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Association between *Lactobacillus* species and bacterial vaginosis-related bacteria, and bacterial vaginosis scores in small population of pregnant Latvian women

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Abstract

Background: One of the most common reasons why females attend doctor are vaginal infections. Vaginal flora is a dynamic environment where a great variety of microorganisms exist in homeostasis. The main normal flora inhabitants are *Lactobacillus* species who protect from pathogens. Still the majority of factors remain unclear about this gentle environment and its interaction.

Aim & Objectives: to analyze vaginal microflora types and microbial species in pregnant women, who were at their first trimester, using PCR and *Nugent* score diagnostic methods.

Methods: 65 pregnant women before their 12th week of pregnancy participated in this study from 06.08.2012 till 31.01.2013. All participants were divided in to 2 groups, group A (n=45) normal pH and group B (n=20) pH ($\geq 4,5$). Their vaginal fluid were analysed with *Nugent* score and PCR methods.

Results: Genus *Lactobacillus* (any *Lactobacillus*) was detected by PCR in all women irrespective of *Nugent* score, most common species were *L. crispatus*, *L. jensenii*, and *L. inners*, less common were *L. gasseri*, *L. plantaris*, *L. rhamnosus* and *L. reuteri*.

G. vaginalis was present in both patient groups divided by pH but it was significantly higher in bacterial vaginosis and intermediate flora group detected by *Nugent* score and group B (high pH group). *Megasphaera*, *Leptotrichia/Sneathia* were detected more common in pathogenic flora than normal flora. *A. vaginae* finding was associated with pathologic flora.

Conclusion: The most common isolated species in pregnant women vaginal flora were *L. crispatus*, *L. jensenii*, and *L. inners*. *L. gasseri* and *L. plantaris* were second most often found species. *L. jensenii* detection was significantly higher in normal flora group. *A. vaginae* were mainly detected in patients with bacterial vaginosis. *Megasphaera* and *Leptotrichia/Sneathia* are

more common for patients with pathologic flora. PCR method is the most precise to identify microorganisms in vaginal flora but rather expensive and time consuming than vaginal fluid examination by *Nugent* score.

Key words: Vaginal microflora, PCR, *Lactobacillus*, *Nugent* score

Are Foundation Year 1 Doctors Receiving Excellent Quality Feedback?

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Abstract

Background

Since the introduction of the European Working Time Directive, there has been a significant reduction in the amount of time available to train a doctor in the UK. The increase in patient demand and poor performance by doctors led to the development of a more efficient training structure in which supervised training opportunities could be maximised, therefore leading to new reforms in postgraduate medical education.

In 2012, supervised learning events (SLEs) were introduced as part of the training of foundation year 1 doctors (FY1s) in the UK. SLEs are interactions between FY1s and trainers, usually senior doctors leading to immediate feedback and reflection. This can be in the form of an observed clinical encounter, a performed procedure, a structured discussion of a clinical case or a trainee led teaching session. They are meant to be formative in nature helping FY1s improve their clinical skills.

Aims

This paper aims to evaluate the standard of feedback received during SLEs by FY1s across different specialties at Lincoln County Hospital, UK. Results would help identify areas to improve and trigger efforts to find ways to improve.

Methods

The standard for good quality feedback used was adopted from the University of Edinburgh's Feedback Standards & Guiding Principles document. It highlighted that good quality feedback is prompt, informative, helpful, and reflected and acted upon.

A survey questionnaire consisting of five- point Likert-scaled response questions was designed and distributed among 31 FY1s working across different specialties at Lincoln County Hospital during February 2013. A number of 29 forms were filled and returned.

Results

In terms of promptness of feedback, 80% (23 of 29 FY1s) received verbal feedback within an hour, 10% (3) received it within 24 hours and another 10%(3) within 7 days. Written feedback, uploaded online was less prompt with only 7%(2) and 10%(3) of trainees receiving feedback within 1 hour and 24 hours respectively. 52%(15) and 14%(4) received written feedback within 7 days and 4 weeks respectively, while 3%(1) after 4 weeks or 14%(4) never receiving any feedback.

Questions pertaining to “how informative feedback received was” were ranked generally poor in terms of favorable responses. Less than majority, 40%(11) of FY1s were often or always told their strengths. 53%(15) responded as having it sometimes and 7%(2) rarely. Only 36%(10) of assessors rarely fail to highlight areas of improvement, 43%(12) sometimes do while a significant proportion 21%(6) always or often fail to do so. In addition, a minority, 37%(10) often or always had advice on how to improve on their weaknesses, 41%(15) sometimes and the rest rarely or never.

As for feedback received during SLEs being helpful, less than majority gave a positive response with only 3%(1) rating the feedback as being very helpful and 31%(9) helpful. The rest rated the feedback as being fairly helpful 52%(15) and poor 14%(4).

It was encouraging to see that the majority 62%(19) of FY1s often or always acted upon feedback received, while 29%(8) sometimes and only 4 %(1) rarely did so.

Results also showed that a small percentage of 7%(2) often reflected on feedback received and 11%(3) sometimes, the vast majority rarely 39%(11) and never 42%(12) doing so.

Conclusion

Our findings suggest that there is still a wide gap between the quality of feedback being received by FY1s during SLEs and the expected standard.

Main areas of feedback that need improvement are the promptness of written feedback, highlighting strengths, weaknesses and ways to improve, and reflective practice.

These findings should be presented to both junior and senior doctors, raising awareness and reminding the trainer and trainee to build on the feedback on SLEs thus encouraging its use as an asset to medical training. It is recommended that the audit be carried out regularly to assess any improvement in this crucial aspect of medical education.

Key words: Feedback, medical education, training, reflective practice

Understanding fear in school children

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Abstract

Introduction: Fear is an intense aversion to or apprehension of a person, place, activity, event, or object that causes emotional distress and often avoidance behavior. Recent studies implicate the prelimbic cortex in fear expression as well, by way of its connection to the basal and then to central nucleus of amygdale.

Objective: The objective of this study was to determine the frequency of fear in school children.

Methods: This was a comparative cross sectional study which was conducted in a private school. School children of 7-12 years of age were selected and the sampling technique was non-probability convenient sampling. Fear Survey Schedule For Children – Revised (FSSC-R) questionnaire was administered to indicate the level of fear. Multiple response analysis was conducted to present overall frequency of fear. Logistic regression was conducted to assess the predictors for the dependent variable of fear. Independent sample *t*- test was performed to assess the normal distribution of fear.

Results: Most of the students feared from failing in their test (62.3%) proceeded by fear from electricity (59.3%) and fear from wild animals (57.6%). Mean fear scores for females (9.40 ± 22.7) were higher than that of males fear scores (6.14 ± 22.7). Independent sample *t*-test showed significant effect of gender, $t(179) = -8.0$, $p < 0.0001$, with females having higher scores than males. Logistic regression showed the odds of sensitivity of fear were 5.64 times higher for females than they were for males. For males, the odds were 1.06, and for females the odds were 5.98.

Study Limitation: Data was only collected from medium class students of 9 years of age.

Conclusion: Fears are a normal part of development, fears of children are realistic and most of them imaginary.

Key words: Fear-provoking cognitions, gender differences, Fear Survey Schedule – Revised (FSSC-R), school children, optimistic statements

Utilization of Radiology Service at Dungun District Hospital in Malaysia

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Abstract

Introduction: District hospitals in Malaysia, like other district hospital all over the world, function as important gateway between primary and tertiary health care systems. Dungun hospital, one of the district hospitals in Terengganu state, provides services to accidents and emergency, inpatients and outpatients including referrals from community and primary health care services. In addition, it serves as referral hospital to get tertiary health care from Terengganu State hospital. Dungun hospital is equipped with three X-ray units and three ultrasound machines for 24-hour service. Being a district hospital, Dungun hospital can provide only the generalist service without radiologist. Yet the radiology service is accessible for all demands.

Objective: To explore the utilization of radiology services at Dungun District Hospital, Terengganu State, Malaysia.

Methods: Retrospective one-year record review study was conducted. X-ray request forms and registration books between 1st January 2011 and 31st December 2011 were reviewed and double checked by pediatrician, physician, surgeon, obstetric and gynecologist, radiologist, staffs from radiology unit of Dungun Hospital, public health professionals and matron who sit and made consensus altogether to enter data properly. Data management for 13649 X-rays cases was done within 4 months from September, 2012 to December, 2012.

Results: Dungun Hospital is a 100-bedded hospital in which (11) medical officers, (378) total staffs, (315) clinical staffs and (9) visiting specialists are attached. Radiology unit equipped with (1) Static X-ray machine, (2) Portable machines, (5) radiographers and additional (2) PPKs

(Pembantu Perawatan Kesehatan) and (15) trainee radiographers. Out of a total of 13649 radiological examinations, the highest number (5603) was contributed by the extremities X-rays followed by the chest X-ray (5355), the spine X-ray (1090), the skull X-ray (1082) and the abdominal X-ray (519) respectively. Among the study group, 8451 were males, (3685) of them took extremities X-ray and (3063) took chest X-ray. Out of 5198 females, chest X-ray and extremities X-ray were taken by (2292) and (1918) respectively. The age range in the study group was from 1 to 99 years. The mean age was 32.01 years (32.01±20.92). Out of 13649 examinations, majority (6324) was requested from A & E Department, followed by (3438) from out-patient department, (1462) for Routine Medical Examination (RME), (1061) from specialist clinic referral, (822) for in-patients in various wards and (542) utilized as portable X-ray. Amongst total utilization of Chest X-ray, 75.3% had properly and completely filled the request form (properly given relevant information on request form). It was found that 71.9% in Abdominal X-ray utilization, 78.2% in skull X-ray utilization, 73.9% in Extremities X-ray request and 74.1% in Spine X-ray services filled the forms properly and completely as well.

Conclusion: According to operational definition of appropriateness of this study, findings can be concluded that the radiology services at Dungun District Hospital were appropriately utilized.

Key words: Utilization, Radiology Service, District Hospital, Health Care

Genetic Diversity of Human Immunodeficiency Virus Type 1 in the Democratic Republic of Congo: a review of available data

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Abstract

Background: HIV has a genetic diversity that is equal to the complexity of the follow up of patients. The classification of the different variants has allowed us to understand the virus, the geographical distribution and evolution of the pandemic and to better guide the follow up and the care of patients infected by HIV.

Aim & Objectives: Review the specifics of the HIV epidemic in the Democratic Republic of Congo (DRC), in terms of different molecular variants of HIV compared to different geographical location published for the country.

Methods/Study Design: The search of the literature and abstracts presented at conferences with the subject of interest to identify different variants of HIV type 1 in the DRC on the websites of research. Online search was based on the following key words: "HIV subtype, DRC", "genotype, HIV, DRC" and "HIV strains in the Democratic Republic of Congo". It was restricted to the published literatures and presented abstracts between 1997 and 2012. Socio-demographic information of the sample, measurement methods and objectives were considered in the evaluation of the search results.

Results/Findings: According to manuscripts published since 1997, we have noticed a dominating prevalence of group M (100%) and of sub-type A at 50.40% [31.2-68.9] for the entire country. In the Eastern part, variants A (44.73%) are dominant on variants C (12.20%), G (11.5%), D (9.12%) and U (7.24%). In the Center, variants A (62.57%) are followed by variants C (10.32%), H (5.02%), U (4.3%) and D (3.9%). In the Western part, variants A (40.91%) are followed by variants G (19.29%), D (10.5%), F (5.65%) and C (4.51%). For the entire country, variants are found in the following order: A (49.40%), G (10.73%), C (9.01%) and D (7.86%). The differences between and within groups are statistically significant for each variants.

Conclusion: Several variants of HIV type 1 circulates throughout the DRC. The most prevalent strains (A, G, C and D) in the DRC are all of Group M (Major). The high number of recombinant forms (CRFs) shows the diversity and dynamics of the virus in this country. This diversity will quickly become a big problem for the fight against HIV in the DRC.

Key words: HIV-1, variants, geography, Democratic Republic of Congo

The Relationship between Emotional Intelligence and Technology Addiction among University Students

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Abstract

Introduction: Today the prevalence of Internet addiction in youth could be a serious crisis as tantamount as drug addiction in personal life, family relationships, social behavior and academic status. Studies show that there is a positive relationship between emotional intelligence and social skills. Emotional intelligence includes understanding, reasoning and handling our emotion. Non-cognitive skills enable us to get success in dealing with environmental conditions. The vulnerability of high emotional intelligent person is much more than others; the aim of this study was examining the relationship between Internet addiction, virtual environments and emotional intelligence.

Methods: This cross-sectional survey was conducted on 201 students who were randomly selected. The survey instrument was a tripliod questionnaire: demographic information including age, sex, etc., Young's Internet Addiction Test (IAT), which contains 20 questions about symptoms of Internet addiction graded by Likert scale score of 1 (never) to grade 5 (always), emotional intelligence questionnaire including 33 questions (Schutte 1997) about three categories of emotion: perception, planning and productivity. The data analyzed by computer software SPSS 16 (ANOVA, 95% confidence).

Results: According to findings of this study, %38.3 of students is Internet addicted in general, %43.8 had mild dependency, %15.9 depended to medium and %2 had severe dependency. The average score of emotional intelligence among college students was %118.99 with a standard deviation of 21.12. There was an inverse relationship between the severity of Internet addiction and emotional intelligence.

Conclusion: Since prevention is better than cure, we could replace proper use of computers, Internet and its facility by wrong ways of using the Internet, which can affect social dimensions of personality, through education in family and training centers.

Key words: Internet addiction, Emotional intelligence, Social skills

Bio-electrical Impedance Analysis versus Anthropometry as Predictor for Hypertension

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Abstract

Background: Several measures like Bio-electrical Impedance Analysis (BIA) and anthropometry are been proposed in literature to quantify obesity. As Obesity is an established harbinger of hypertension; the strength of association of these measures with hypertension may provide an evidence for their aptness in context specific setting.

Aims and Objective: To compare the performance of Bio-electrical Impedance Analysis with anthropometric indices (Body Mass Index and Waist Circumference) to predict hypertension among Indian population.

Method/study design: This hospital based cross sectional study was conducted for 6 months. BIA, anthropometry data and blood pressure were recorded from representative sample. Validity of these obesity measures for hypertension was analyzed through sensitivity, specificity and predictive values. Further the strength of association and overall accuracy of these measures were compared through area under Receiver Operator Characteristic (ROC) curves and non-parametric paired comparisons.

Result: Waist Circumference (WC) was overall more sensitive and specific tool than BIA and Body Mass Index (BMI), with higher predictive accuracy for hypertension. Area Under Curve (AUC) was maximum for WC in both male and female and this difference was detected statistically significant in contrast paired comparison.

Conclusion: BIA was not found to be superior over anthropometric measures in Central-Indian ethnicity to envisage Hypertension; However, more evidences need to be generated from a multi-centric study with diverse strata representation before making final remark.

Key words: Obesity, BMI, WC, BIA, Hypertension, ROC

Teacher-made Three Dimensional Model of Pyramidal Motor System

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Abstract

Background: The study of the structure of nervous system, human neuroanatomy, is crucial to the medical and allied health students. The tracts in motor system and somato-sensory system are the most complicated portions which need simplification for better understanding. The pyramidal motor system consists of a group of fibres carrying messages for voluntary motor movement to the lower motor neurons in the brain stem and spinal cord. It controls all of our voluntary movements and understanding of its pathway is vital for medical students to be able to transfer this knowledge to real life clinical settings.

Aim & Objectives: To determine the effectiveness of teacher-made educational model in enhancing medical students' learning of pyramidal motor system

Methods: An innovative attempt was made by the researchers to develop a model of pyramidal motor system using readily available materials. It was developed to illustrate the motor pathway in three dimensional model starting from the motor area in the cerebral cortex till to the skeletal muscle. A computer aided animation to demonstrate the cross sectional appearance of brain at different levels and the motor pathway was also created. The model was supported by the animation mimicking the conduction of nerve impulses along the motor pathway. A total of 87 Year 1 medical students in small groups were randomly exposed to two methods; (1) 44 students in this innovative method and (2) 43 in conventional small group teaching method. The difference in their assessment scores (both immediate and remote) was analyzed.

Results/Findings: The groups assisted by the innovative educational aid developed by the teachers for this purpose showed a significantly higher scores ($p < 0.05$) indicating effectiveness of this innovative method.

Study Limitations: The study results only showed the immediate achievement of students in terms of paper & pencil test scores. The assessment scores would not reflect the students' capability to apply this knowledge in the real patient situations.

Conclusion: The study provided a strong evidence that the three dimensional model created by the medical teachers enhanced the medical students' learning of pyramidal motor system. Thus the medical schools should promote the innovation and utilization of teacher-made educational models to enhance their students' learning of complex issues.

Key words: medical, learning, neuroanatomy, teacher-made model, pyramidal motor system

Arterial Age and Shift Work

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Abstract

Background: The relationship between shift work and cardiovascular disease is controversial.

Objectives: The present study aimed to assess the relationship between shift work and arterial age and to identify predictors of early arterial aging.

Methods/Study Design: A total of 61 workers, 77% working in 2 or more shifts, underwent arteriography. Arterial age (AA), brachial and aortic augmentation index (Aix Brach and Aix Ao) and pulse wave velocity (PWV) were assessed. The participants were questioned about smoking habits, cardiovascular family and personal history, physical work and number of shifts.

Results/Findings: Aix Brach was: -40 ± 29 %, AixAo: 16 ± 1.71 %, PWV: 8.06 ± 1.44 m/s, AA: 41 ± 15 years. The number of shifts was significantly associated with Aix Brach ($p < 0.01$) and Aix Ao ($p < 0.01$) (Multiple $R = 0.875$, $F < 0.01$); PWV ($p < 0.01$) and AA ($p = 0.0001$) (Multiple $R = 0.922$, $F < 0.01$). Multiple regression analysis revealed significant associations between arterial age and smoking ($p = 0.0008$), positive cardiovascular family history ($p = 0.023$) and physical work ($p = 0.0029$) (Multiple $R = 0.758$, $F < 0.01$). Early arterial aging was more likely in shift workers compared to the other participants (OR=1.189, 95%CI=0.346-4.089).

Conclusion: Shift work, smoking, positive cardiovascular family history and physical work predict early arterial aging.

Key words: Arteriography, early arterial aging, pulse wave velocity, augmentation index, shift work

Prevention of recurrent falls in elderly: a pre-post intervention study in a rural community, Egypt

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Running title: Prevention of recurrent falls in elderly

Abstract

Background: Nursing intervention has been reported to prevent further falls in elderly with previous falls.

Population and Methods: This as pre/post intervention study involving a convenient sample of sixty three elderly of both sexes with previous falls. Seven sessions of multiple interventions were individually delivered to the elderly in their homes in a rural community. The intervention included knowledge about falls, instruction about environmental hazards and exercise training. Change in knowledge, activities of daily living (ADLs), instrumental activities of daily living (IADLs), The Risk for Falls of Older Adult People Community Setting (FROP-Com), Berg balance scale (BBS) and environmental checklist were assessed at pre-and post-interventions.

Results: The median knowledge score increased significantly after intervention from 40 up to 133. Also the median total score of practicing exercise increased from 0 to 78. There are significant improvements in the score of all elements and the total score of environmental hazards in post 2 and 4 months. The percent of independent elderly as measured by ADLs and IADLs increased significantly at 2 months after intervention (3.2% vs. 14.3%; and 3.2% vs. 12.7%; respectively). The low risk of fall, as measured by BBS and FROP-Com score, showed significant increase at both 2 and 4 months post-intervention. Both the recurrence and effect of falls were significantly reduced during the follow-up period.

Conclusion: Despite the small size of study population, the multiple interventions reduced both the recurrence and the sequel of falls.

Key words: Recurrent Falls, Elderly, Intervention, Community setting

Body Weight Gain in Pulmonary Tuberculosis during Chemotherapy

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Abstract

Background: Wasting is a common feature in tuberculosis and treatment is aimed at achieving weight gain in pulmonary tuberculosis patients. It is believed that weight change after 2 months of intensive phase of treatment can help identify persons at high risk of relapse.

Aim & Objectives: To study the extent of body weight gain in pulmonary tuberculosis during treatment.

Methods/Study Design: This was a retrospective study. Among the patients diagnosed with pulmonary tuberculosis, we included those that were declared clinically cured at the end of 6 months (n=40). Body weights were recorded thrice - at diagnosis (PTB-0), after two months of intensive phase of treatment (PTB-2) and at the end of 6 months of treatment (PTB-6).

Results/Findings: Mean \pm SD of the body weights (in kgs) for PTB-0, PTB-2 and PTB-6 were respectively 41.7 ± 3.79 , 43.13 ± 3.77 and 47.13 ± 3.99 . When compared to PTB-0, PTB-2 and PTB-6 showed higher mean body weights (3.4% and 13% increase respectively). Repeated measures ANOVA of the three test groups showed statistical significance ($p < 0.001$). Tukey HSD post-test between the three groups showed that the means differed significantly from each other ($p < 0.01$ for PTB-0 vs PTB-2, PTB-2 vs PTB-6 and PTB-0 vs PTB-6), indicating that body weight was progressively increasing during the course of treatment.

Conclusion: Treatment of tuberculosis should aim at achieving a higher body weight gain during the intensive phase

Key words: Tuberculosis; Body weight; Chemotherapy

Prevalence of left ventricular hypertrophy in end stage renal disease

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Abstract

Introduction: Cardiovascular disease (CVD) is still the major cause of death in patients with end stage chronic kidney disease (ES-CKD), with a mortality rate approximately 10 to 30 times greater than that of the general population. Advanced cardiomyopathy is caused by left ventricular hypertrophy (LVH) in patients with end stage kidney disease.

Objective: The objective of the study is to determine the prevalence of LVH in end stage renal disease (ESRD) patients.

Methods: This was a cross sectional study conducted at Department of Nephrology, Kulsom Bi Valika Social Security Site Hospital, Karachi. The sampling technique was non probability convenient sampling and the sample size was calculated by using the WHO software. Patients included in this study were of known cases of end stage renal disease. Patients excluded from the study were of ischemic heart and valvular heart disease. Linear Regression Analysis was conducted and R value was computed.

Results: R² value indicates 83% of the dependent variable of left ventricular mass can be explained by the independent variables of Systolic Blood Pressure and Diastolic Blood Pressure. Scatter plot between creatinine and hemoglobin showed negative correlation. A rise in serum level of creatinine showed a decreased serum level of hemoglobin. Scatter plot between left ventricular hypertrophy and creatinine showed positive correlation. An increase in left ventricular mass showed an increase serum creatinine level.

Study Limitation: Few biochemical parameters were conducted.

Conclusion: Left Ventricular Hypertrophy is frequent in End Stage Renal Disease.

Key words: Left Ventricular Hypertrophy (LVH), End Stage Renal Disease (ESRD), anemia, renal function, creatinine

The influence of adjuvant radiotherapy on ovarian function, menopausal symptoms and quality of sexual life in cervical cancer patients

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Abstract

Background: Cervical cancer is the most common gynaecologic cancer in women worldwide. While majority of cervical cancer patients are premenopausal, preservation of ovarian function remains crucial to maintain overall quality of life without menopausal symptoms as well as their quality of sexual life. Ovarian function depletion following treatment of cancer due to pelvic irradiation is affecting the quality of survivals and is recognized issue and efforts should be made to help young women to retain also their fertility potential.

Aim: to analyse the influence of adjuvant radiotherapy in the treatment of cervical cancer on ovarian function, menopausal symptoms and quality of sexual life.

Material and methods: In a prospective case-control study 37 patients diagnosed with a cervical cancer were included - 29 patients receiving adjuvant radiotherapy in the study group and 8 patients without radiotherapy in the control group that were undergoing surgical treatment in Riga Eastern Clinical university hospital from year 2007 till 2011.

Results: Mean concentrations of folliculostimulating hormone were higher in patients who received adjuvant radiotherapy in comparison to patients who received only surgical treatment – 94.12 ± 44.16 U/l (range 5.0 – 199.0) vs. 6.08 ± 2.90 U/l (range 2.9 – 11.5) U ($p < 0.001$). Higher concentrations of folliculostimulating hormone in serum correlated with adjuvant radiotherapy (0.683; $p < 0.001$).

Patients who received adjuvant radiotherapy more often experienced symptoms related to the decreased oestrogen levels. Only for depressed mood, headaches and weight gain no differences between groups were observed.

Patients in the group with the adjuvant radiotherapy less frequently reported that their sexual life was fine; they were less frequently satisfied, more depressed, unconvinced and even felt anger concerning their sexual life.

37.5% patients in the surgery group and 20.7% patients in the combined treatment group had changed their sexual partners in the treatment period (p=0.36).

Conclusion: Patients with more aggressive treatment have compromised quality of their sexual life and overall quality of life due to earlier onset of menopause. This can be explained by impaired ovarian function caused by external-beam radiotherapy. Combined surgical treatment following radiotherapy should be applied only in patients with high risk factors for cervical cancer recurrence; moreover, ovaries should be mapped with a metallic clipators for better visualization when planning adjuvant radiotherapy to preserve ovarian function in premenopausal women.

Key words: cervical cancer, quality of sexual life, menopause

Palmaris Longus Agenesis (PLA) among Dusun & Bajau ethnic groups of Northern Borneo

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Abstract

Background: The functional role of Palmaris longus muscle is little to human upper limb, but its long tendon is very useful as a donor tendon in hand reconstructive surgery. In the human body, Palmaris longus muscle is often described as one of the most variable muscles in both number and form. It is only to be consistently found in mammals especially in those using forelimbs for weight-bearing and ambulation. The absence of Palmaris longus in human appears to be hereditary but its possibility through genetic transmission has not been proven yet. The first report in 1559 estimated the Palmaris longus agenesis (PLA) was 17.2% among Indians and 12-24% in Caucasians. It was reported to be 4.6% among Singaporean-Chinese while 12.6% and 26.6% in Nigeria-black and Turkish people respectively. A 2007 UKM study shows prevalence of PLA in Malays was 11.3% followed by Indians (10.7%) and Chinese (6.0%). Studies had indicated that PLA would be associated with other anatomical variations of hand.

Borneo is the third largest island in the world and located in the centre of the Maritime Southeast Asia. Sabah, once known as north Borneo, is the second biggest states in Malaysia after Sarawak. The largest indigenous ethnic group in Sabah is Kadazan-Dusun residing mainly on the West Coast region of Sabah, making up about 30% of population. Bajau is the second largest indigenous ethnic group and can be found in east coast of Sabah.

Aim & Objectives: To determine the prevalence of PLA among the two major ethnic groups of Sabah namely Dusun (Kadazan-Dusun & Rungus) and Bajau and to compare the estimates between age and gender

Methods: The presence or absence of Palmaris longus tendon was clinically examined among the ethnic volunteers (18 years and above) by using standard tests namely Schaffer's test, Thompson's test, Mishra's test I and II, Pushpakumar's test.

Results/Findings: 22 villages from Sandakan, Kudat, Pitas, Kota Belud, Kota Kinabalu (Penanpang and Innanam) area were covered. 397 Dusun (129 males & 268 females) and 201 Bajau (85 males & 116 females) were examined. Only 64.7% of Dusun and 73.6% of Bajau

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showed presence of Palmaris longus tendon in both hands. The bilateral absence of Palmaris longus tendon was 18.9% among Dusun and 11.4% among Bajau. PL tendon unilateral absence was 16.4% and 14.9% for Dusun and Bajau respectively. The PLA (both bilateral and unilateral) among Dusun 35.3% was significantly higher than the 26.4% of Bajau (χ^2 : 4.832 & p:<0.03). The females tend to have a significantly higher prevalence of PLA than males (i.e; 40.3% for Dusun and 31% for Bajau).

Conclusion: The Palmaris longus tendon agenesis (both bilateral and unilateral) among the studied ethnic groups of Sabah was much higher than the prevalence among Malays, Indians and Chinese of 2007 UKM study. Further research is needed to determine the anatomical variations associated with PLA among the ethnic groups of Sabah.

Key words: Palmaris longus agenesis, ethnic group, Borneo, Kadazan-Dusun, Bajau

“Thoraco-Abdominal Flap”- A Simple Flap for Skin and Soft Tissue Cover Following Radical Surgery for Locally Advance Breast Cancer-The Malaysian Experience

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Abstract

Backgrounds: Locally advanced breast cancer (LABC) is a major concern for clinicians due to its large numbers and its complex treatment. Skin and soft tissue cover after radical breast surgery is one of the most challenging issues.

Aim & Objectives: To evaluate the efficacy of thoraco-abdominal flap (TA) in terms of convenience, patient compliance and tolerability to adjuvant radical radiotherapy in operable LABC patients in which primary skin cover was not possible due to large post operative skin and soft tissue defects.

Methods: A prospective analysis of twenty patients with LABC, who underwent mastectomy and axillary clearance over a period of eighteen months were included in this study. Primary skin closure was not possible for any of these patients due to large skin and soft tissue defect produced after radical surgery. All of them were subjected to TA flap to cover the skin gap produced after surgery. Immediate postoperative outcomes, tolerability to postoperative radiotherapy (PORT) were analyzed.

Results: Out of these twenty patients, one patient (5%) had minor wound break down in the immediate post operative period which was managed by dressing and secondary suturing under local anesthesia. Rest all nineteen patients were discharged from hospital without any complications within the expected discharge time period (3-4 days). All of them tolerated PORT well. None of them showed any loco-regional or distal recurrence in 18 months follow up period.

Conclusions: In view of its simplicity, low cost, good postoperative compliance and well tolerability to PORT, it can be concluded that TA flap can be the first choice in LABC patients requiring skin and soft tissue cover after radical surgery.

Key words: Locally advanced breast cancer, Post-operative skin and soft tissue defect, Thoraco-abdominal flap

Post Gastrectomy Early Enteral Feeding Through Naso-Jejunal Tube In Cases of Gastric Cancer: A Prospective Clinical study

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Abstract

Background: Surgery remains the key answer for operable gastric cancer cases. However, early postoperative enteral feeding and the various routes of feeding are still the burning issues for debate.

Objectives & Aim: We conducted a prospective study to evaluate the patient's tolerability and outcome of early enteral feeding through naso-jejunal tube after gastrectomy/ gastro-jejunostomy in cases of carcinoma stomach.

Methods: Over a period of 5years, total numbers of 139 patients (male-102 and female 37) aged between 44 and 81 years, operated for gastric cancer were included in this study. Radical gastrectomy was performed in 116 patients and palliative gastro-jejunostomy in 43 patients. Patients were subjected to enteral (naso-jejunal tube) feeding from the first postoperative day. In all cases placement of the naso-jejunal tube was done per-operatively under vision and another second naso-gastric tube was introduced in to the stomach for decompression of the stomach. Both the tubes were fixed over the nose with adhesive tape.

Results: Enteral feeding was started in 137 patients on the 1st postoperative day. In two patients enteral feeding could not start from postoperative day1 due to suspicion of anastomotic bleed. Of total 139 patients; in 131 patients, scheduled early enteral naso-jejunal feeding was continued without difficulties. Eight patients failed to do so due to development of feeding related complications such as nausea/vomiting/diarrhea /abdominal blotting.

Conclusions: Early enteral naso-jejunal feeding is cheap and safe. It should be advocated for its simplicity and great advantages.

Key words: Carcinoma stomach, Gastrectomy, Naso-jejunal tube, Early enteral feeding

Effectiveness of Internal Sphincterotomy in reducing Post Open Hemorrhoidectomy Pain: A Randomized Comparative Clinical Study

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Abstract

Background: Hemorrhoids are one of the most common disorders of anus. Various treatment modalities have been described over the periods. However, open hemorrhoidectomy; mainly for grade 3 and 4 haemorrhoids is still widely used. The main drawback of hemorrhoidectomy is the pain in the early postoperative period. Studies have showed that internal Sphincterotomy along with Hemorrhoidectomy significantly reduces the post operative pain without any major complications.

Aim & Objective: The aim of this study was to evaluate the effects of internal Sphincterotomy in reduction of post open hemorrhoidectomy pain.

Methods: Over a period of two years 50 patients (38 male, 12 female) aged between 24 & 50 years) treated for 3rd and 4th degree haemorrhoids were included in this prospective randomised study. Patients were randomly divided in to two equal groups. Group I (control group) were subjected to classical open hemorrhoidectomy and group II (study group) were subjected to classical open hemorrhoidectomy with internal Sphincterotomy. Patients above 50 years of age and any patients associated with other colo-rectal or anal diseases were not included in our study.

Results: Mean post-operative pain score in study group (Gr- II) was 1.60 and in control group (Gr-I) it was 2.32 (P<0.01). Postoperative complications, like urinary retention was seen in 8 patients from Gr-I and in 1 patient from Gr-II. From Gr-II; as late complications, faecal soiling was present for 3 weeks in 1 patient and impaired control of flatus was present in 2 patients for 7-10 days. One patient from Gr-I developed anal stenosis which was managed conservatively.

Conclusion: Addition of Internal sphincterotomy to open hemorrhoidectomy is an effective method to reduce post open hemorrhoidectomy pain without significant morbidity.

Key words: Open hemorrhoidectomy, post hemorrhoidectomy pain. Internal Sphincterotomy

Self-medication: Awareness and Attitude among Malaysian Urban Population

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Abstract

Background: Self-medication is defined as obtaining and consuming drug(s) without the advice of healthcare professionals either for diagnosis, prescription or surveillance of the treatment. The practice of self-medication is becoming more common worldwide and currently plays a major role in self-care.

Objectives: The objectives of our study were: (I) To determine the perception and level of awareness regarding OTC medications, among the general public in Malaysia and (II) to determine the effect of factors such as socio-demographics, personal health and family history of illness, on the practice, attitudes and awareness regarding OTC drugs, among the Malaysian population.

Methods: In this cross-sectional study, a validated self-administered, questionnaire was used to collect data among University students, working adults and those visiting pharmacies in Malaysia.

Results: Of the 364 respondents, 116 (31.6%) were male and 248 (67.6%) were female. Half the population was students while the other half was employed. Overall, 308 (83.9%) participants consumed OTC medications. The commonly consumed OTC drugs were supplements and vitamins followed by painkillers, flu/ cough remedies and sore throat products. The OTC medications were most frequently bought from pharmacies. Easy access, convenience and time saving were the most frequent reasons for self-medication. Eighty two percent of the respondents stated that their level of knowledge regarding OTC medications was moderate to low. Of the study participants, 58 were on regular prescription medications and half of them were unsure or disagreed that OTC drugs could interfere with the regular prescription drugs.

Conclusion: Lack of awareness regarding drug interaction is an issue that warrants further intervention by increasing the knowledge of the public, so as to prevent adverse events from the drugs.

Key words: self-medication, over-the-counter, non-prescription, drugs, awareness, attitudes

Respiratory Pathology in Children Inhalationally Exposed to Irritating Substances

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Abstract

Background: The investigation of the features of the course of the respiratory pathology in children who are chronically exposed to fine dust is an issue of current importance due to high prevalence of respiratory diseases and unfavorable environmental conditions.

Aim: To scrutinize clinical features of the clinical course of respiratory diseases in children who are chronically exposed to fine dust (PM₁₀) and irritating chemicals (nitrogen dioxide, ammonia, hydrogen chloride).

Methods: We used a set of clinical laboratory testing and instrumental examination (rhinomanometry, spirometry) methods. We examined a total of 180 children (aged 3 to 7 years) with allergic rhinitis (J30.3) and hypertrophy of the palatine and nasopharyngeal tonsils (J35.0 and J35.2) (44.9% of the patients were girls, 55.1% were boys), who were residing in areas with high levels of ambient air pollution by particulate matter (PM₁₀) and chemicals such as nitrogen dioxide, hydrogen chloride and ammonia (a study group). A control group included 100 children with a similar pathology, residing in relatively unpolluted areas. The age and sex distributions were similar in both groups.

Results: We observed a higher prevalence of upper respiratory tract diseases in the area with high levels of air pollution by fine dust and the chemicals having an irritating effect (nitrogen dioxide, hydrogen chloride and ammonia) in comparison with relatively unpolluted areas. We have determined the features of the clinical course of the upper respiratory tract pathologies – a combination of respiratory symptoms with signs of asthenic and neurotic syndrome, the absence of seasonality of exacerbations, resistance to standard treatment methods, clinical signs of hypoxia and intoxication, lymphadenopathy, increased lipid peroxidation, decreased AOA in the blood and reduced superoxide dismutase activity, increased malondialdehyde (MDA) and methaemoglobin levels, mild inflammatory changes on the complete blood count, reduced non-specific resistance, the imbalance of cellular and humoral immunity, a reduction in the total nasal airflow rate according to a rhinomanometry examination, mild restrictive and obstructive signs of impaired respiration function, inflammatory changes in the mucous membranes of the paranasal sinuses such as swelling, exudation and fibrous changes.

Conclusion: The identified features of the clinical course of respiratory diseases indicate a more severe course of respiratory pathologies in the children who are chronically exposed to fine dust and irritating chemicals (nitrogen dioxide, ammonia and hydrogen chloride) and the necessity to use a comprehensive approach when providing treatment and prevention.

Key words: respiratory diseases, irritating substances, fine dust, children, ambient air

Knowledge, Attitude and Practice on Insecticide Treated Nets in Myanmar

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Abstract

Introduction: In Myanmar, malaria problem has become more critical with the development of multi-drug resistance in *P. falciparum*. This development made the governments to focus their attention for building up vector control program based upon selective spraying, personal protection method, including Insecticide Treated Nets (ITNs) that can be carried out by the communities

Objectives: The present study is aimed to assess knowledge, attitude and practice of community on ITN in Myanmar.

Research Methodology: A cross-sectional descriptive study was done in 16 villages. A pre-tested structured questionnaire was used with face to face interview to 256 randomly selected households. Only one adult person was interviewed per household.

Results: The study results showed that more than three-fifth (62.1%) of the study population had low knowledge level on malaria and ITNs uses and some misconceptions regarding the mode of transmission of malaria. About two-thirds of the study respondents had low attitude score on malaria prevention and use of ITNs. There is significant association between knowledge and attitude level of respondents and their educational status.

Conclusion: This study show that there is a need for increasing availability of information on ITN and ITN tablets to prevent malaria transmission in the study township.

Key words: Malaria, knowledge attitude and practice (KAP), insecticide treated nets, Myanmar

Special Issues in Managing Migraine in Women: A Review Article

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Abstract

Migraine is a highly prevalent condition experienced by women throughout their child bearing age, started from menarche to menopause. It is affected by the oestrogen, female hormonal changes especially during menarche, pregnancy and menopause. Women with migraines have an increase risk for stroke during pregnancy as well as other vascular complications.

Treatment should be considered based on the severity of the patient's headache and functional disability. It is important to select the safest and appropriate therapy especially during pregnancy. Sometime migraine treatment is essential in view of increase maternal and foetal risks resulting from acute attacks rather than the potential adverse effects of therapy itself. Non-pharmacologic treatments are preferred because only a few drugs are safe to use during pregnancy and lactation.

Key words: Menstrual Migraine, Pregnancy, Lactation, Menopause, Hormone

Feasible Factors in Determining the District Hospital as a Teaching Hospital

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Abstract

Background: UCSI University, Faculty of Medicine and Health Sciences needs expending to community based district level existing functioning hospital as a teaching hospital for fulfillment of increase demand. Those issues called for Dungun Hospital is a district hospital which has been proposed as a teaching hospital after upgrading to a certain extent. Therefore it is needed to assess existing functions and facilities of it for utilizing as a teaching hospital. In addition, it is also needed to provide evidence based information to policy makers to establish the Dungun Hospital as a teaching hospital.

Aim & Objectives: It is to identify feasible factors in determining the selected functioning district hospital as a teaching hospital. Objective includes to observe the infrastructure characteristics, facts and facilities of teaching-learning environment and to explore the students' concerns regarding the enforcement of selected district hospital as a teaching hospital according to accreditation guideline.

Methods/Study Design: It is a Cross-sectional Study design at selected functioning district hospital at Dungun, Terengganu State, Malaysia. The study populations are students who being

conducting District Hospital posting attachment within 8 months. Two quantitative assessments were done by observation of Hospital statistics and facts and self administered interview.

Results/Findings: Twenty eight female students and twenty two male students were included in this study. They are final year medical students of UCSI University. Most of the survey support that current infrastructure needs upgrading to meet MQA requirement and if upgraded, most students recommended Dungun Hospital can be utilized as a standard teaching hospital.

Conclusion: The identified feasible factors from our study will be able to provide relevant information to policy makers and key stakeholders to establish Dungun Hospital as a teaching hospital after upgrading those factors to some extent.

Key words: UCSI University, Accreditation, Malaysian Qualification Agency, Dungun Hospital, Feasible factors, Teaching Hospital

Skull Metastasis of Follicular Thyroid Carcinoma – A Case Report

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Abstract

Background: Metastasis of follicular thyroid carcinoma to the skull is rare. However, in case of skull metastasis it is one of the most important differential diagnoses to be considered.

Aim & Objectives: Rare occurrence and mostly its importance in clinical practice justify reporting our case.

Methods: Report of a rare case.

Results: Total thyroidectomy, excision of metastatic lesions whenever possible followed by radioiodine ablation and thyroid stimulating hormone suppression (Thyroxin therapy) is the recommended treatment. However, prognosis is poor in such cases. We present a case of 51 years old lady with 16 years history of non-toxic solitary thyroid nodule presented with left occipitoparietal swelling for last 1 year and left hip pain for 6 months. Fine needle aspiration of goiter and scalp swelling revealed follicular neoplasm. CT brain demonstrated a large mass in left parietal and occipital region with direct brain compression. The patient underwent total thyroidectomy followed by radioiodine ablation and radiotherapy for the bone metastases. Patient was advised to continue thyroxin tablet for life long.

Conclusions: Follicular carcinoma should be considered as an important differential diagnoses for metastasis lesion over skull.

Key words: Skull metastasis, follicular thyroid carcinoma

Comparison of lipid lowering efficacy of atorvastatin and rosuvastatin

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Abstract

Background: Dyslipidemia is a well known risk factor for coronary heart disease (CHD), and its management with a view to reduce CHD risk has remained in lime light since long. Statins are the most commonly used agents for this purpose. A number of them are available, each having a different lipid lowering capability, making the selection of an appropriate one confusing for physicians. Various other factors that need to be considered while choosing the best one include their cost, side effects profile and patient preference.

Aim & Objectives: To compare the efficacy of atorvastatin and rosuvastatin in reducing the serum levels of different lipid fractions.

Methods/Study Design: This quasi-experimental is being carried out at Department of Medicine, 1 Mountain Medical Battalion, Bagn (Azad Kashmir, Pakistan) since Sep 2012 after approval by the Ethics Review Committee of the institute. Eligibility criteria include:

- (1) Diabetics with CHD (including MI& stroke)—regardless of baseline lipid levels.
- (2) Diabetics without CHD, age >40 years and additional CHD risk factors (hypertension, smoking, obesity, male gender, family history of premature CHD) —regardless of baseline lipid levels.
- (3) Non- diabetic hypertensive patients are included in the study if lipid lowering agents are indicated in accordance with the risk categories defined in ATP III guidelines:
 - a. Hypertensive patients with MI, stroke
 - b. Hypertensive patients with LDL >4.2 and smoking/ HDL<1.04mmol/l /age (men>45 years, women>55years)

Exclusion criteria include unwillingness by the patient and presence of any underlying condition producing dyslipidemia such as nephrotic syndrome. At the initial consultation, an informed written consent is obtained from the patients in their native language and demographic data recorded. Blood samples are collected for estimation of serum total cholesterol, triglycerides, HDL and LDL after 12 hours fast. Patients are then assigned to either of the two groups using non-probability convenience sampling technique. The first group is to receive atorvastatin 10mg HS

whereas the second group is given rosuvastatin 5mg HS daily. Statins are continued for a total of 6 weeks, during which period the patients are followed up on fortnightly basis. On each visit, compliance to treatment is assessed and possible side effects to treatment recorded. Serum total cholesterol, triglycerides, HDL and LDL after 12 hours fast are rechecked at the end of 6 weeks. The study is still on-going and data collected upto the end of Feb 2013 has been analyzed with SPSS 18 using independent samples t- test as a test of significance.

Results/Findings: So far, a total of 90 patients have completed the trial. Out of these, 40 (20 males and 20 females; age 52.05± 13.25 years) have been treated with atorvastatin whereas 50 (16 males and 34 females; age 54.84± 10.40 years) have been treated with rosuvastatin. The underlying diagnosis in these patients are shown in Table 1. As depicted in Fig 1, serum cholesterol, triglycerides and HDL have been reduced to the same level in both the treatment groups. However, a significantly greater reduction in serum LDL levels has been observed in patients treated with rosuvastatin as compared to those treated with atorvastatin. Bodyaches and pains have been the only side effect observed, seen in 3 (7.50%) patients treated with atorvastatin and 4 (8.00%) patients treated with rosuvastatin (p: 0.834)

Conclusion: Rosuvastatin is superior to atorvastatin in reducing serum LDL levels, whereas the effects on serum total cholesterol, triglycerides and HDL is equivalent to those of atorvastatin. Rosuvastatin should thus be preferred over atorvastatin while choosing a statin.

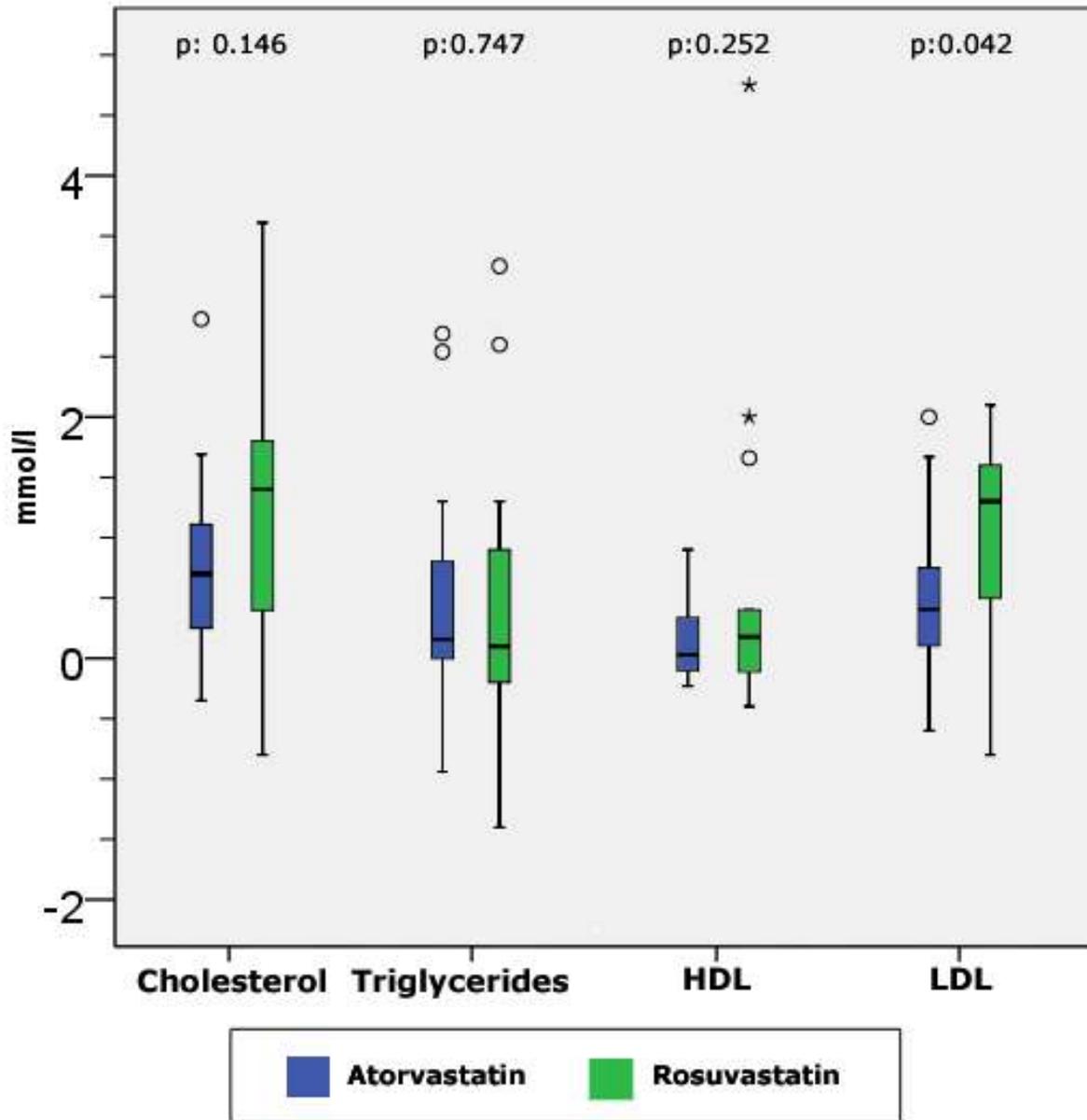
Key words: statins, dyslipidemia, coronary heart disease, diabetes

Table 1: Underlying diagnosis

Disease	Atorvastatin group (n=40)	Rosuvastatin group (n=50)
Diabetes mellitus type 2	32	37
Hypertension	13	16
Angina pectoris	4	6
Congestive heart failure	-	4
MI in the past	1	-
Stroke	2	-

(Figures refer to the number of patients. Many patients had more than one diagnosis.)

Fig 1: Mean reduction in lipid parameters



Evaluation of students' feedback for improvement of clinical posting

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Abstract

Background: Feedback to student is part of the learning process seen in many learning models and also used for stimulating undergraduate learning in medical education. On the other hand, using students' feedback for improvement of teaching become popular in medical education since 1990's. There are many research on giving feedback to students and how students perceive feedback. However there is not much study on usefulness of students' feedback for improvement of medical education. This study tries to examine the feedback from students for improvement of clinical teaching.

Aim & Objectives:

This study aims to:

- identify students' preferred teaching learning methods and reasons mentioned in student feedback-form
- determine student's preferred assessment methods and reasons mentioned in student feedback –form

Methods: It is a cross sectional study done in a clinical posting of a medical school in Malaysia during 2013. A feedback form with open-ended questionnaire was used as a data collection tool. Qualitative data analysis was done to interpret responses to open ended questions.

Results/Findings: There are diversity of students' preferences on teaching & learning methods and assessments. Most of the students preferred a teaching-learning methods which prepared them for end posting and final examination. Most of the students like an assessment method which prepared them for final exam. Students do not like learning methods without face to face guidance from lecturers. Most of the students do not make suggestion for improvement. The students do not know how to make effective use of Self Directed Learning. Although students mentioned the

teaching learning methods and assessment methods they do not like , most of them do not give suggestions for improvement of the methods.

Study Limitations: Students' understanding on importance of feedback was not explored. Students were briefly told that students' feedback will be reviewed to improve the teaching learning and assessment methods before they fill the form. Students' may respond more seriously if they know the importance of their feedback for improvement of teaching learning methods and assessment methods.

Conclusion: This study gives some information useful for improvement of teaching learning as well as assessment methods. It gives an insight that participating medical students are not ready for independent learning. Students do not expect change in teaching learning methods and assessment methods.

Key words: Students' feedback, Assessment methods, Teaching learning methods, Clinical posting

A Concept Map to highlight the teacher's role in student centred learning process

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Abstract

Background: The institutions of higher education in Malaysia are trying their best to keep abreast with the current educational trends. The concept of student-centred learning has been incorporated into the undergraduate and postgraduate curricula and students are encouraged to become active learners. However, faculty members tend to incline towards teacher-centred learning as they find it hard to comprehend the students' learning process. The most crucial part is that teachers are feeling - they might be left out in the student-centred learning practice. This project was attempted to highlight the importance of teachers in the educational context of a student-centred learning approach.

Aim & Objectives: To develop a concept map highlighting the teacher's role in a student-centred learning process in the context of higher education and to determine its acceptance by the faculty members.

Methods: The available theories on learners, teaching and learning processes were reviewed through literature search as well as expert opinions. Discussion and brain storming among peer lecturers were done to find the link between different theories to form a concept map as an innovative attempt to clarify the concept of learning. Opinions on their tasks and roles during various student-centred processes were retrieved from experienced teachers. A draft concept map was developed and improvements had been made through discussions with faculty members.

Results/Findings:

The concept map developed as such depicts the socio cultural context as an outer frame because both formal and informal learning cannot occur in a vacuum or outside the social context. The smaller frame represents higher education institution like universities and colleges. Learner is the main actor with differing orientation and learning styles. Whatever learning theories may be used, there should be teacher or instructor for formal learning. Socio-cognitive and Constructivist approach encourages collaborative learning and learners have to make sense of the problems together with co-learners (community of practice). Threshold concept and troublesome knowledge are important for teachers as learners need help to overcome the thresholds to proceed in learning stages (from novice to expert). The instructors are responsible for facilitating the learner to advance

from one stage to next higher level. A consensus was reached that teachers still played an essential role for efficient implementation of student centred learning.

Study Limitations: The concept map had been presented and discussed only in a few institutions that the teacher's acceptance of this concept map could not be generalized.

Conclusion: With the advent of technology, the learners are ready to adopt and adapt to the student-centred learning approaches. Accordingly, the teachers should be ready to make the best use of this approach. It is intended that the concept map be of some assistance for newly recruited faculty members to comprehend the students' learning in the context of higher-level education.

Key words: teacher's role, student-centred learning, concept-map, higher education

The Emerging Role of Computer Literacy in Improving the Performance of Dental Students

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Abstract

Aims: The aim of this study was to investigate the current knowledge, skills, and opinions of undergraduate dental students of Qazvin University of Medical Sciences about information communication technology (ICT). A survey was carried out to investigate the capability and attitude of dental students towards computers, using questionnaire.

Materials & Methods: Questionnaires were distributed among undergraduate dental students. All students had access to computers and Internet at the university. Dental students of the second, third, fourth, fifth and sixth years of the dentistry program were asked to complete a questionnaire presented to them at the end of a lecture at the end of the second semester 2008-09.

Results: The response rate was 84.4%. As for free and unrestricted access to computers at the school of dentistry, 93.4% of the students had access to computers at home. All users were computer users. A significant number of students (57.9%) judged themselves proficient in information technology (IT) skills. There was no significant difference between the two sexes about IT. More than 90% of the student acquired their computer skills through sources other than the university. Both sexes used computer to access Internet (78.9%), for word processing (18.4%), multimedia (7.8%), presentations (18.4%), and data management (1.3%). Some students selected more than one item.

Conclusion: Our study revealed a high level of ability to use ICT facilities among dental students. Attention is required to develop interventions that can improve ICT skills. However, the educational use of ICT among Iranian students remains high.

Key words: Computer, Internet, ICT, dental students, education

Emerging Role of Health Information Technology in the US Public Health

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Abstract

The author discusses a starting-point premise of Health Information Technology infrastructure which is expanding rapidly in public health practices in the United States and potentially in other developed nations. For example, we find continuous expansion of Electronic Health Record applications with strong push from the government sector for Physicians, Hospitals and other providers to convert paper based practices to digital and an interoperable framework. Using Health Exchanges, soon EHRs are expected to directly transmit patient and disease based data to public health registries which currently is a rather manual process. We also find expanding role of telemedicine technology for patient outreach as well as in Disaster Medicine. Last but not least, while the basic premises of public health is expanding, in this age of digital “big data” analytics, the role of Information Technology is undergoing new applications, algorithms and strategies to improve population health, health outcomes and health registries.

Key words: Public Health, Health Information Technology, Electronic Health Record, Public Health Informatics

Uremic Pericardial Effusion: A Case Report

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Abstract

A 24 year old man, recently known to have hypertension was admitted to our hospital for acute shortness of breath with central chest pain. His investigations revealed end stage renal disease with a normochromic normocytic anaemia. There was cardiomegaly on his chest radiograph and initial echocardiography did not reveal a pericardial effusion. Haemodialysis was initiated and his renal profile steadily improved. His serial chest radiographs from day 10 post hemodialysis showed increasing heart size. Echocardiography revealed a new pericardial effusion without the signs of pericardial tamponade. His pericardial effusion was completely resolved 4 weeks after admission with more intensive haemodialysis regimens, including daily short dialysis. This supports the notion that patients with uremic pericarditis resolve rapidly with intensive dialysis.

Key words: End stage renal failure, Haemo dialysis, pericardial effusion, Uremic Pericarditis

Silent ACTHoma: A subclinical presentation of Cushing's disease in a 79 year old male

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Abstract

Pituitary adenomas are mostly benign tumors which may be clinically functioning or non-functioning. ACTH secreting tumors causing Cushing's disease are detected in 0.7 to 2.4 per million individuals per year. Most of the cases reported on such ACTHomas are microadenomas (<10mm) and very few macroadenomas (>10mm). We report an unusual case of 79 year-old elderly patient presenting with subclinical Cushing's disease due to pituitary macroadenoma (ACTHoma) found incidentally. It raises many possibilities of biochemical nature of hormone in such patients or early degradation of hormone. It certainly brings to our attention that more clinical research is needed to find causes of subclinical Cushing's disease.

Key words: pituitary macroadenomas, Corticotroph adenomas, microadenomas, hypercortisolism

The Vanishing “Shower Head”: A case of Spontaneous Mobile Proximal Transverse Aortic Thrombus presenting as Acute Critical Limb Ischemia

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Abstract

Introduction:

Proximal transverse aortic thrombus is a rare finding having a high risk of embolic events, including critical limb, cerebral and visceral ischemia. Mainly surgical management strategies have been suggested with some authors recommending thrombolysis. We present a rare case of pedunculated proximal transverse aortic thrombus which was managed medically and the patient showed near complete resolution within a week of therapy.

Case Report:

A 56-year-old African American lady presented with 3 hour history of rest pain, poikilothermia, paresis and paraesthesia of right foot. Past history of hypertension, diabetes mellitus and 30 pack year smoking history. No history of atrial fibrillation, valvular heart disease, intermittent claudication or hypercoagulable disorder. No family history indicating hypercoagulable disorders. Vitals were within normal limits. Clinical examination showed regular pulse and signs of acute right ischemic foot with absent popliteal and dorsalis pedis pulses, delayed capillary refill, cyanotic skin discoloration, and tender cold right foot. EKG showed normal sinus rhythm. CT Angiogram of abdominal aorta revealed occlusion of right common femoral, peroneal and anterior artery with no evidence of significant calcified atherosclerotic disease and multiple wedge shaped hypodensities in bilateral kidneys. Emergent right femoral embolectomy was done. Due to high risk of compartment syndrome, a 4 compartment fasciotomy was also performed. Good Doppler tones were achieved post operatively. Histopathology of occlusive thrombi removed showed early organizing blood clot.

Postoperative transthoracic echocardiogram and ultrasound of bilateral carotids were negative. Transesophageal echocardiography (TEE) was performed to further evaluate cardiac source of embolization. It revealed a large 1.4 by 2.3 cm homogenous highly mobile pedunculated echodense mass in proximal transverse aorta. Workup for prothrombotic disorders (DRVVT lupus anticoagulant screen and highly phospholipid dependent aPTT, proteins C and S, antithrombin III activity, homocysteine, antinuclear antibody, factors V Leiden and II Prothrombin 20210A mutation, and cardiolipin IgG, IgM and IgA) were negative. She was started on heparin drip post-

operatively and bridged to warfarin (INR goal 2-3). Repeat TEE 5 days later showed near complete resolution of aortic thrombus with only remnant simple (<4mm thickness) atheromatous plaque where stalk was connected. Her post operative course was uncomplicated. She did not have any signs or symptoms of embolic events post operative. She was discharged home on the 10th post operative day on lifelong anticoagulation (warfarin) and statin therapy.

Discussion:

In our patient, since she was already started on anticoagulation, we decided to continue it for next few days and repeat TEE to see response to therapy. Our case shows successful resolution (confirmed by TEE) of a large pedunculated proximal transverse aortic thrombus in a patient with critical arterial ischemia after 6 days of anticoagulation therapy with heparin. This suggests that effective anticoagulation under close monitoring can be a promising management option in selected patients with aortic thrombus compared to surgery and thrombolysis. Further studies need to be done to find the best strategy in managing such patients.

Key words: thrombolysis, aorta, thromboembolism, transthoracic echocardiogram, transesophageal echocardiogram

An unusual complication of weight lifting: Aortic Dissection

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Abstract

Introduction:

Aortic dissection (AD) is a catastrophic event secondary to number of known precipitating factors¹. Weight lifting, on the contrary is a rare causes of AD. Hatzaras et al reported 31 patients having AD precipitated by weight lifting, of which 4 had Sanford Type B. Extensive literature search showed most articles describe Sanford Type A AD and with existing aortic dilation presenting with acute onset chest pain after weight lifting. We report a rare case of non-Marfan elderly patient with localized intimal dissection in non dilated infrarenal abdominal aorta (Sanford Type B/ DeBakey's Type IIIb) presenting as sudden onset abdominal pain after weight lifting.

Case Report:

A 60- year old African-American gentleman presented with a 3-day history of acute onset left lower quadrant abdominal pain which started while moving his friend's heavy furniture. Clinical examination revealed a well built man (BMI of 22) with mild left lower quadrant abdominal tenderness on deep palpation with otherwise normal exam. Vitals and routine labs were within normal limits. EKG showed sinus rhythm. Contrast-enhanced CT scan of abdomen/pelvis revealed localized infrarenal abdominal aorta intimal dissection from origin of inferior mesenteric artery, extending approximately 3cm caudally. No retroperitoneal hemorrhage. Aortic diameters were 1.8x1.9cm in transverse and AP planes respectively. No CT/clinical evidence of bowel ischemia were apparent. No history/clinical evidence of Marfan's syndrome/ Ehlers-Danlos' syndrome/syphilis/vascular anomaly/trauma were noted. No family history of similar events. Conservative management was started. Beta blocker was given to maintain heart rate <60 bpm and systolic BP <120 mm Hg. Vitals remained stable. With pain well controlled and no signs and symptoms of bowel ischemia, we continued conservative management. He was discharged on metoprolol PO 12.5mg q12 hours with plan for follow up CT angiogram in 3/6/12 months

Discussion:

This is a rare case of non-Marfan elderly patient with localized intimal dissection in non-dilated infrarenal abdominal aorta (Stanford B/ DeBakey's type IIIb) presenting as sudden onset abdominal pain after weight lifting. Researchers have shown the direct effects of heavy weight lifting on arterial blood pressure. Highest blood pressure was seen during a double bench press

(480/350 mmHg). Mean peak value for same exercise was 320/250 mmHg! Cardiac output shows positive linear relationship with the intensity of exercise performed. Thus the instant increase in blood pressure from exercise or emotions may cause a corresponding wall stress exceeding the tensile strength of the aortic tissue. When combined with existing aortic dilation it may result in aortic dissection.

Apart from connective tissue disorders like Marfan's/ Ehlers-Danlos' syndromes, weightlifting has been reported as predisposition for AD. Most of these patients are young and had dilated aorta and Sanford type A AD. We observed that weight lifting can precipitate Sanford type B AD with normal aortic dimensions in an elderly patient presenting as acute abdominal pain. Hence, AD may be considered in the differential diagnosis of elderly patient with sudden onset abdominal pain after weightlifting.

Key words: Debakey, Marfan, Abdominal pain, mesenteric ischemia, inferior mesenteric artery

A BUG THAT LICKED THE JOINT AND BIT THE HEART: A Rare and Unusual Presentation of Infective Endocarditis and Cellulitis by *Streptococcus Dysgalactiae*

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Abstract

Introduction: Invasive Group C infections remain a very rare entity. Group C streptococci are part of the normal human flora and may cause pharyngitis but invasive infections have been infrequently reported. Epidemiologically, native Infective Endocarditis (IE) is caused by streptococcus viridans. However, there are 5% of cases where other species of streptococcus are being reported. We present a rare case of streptococcus dysgalactiae cellulitis that resulted in septicemia, prosthetic joint septic arthritis and subsequently native valve IE. Our literature search showed less than ten similar cases being reported so far.

Case Report: A 54 year old Caucasian female, morbidly obese with medical history of long standing diabetes mellitus, lower extremities venous stasis, recurrent episodes of lower extremity cellulitis, and bilateral total knee replacement >10 years ago. She presents with aggressive cellulitis that developed after her cats and dogs scratched her left lower extremity. CT scan showed right knee abscess. Due to extension of abscess to the prosthetic joint, she underwent explantation of hardware. A new 3/6 systolic murmur was found. A Transthoracic followed by Transesophageal echo revealed small linear vegetations on the aortic valve. Blood cultures grew streptococcus dysgalactiae on 2 sets as well as in the arthrocentric fluid. IE was confirmed by modified Duke's criteria. IV vancomycin was given for 4 weeks for treatment and patient improved clinically.

Discussion: Group C streptococcus is usually a zoonotic pathogen. Streptococcus dysgalactiae is one among the group affecting humans. It is a beta hemolytic organism that produces large and small colonies. It is subdivided into subspecies equisimilis and dysgalactiae identified by 16s rDNA technique. Large colony organisms produce endemic and epidemic exudative pharyngitis or sometimes cellulitis but less than 5% case it will cause bacteremia and very rarely Infective Endocarditis.

Conclusion: The case report highlights that clinicians must maintain a high index of suspicion for invasive group C infections especially in the immunocompromised host. If aggressive soft tissue

infections are present blood cultures should be checked too. New technologies are able to identify further sub species of Group C organisms. Knowing this it will help us identify and provide accurate timely diagnosis and treatment.

Key words: Group C Streptococci, Septic arthritis, pet, abscess, bacteremia