with co-morbidity score of 3 defined as those with any cancer, end-stage renal or liver disease, or HIV disease, was more likely to have a negative TST results [10mm cut-off point: Odd Ratio (95% CI) 6.6 (1.82 to 24.35), $p = 0.003$; 15mm cut-off point: 4.8 (1.21 to 18.95), $p = 0.012$]. A TST reading of 10mm had a higher sensitivity than 15mm as the cut-off point in diagnosing TB infection. Considering all possible confounding factors like ethnicity, prior BCG vaccination and TB burden in the population, severity of co-morbidity remains strongly predictive of a negative TST. Caution should be exercised in interpreting TST in these patients.

Key words; Tuberculin skin testing, Tuberculosis, Co-morbidity, Malaysia

Loh LC, A Codati, M Jamil, Z Mohd Noor, P Vijayasingham. "Discovery to treatment" window in patients with smear-positive pulmonary tuberculosis. *Med J Malaysia* 2005; 60(3): 314-319

"Discovery to treatment" window in patients with smear-positive pulmonary tuberculosis

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Abstract

Delay in commencing treatment in patients diagnosed with smear-positive pulmonary tuberculosis (PTB) may promote the spread of PTB in the community. Socio-demographic and clinical data from 169 patients (119 retrospectively and 50 prospectively collected) treated for smear-positive PTB in our hospital Chest Clinic from June 2002 to February 2003 were analysed. One hundred and fifty eight (93.5%) patients were started on treatment in less than 7 days from the time when the report first became available while 11 (6.5%) patients had their treatment started \geq 7 days. The median 'discovery to treatment' window was 1 day (range, 0 to 24 days). Of the factors studied, longevity of symptoms, absence of fever or night sweats and having sought traditional medicine were associated with delay in treatment commencement. The urgency and importance of anti-TB treatment should be emphasized especially to patients who are inclined towards treatment with traditional medicine.

Key words; Smear positive, Pulmonary tuberculosis, Treatment delay, Traditional medicine, Malaysia

Loh LC, V Kanabar, M D'Amato, NC Barnes, BJ O'Connor. Sputum induction in corticosteroid-dependant asthmatics: risks and airway cellular profile. *Asian Pacific J Allergy Immunol* 2005; 23:189-196

Sputum induction in corticosteroid-dependant asthmatics: risks and airway cellular profile

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Abstract

Sputum induction with nebulized hypertonic saline is increasingly being used to evaluate airway inflammation. We investigated the procedure-associated risk in 16 asthmatics that were still symptomatic despite on high doses of regular corticosteroid (CS) therapy (7 on daily inhaled CS \geq 800 microg budesonide or equivalent; 9 on additional daily oral CS) and their sputum cellular profile. For comparison, 12 mild stable asthmatics and 10 normal healthy subjects were included. All subjects inhaled 3%, 4% and 5% hypertonic saline sequentially via ultrasonic nebulizer as a means to induce sputum. Maximal percentage fall of Forced Expiratory Volume on One Second (FEV₁) during sputum induction was significantly greater in CS-dependent asthmatics (median % [IQR]: 16.0 [11.0-32.3]) than in mild asthmatics (5.3 [4.2-10.8], $p = 0.002$) and in normal subjects (4.6 [3.4-6.4]), $p = 0.0001$). The maximal percentage FEV₁ fall was inversely correlated with baseline FEV₁ ($R_s = -0.69$; $p < 0.0001$). Compared to mild asthmatics, induced sputum from CS-dependant asthmatics had proportionately fewer eosinophils (2.2 [0.8-7.0] versus 23.3% [10.7-46.3], $p = 0.003$) and greater neutrophils (64.2 [43.9-81.2] versus 28.7 [19.0-42.6], $p = 0.009$). Sputum neutrophils showed a significant inverse correlation to FEV₁ ($R_s = -0.51$, $p = 0.01$). We concluded that sputum induction using nebulized hypertonic saline should be performed with caution in CS-dependant asthmatics. The airway cellular profile observed suggests that the immunopathology underlying CS-dependant asthmatics may be different or a consequence of CS therapy.

Loh LC, Koh CN. Impact of objective airflow measurement on assessment of asthma severity and treatment appropriateness. *The Family Physician* 2005;13(3):10-14

Impact of objective airflow measurement on assessment of asthma severity and treatment appropriateness

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Abstract

Current asthma treatment is directed by severity of symptoms and lung function. In Malaysia, spirometry is not widely available and therefore not used in most medical consultations. In 163 asthmatic patients [mean (95% CI) age: 41 (38-44) yrs; 29% male; 32% Malays, 32% Chinese, 34% Indians] who were being followed up in a State Hospital medical outpatient clinic and a large urban-based health clinic, we studied the effect on Global Initiative for Asthma (GINA) disease severity classification and the appropriateness of currently prescribed treatment when forced expiratory volume in one second (FEV₁) was considered together with symptom severity. We showed that 52% of the patients were upgraded to a higher severity classification and 71% of the patients were 'under-treated'. If based on 'symptoms alone' to assess severity, 39% of the patients were still 'under-treated'. We concluded that the disease severity in many asthmatic patients might have been underestimated and therefore not adequately treated, because spirometry was not available or used to assess asthma severity. The use of spirometry should be advocated more widely among clinicians treating asthma in Malaysia.

Key words: Asthma severity, spirometry, symptoms, Malaysia, under-treatment

Loh LC, CH Lai, OH Liew, YY Siow. Symptomatology and health outcomes in patients with chronic obstructive pulmonary disease. *Med J Malaysia* 2005; 60(5):570-577

Symptomatology and health status in patients with chronic obstructive pulmonary disease

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Abstract

Chronic Obstructive Pulmonary Disease (COPD) is a growing health problem worldwide and in Malaysia. Until recently, research on COPD has been slow and difficult, partly due to the huge heterogeneity of this disease, and its variable and imprecise definitions. To perform a descriptive study on a convenient sample of local patients with COPD treated in a state hospital in Malaysia. Fifty-two patients [mean (95% CI) age: 67 (63-70) years; 86% male: 38% Malays, 36% Chinese, 25% Indians; mean (95% CI) PEFr: 45 (40-51) % predicted normal] were interviewed. Clinico-demographic data was collected using a structured questionnaire and health-related quality of life was scored using St George's Respiratory Questionnaire (SGRQ). For analysis, patients were also divided into moderate (n=17) [PEFR 50% to 80%] and severe (n=35) [PEFR < 50%] disease groups. Except for education and total family income, demographic and comorbidity variables were comparable between the two groups of COPD severity. All except 9% of patients were current or ex-smokers. Breathlessness, not chronic bronchitis (i.e. cough and sputum), was the first ranking respiratory symptom in over 70% of the patients, whether currently or at early disease manifestation. Between 5 and 15% of the patients denied any symptom of chronic bronchitis as current or early stage symptoms. Duration of symptoms prior to the diagnosis varied considerably with about 9% having symptoms for over 10 years. Over 80% of the patients smoked for over 15 years before the onset of symptoms. Quality of life in patients with COPD was generally poor and similar between both COPD severity groups. About one fifth of the patients had exacerbations more than 12 times a year. While many features described in our local patients are well recognized in COPD, the finding that 'chronic bronchitis' is not a prominent symptom in the current or past history may have important implications in the diagnosis of at risk individuals and patients with early disease requiring attention. More research is required to confirm and to understand this.

Loh LC, SH Puah, CV Ho, CY Chow, CY Chua, J Jayaram, C Kavetha, SJ Wong. Disability and breathlessness in asthma- a scoring method by repetitive inspiratory effort. *J Asthma* 2005; 42(10): 853-858

Disability and breathlessness in asthmatic patients - a scoring method by repetitive inspiratory effort

Loh LC, Puah SH, Ho CV, Chow CY, Chua CY, Jayaram J, Kavetha C, Wong SJ.

Department of Medicine, IMU Lung Research, International Medical University, Clinical School, Seremban, Malaysia.

Abstract

Measurement of disability and breathlessness in asthma is important to guide treatment. Using an incentive spirometer, Triflo II (Tyco Healthcare, Mansfield, MA, USA), we developed a three-minute respiratory exercise test (3-MRET) to score the maximal breathing capacity (MBC) and perception of dyspnea (POD) index by means of repetitive inspiratory efforts achieved within 3 minutes. POD index was calculated based on the ratio of breathlessness on visual analogue scale over MBC score. In 175 normal healthy subjects and 158 asthmatic patients of mild ($n = 26$), moderate ($n = 78$), and severe ($n = 54$), severity, the mean (95% CI) MBC scores in mild, moderate, and severe asthma patients were 168 (145-192), 153 (136-169), and 125 (109-142) respectively, and 202 (191-214) in normal subjects ($p < 0.001$). The mean POD index in mild, moderate, and severe asthma patients was 16 (9-23), 25 (14-37), and 57 (14-100), respectively, and 6 (4-7) in normal subjects ($p < 0.001$). Intraclass correlation coefficients for MBC score and POD index in 17 asthmatic and 20 normal subjects were high. In 14 asthmatic patients randomized to receiving nebulized beta2-agonist or saline in a cross-over, double-blind study, % forced expiratory volume in one second (FEV1) change correlated with % change in MBC score [$r(s) = 0.49, p < 0.01$] and POD index [$r(s) = 0.46, p = 0.012$]. In 21 asthmatic and 26 normal subjects, the MBC score and POD index correlated with the walking distance and walking POD index of the six-minute walking test (6MWT). We conclude that 3MRET is discriminative between asthmatic patients of varying severity and normal subjects, is reproducible, is responsive to bronchodilator effect, and is comparable with 6MWT. Taken together, it has the potential to score disability and POD in asthma simply and effectively.

Loh LC, SY Quah, SK Khoo, P Vijayasingham, T Thayaparan. Addition of macrolide in treating hospitalized community-acquired pneumonia. *Respirology* 2005; 10 (3): 371-377

Addition of macrolide in treating adult hospitalized community-acquired pneumonia

Loh LC, Quah SY, Khoo SK, Vijayasingham P, Thayaparan T.

IMU Lung Research, International Medical University, Kuala Lumpur, Malaysia.

Abstract

Objectives:

Current clinical practice guidelines, including those in south Asia, recommend the addition of a macrolide to a broad-spectrum antibiotic for the treatment of severe hospitalized community-acquired pneumonia (CAP). The aim of this study was to observe the influence of macrolide addition on clinical outcomes of hospitalized adult patients with CAP.

Methodology:

Over a 16-month period between 2002 and 2004, 141 eligible patients were prospectively recruited from an urban-based teaching hospital in Malaysia.

Results:

Of the 141 patients, 63 (44.7%) patients (age (standard deviation (SD)) 56 (20.0) years; 50.8% male) received a macrolide-containing antibiotic regimen, while 78 (55.3%; age (SD) 57 (20.2) years; 52.6% male) were on a single broad-spectrum antibiotic only. In total, 39 (27.7%) and 102 (72.3%) patients had severe and 'non-severe' pneumonia, respectively. Irrespective of whether they had severe or non-severe pneumonia, there were no significant differences in mortality (non-severe pneumonia, 6.5% vs. 5.4%, $P = 0.804$; severe pneumonia, 17.6% vs. 18.2%, $P = 0.966$), need of ventilation (non-severe pneumonia, 8.7% vs. 3.6%, $P = 0.274$; severe pneumonia, 23.5% vs. 13.6%, $P = 0.425$) or median length of hospital stay (non-severe pneumonia, 5.5 vs. 5 days, $P = 0.954$; severe pneumonia, 7 vs. 6 days, $P = 0.401$) between the two treatment regimens.

Conclusion:

This observational, non-randomized study suggests that addition of a macrolide may not convey any extra clinical benefits in adult hospitalized patients with CAP.

Key words: community-acquired pneumonia, macrolide, Malaysia, mortality.

Loh LC, S Raman, S Mohd Yusoff, W A Wan Yaacob, S Kumar. Scalp metastasis from squamous cell carcinoma of lung. *Grand Rounds 2005*; 5: 19-21

Scalp metastasis from squamous cell carcinoma of lung

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Abstract

We report a case of a 53-year-old man with a solitary nodular growth on the scalp in the right temporal region, noted during his hospital admission for bilateral knee replacement. A chest X-ray revealed a large circumscribed opacity in the left lung field. Bronchoscopy revealed a tumour at the carina. Histology of biopsies from the bronchoscopy and the scalp lesion showed an identical moderately differentiated squamous cell carcinoma. The patient survived 2.5 months after the onset of symptoms. While skin metastasis is recognised but rare in primary lung cancer, metastasis to the scalp is particularly unusual.

Key words; Scalp metastasis; skin metastasis; lung cancer; squamous cell carcinoma.

Loh LC, PN Teh, S Raman, P Vijayasingham, T Thayaparan. Incentive spirometry as a means to score breathlessness. *Malaysian J Med Sci* 2005; 12(1):39-50

Incentive spirometry as a means to score breathlessness

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Abstract

Perceived breathlessness played an important role in guiding treatment in asthma. We developed a simple, user-friendly method of scoring perception of dyspnoea (POD) using an incentive spirometer, Triflo II (Tyco Healthcare, Mansfield, USA) by means of repetitive inspiratory efforts achieved within three minutes in 175 normal healthy subjects and 158 asthmatic patients of mild (n=26), moderate (n=78) and severe (n=54). Severity was stratified according to GINA guideline. The mean POD index in normal subjects, and asthmatic patients of mild, moderate and severe severity were: 6 (4-7), 16 (9-23), 25 (14-37), and 57 (14-100) respectively ($p < 0.001$ One-Way ANOVA). Based on 17 asthmatic and 20 normal healthy subjects, intraclass correlation coefficients for POD index within subjects were high. In 14 asthmatic patients randomized to receiving nebulised b2-agonist or saline in a crossover, double-blind study, % FEV1 change correlated with % changes in POD index [$r_s = -0.46$, $p = 0.012$]. Finally, when compared with 6-minute walking test (6MWT) in an open label study, respiratory POD index correlated with walking POD index in 21 asthmatic patients [$r_s = 0.58$ (0.17 to 0.81) ($p = 0.007$)] and 26 normal subjects [0.50 (0.13 to 0.75) ($p = 0.008$)]. We concluded that this test is discriminative between asthmatic patients of varying severity and from normal subjects, is reproducible, responsive to bronchodilator effect, and comparable with 6MWT. Taken together, it has the potential to score disability and POD in asthma effectively and simply.

Key words: Perception of dyspnoea, asthma, normal subject, incentive spirometer, six-minute walking test

Loh LC, T Thayaparan, S Mohd Yusoff, R Yunus, S Kumar. Chest wall implantation of lung cancer following chest tube drainage of a pleural effusion. *Grand Rounds* 2005, 5: 10-14

Chest wall implantation of lung cancer following chest tube drainage of a pleural effusion

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²Department of Medicine, Seremban Hospital, Seremban, Malaysia

³Department of Pathology, Seremban Hospital, Seremban, Malaysia

Abstract

A 67-year-old man with a lung mass developed a large painful chest wall swelling adjacent to a chest drainage tube site. The swelling occurred after a second chest drain was performed for a rapidly relapsing pleural effusion, and the biopsy showed that it was an adenocarcinoma. We conclude that chest wall tumour implantation was caused by the chest tube drainage of the malignant pleural effusion, and that this accelerated the patient's deterioration. Our case illustrates the possibility of chest tube seeding of tumour cells from pleura to chest wall.

Key words: Thoracocentesis; chest tube; pleural effusion; adenocarcinoma; lung cancer; chest wall implantation.

Loh LC, B Vyas, V Kanabar, M Lethbridge, DM Kemeny, BJ O'Connor. Inhaled endotoxin in healthy human subjects: a dose-related study on systemic effects and peripheral CD4+ and CD8+ T cells. *Respiratory Med* 2005; 100(3):519-528

Inhaled endotoxin in healthy human subjects: a dose-related study on systemic effects and peripheral CD4+ and CD8+ T cells

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Abstract

Background:

Inhaled endotoxin or lipopolysaccharide (LPS) is implicated in the pathogenesis of pulmonary diseases. We investigated the inhalation effects of two different doses of LPS in healthy human subjects.

Methods:

Eighteen healthy non-atopic human subjects inhaled either 15 µg (n=10) or 50 µg (n=8) *Escherichia coli* LPS in an open study. As control, each subject had isotonic saline inhalation 1 week before (baseline) and after LPS inhalation. Data collected included those of clinical parameter, induced sputum and peripheral blood CD4+ and CD8+ T cells.

Results:

Acute flu-like symptoms and pyrexia were significantly greater in the 50 µg than 15 µg LPS group. Similarly, the increase in sputum and blood total cell and neutrophil counts at 6 h following inhaled LPS were greater in the 50 µg group. Myeloperoxidase, human neutrophil elastase and interleukin-8 in sputum sol, but not blood, showed a trend towards greater increase following 50 µg LPS. All these changes were resolved at one week. In the 50 µg dose group alone, there was a reduction in the proportion of peripheral blood interferon (IFN)-γ-producing CD4+ and CD8+ T cells at 6 h followed by an increase at 1 week after inhaled LPS.

Conclusions:

The airway and systemic effects of inhaled LPS are dose-related and predominantly neutrophilic. The changes in the proportions of circulating CD4+ and CD8+ T cells suggests preferential recruitment of IFN-γ-producing T cells into tissue from inhaled 50 µg LPS, followed by reappearance of these cells in blood 1 week later.

Key words; Inhaled endotoxin; Lipopolysaccharide; Sputum; Intracellular flow cytometry; CD4+; CD8+

Loh LC, Wong PS. Asthma prescribing practices between government and private doctors in Malaysia - a nationwide questionnaire survey. *Asian Pacific J Allergy Immunol* 2005; 23: 7-17

Asthma prescribing practices of government and private doctors in Malaysia - a nationwide questionnaire survey

Loh LC, Wong PS.

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Abstract

A self-answered, anonymously completed questionnaire survey was performed between June 2002 and May 2003 where doctors from government and private sectors in Malaysia were invited to participate by post or during medical meetings. One hundred and sixteen government doctors and 110 private doctors provided satisfactorily completed questionnaires (effective respondent rate: 30.1%). The most preferred medications for 'first-line', 'second-line' and 'third-line' treatment were for government doctors: inhaled short-acting beta2-agonist (SABA) (98%), inhaled corticosteroids (CS) (75%), and leukotriene antagonist (52%); and for private doctors: oral SABA (81%), inhaled CS (68%), and oral CS (58%). The first choice inhaler device for most government and private doctors were metered dose inhalers, with cost and personal preferences (for private doctors), and technical ability (for government doctors) as the key considerations when deciding on the choice of device. This benchmark data on the asthma prescribing practices of a healthcare delivery system fully dichotomized into government and private sector, provides evidence for practice differences affected by the nature of the healthcare system, and might have implications on healthcare systems of other countries that share similarities with that of Malaysia.

Muthiah YD, Lee WL, Teh LK, Ong CE, Ismail R. Genetic polymorphism of CYP2C8 in three Malaysian ethnics: CYP2C8*2 and CYP2C8*3 are found in Malaysian Indians. *J Clin Pharm Ther* 2005; 30(5): 487- 490

Genetic polymorphism of CYP2C8 in three Malaysian ethnics: CYP2C8*2 and CYP2C8*3 are found in Malaysian Indians

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Abstract

Background:

CYP2C8 is genetically polymorphic. Four variants, CYP2C8*2, CYP2C8*3, CYP2C8*4 and CYP2C8*5, which contain mutations in the coding regions have been reported to exhibit different enzyme activity as compared with CYP2C8*1.

Objective:

To determine the allele frequency of three codon-changing variants (CYP2C8*2, CYP2C8*3 and CYP2C8*4) in the Malaysian population.

Method:

Healthy unrelated volunteers from three major races in Malaysia were recruited. The study was approved by the local Research Ethics Committee. DNA was extracted using a standard protocol. A two-step multiplex PCR method was developed to detect three alleles of CYP2C8. PCR results were confirmed by subsequent direct DNA sequencing.

Result:

Only the Indians showed CYP2C8 polymorphism with allele frequency of 98% for CYP2C8*1, 0.8% for CYP2C8*2 and 1.2% for CYP2C8*3. CYP2C8*4 was not detected in any of the ethnic groups.

Conclusion:

To the best of our knowledge, the current study described, for the first time polymorphisms of CYP2C8 in Malaysian Indians.

Nayanatara AK, Nagaraja HS, and Anupama BK. The effect of repeated swimming stress on organ weights and lipid peroxidation in rats. Thai J Physiol Sci 2005; 18: 5-9

The effect of repeated swimming stress on organ weights and lipid peroxidation in rats

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Abstract

Stressful situations induce physiological and behavioral changes in an organism to maintain the homeostasis. Chronic stress exposure has detrimental effect on several cell functions. The present study was to investigate the influence of repeated swimming stress on body weight, organ weights, and lipid peroxidation in brain regions, liver, kidneys, and adrenal glands. Adult male Wistar rats (n = 12) were exposed to forced swimming stress daily (45 minutes duration at 20o C) for 7 days. The control was unstressed animals housed in the same condition (n = 12). Swimming stress significantly decreased total body weight (198.8 ± 5.75 g) when compared to unstressed control (218.20 ± 4.60 g) ($p < 0.01$). There was a significant increase in liver, kidney, adrenal gland, and cerebral cortex weights. A significant elevation in the lipid peroxidation in liver, kidneys, adrenal glands, and different brain regions like cerebral cortex, cerebellum, and hypothalamus was also observed. The present data suggest that repeated stress in the form of forced swimming activates the free radical processes leading to an increase in lipid peroxidation in many tissues.

Key words: stress, swimming, lipid peroxidation, organ weights

Phua KL, Lee LK. Meeting the challenge of epidemic disease outbreaks: an agenda for research. J Public Hlth Policy 2005; 26:122-132

Meeting the challenge of epidemic infectious disease outbreaks: an agenda for research

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Abstract

Challenges arising from epidemic infectious disease outbreaks can be more effectively met if traditional public health is enhanced by sociology. The focus is normally on biomedical aspects, the surveillance and sentinel systems for infectious diseases, and what needs to be done to bring outbreaks under control quickly. Social factors associated with infectious disease outbreaks are often neglected and the aftermath is ignored. These factors can affect outbreak severity, its rate and extent of spread, influencing the welfare of victims, their families, and their communities. We propose an agenda for research to meet the challenges of infectious disease outbreaks. What social factors led to the outbreak? What social factors affected its severity and rate and extent of spread? How did individuals, social groups, and the state react to it? What are the short- and long-term effects on individuals, social groups, and the larger society? What programs can be put in place to help victims, their families, and affected communities to cope with the consequences--impaired mental and physical health, economic losses, and disrupted communities? Although current research on infectious disease outbreaks pays attention to social factors related to causation, severity, rate and extent of spread, those dealing with the "social chaos" arising from outbreaks are usually neglected. Inclusion, by combining traditional public health with sociological analysis, will enrich public health theory and understanding of infectious disease outbreaks. Our approach will help develop better programs to combat outbreaks and equally important, to help survivors, their families, and their communities cope better with the aftermath.

Key words: infectious disease outbreaks, sociological analysis, research agenda

Ponnudurai G, Nadarajah VD, Chen YS. PBL induction programme at the International Medical University: students' perceptions. J Med Edu 2005; 9(2):131-137

PBL induction programme at the International Medical University: students' perceptions

Ponnudurai Gnanajothe, Nadarajah Mishnah , Yu-Sui Chen

Abstract

The International Medical University (IMU), founded in 1992, in Kuala Lumpur, Malaysia, is the first medical school in this region to introduce problem-based learning (PBL) to the semester one students of the medical programme. A week long induction programme was introduced to students upon entry into IMU, to ensure that they had a clear understanding of the concepts and conduct of the IMU-PBL, which is important for the successful implementation of PBL. The programme included a plenary on 'Introduction to the IMU-PBL', a plenary and demonstration of 'How to utilize resources', PBL exercise 1 and 2, a plenary on 'PBL and Assessment', students' feedback on PBL sessions and a critique on a video presentation. This paper explores the effectiveness of the PBL induction week. A questionnaire was completed by the students pre and post PBL induction programme. Students rated the hands-on PBL sessions, as being the most useful. This was followed by the plenary on how to utilize resources. Following the induction programme, majority of the students found PBL to be a useful tool for learning. Although 95% of the students agreed that the role of the facilitator is to ask probing questions and stimulate discussion, 67% still feel that the facilitator should be able to teach. PBL induction programme at IMU is a success as the students feedback indicates a positive attitude towards PBL. It is indeed a challenge to maintain this optimism throughout the medical course. This feedback is useful to implementers for further action to be taken in improving the induction programme as well as the IMU-PBL.

Key word: problem-based learning; PBL induction programme; medical students

Teng CL, Kamil MA, Zailinawati AH. Pain and culture: a brief review. *The Family Physician* 2005, 13(1&2): 2-3

Pain and culture: a brief review

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Abstract

Pain is a common experience that none of us can escape at one time or another. It is a subject that has provoked much interest and scholarly works. When PubMed, the foremost biomedical database, was searched recently, "Pain" was the major focus in 107, 160 citations [search term: Pain as MeSH Major Topic]; 3891 of these citations dealt with pain and cultural issues [search term: "Pain" AND ("ethnology" OR "culture" OR "cross-cultural" comparison)].

Zainur Rashid Z. Abd Al-Rhman HS. Hyperthyroidism in pregnancy. The Fam Physician 2005; 13(3): 2-4

Hyperthyroidism in pregnancy

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Summary

- o Thyroid diseases are common in women, including at the time of pregnancies.
- o Many typical features of hyperthyroidism are common in normal pregnancies and this may delay or mask the diagnosis.
- o Uncontrolled thyrotoxicosis increases the rate of miscarriage, intrauterine growth restriction (IUGR), premature labour and perinatal mortality.
- o Multi-disciplinary efforts are required to achieve optimal control of thyrotoxicosis.
- o Anti-thyroid drugs are safe and should be used with the lowest possible doses.
- o Radioiodine treatment is contraindicated during pregnancy and lactation.
- o Indications of surgery include: compression symptoms, thyroid malignancy, non-compliance to medications or when the patient develop drugs

Key words: Hyperthyroidism, pregnancy