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Do Health Care Providers Adhere to the Revised Malaria Control Guidelines?

Sujoy Ray  
Final Year MBBS student, Kasturba Medical College, India  
sujoyray@rediffmail.com

Dr. Suma Nair  
Associate Professor, Department of Community Medicine, Kasturba Medical College, India  
suma.nair@manipal.edu

Abstract

Introduction: Malaria is a public health problem worldwide with India contributing to 77% cases in the South East Asian region of WHO. Karnataka is one of the project states under World Bank with API>2. Statistics from the district of Udupi, which is the setting for this study, shows a rise in malaria cases from January-May 2009. There were a total of 1189 malaria cases reported of which 103 were positive for *P. falciparum*. The National Programme to control malaria has recently revised its strategies, thus involved personnel need to be aware of it for the programme to be effective.

Objectives: Keeping in mind the emergence of Chloroquine resistant malaria, The National Malaria Control Programme has revised its strategy. This cross-sectional study was conducted to assess the awareness and practice of National Guidelines for malaria among health care providers in Urban Udupi, Karnataka (which is one of the project states under the World Bank for malaria control) and the problems in implementation of these guidelines.

Settings and design: Cross sectional study, Udupi district

Methods: Data was collected by personal interview (structured proforma) after obtaining due consent.

Statistical analysis used: Data was analyzed by SPSS software

Observations/Results: Most respondents were from both Manipal and Udupi and had been practicing for over 5 years. Chills and headache were used as main guiding symptoms for diagnosis, all insisted on lab diagnosis with QBC being the most preferred test followed by smear. Cases were treated on pure clinical diagnosis in case of typical signs, unresponsiveness to other therapy, unwillingness or non-affordability of tests. Both species of Plasmodium were prevalent, Chloroquine being first line treatment for *P. Vivax* and Artemisinin compounds for Falciparum. Clinical failure was encountered against Falciparum due to chloroquine resistance and quinine was mainly used to combat it. Medical journals were the most important source of information. Non-availability and increasing costs were the main problems in ACT prescription; notably some physicians had never used ACT. About one-third of the physicians were aware of specific government initiatives for implementation of the revised malaria control guidelines.

Conclusion: Despite the implementation of national guidelines for over two years, it was still to be uniformly followed. Chloroquine resistance was found to be the main cause for clinical failure. Cost and availability of ACT were the main hurdles for its use. Access to information about new guidelines could be improved by IEC (information education communication) techniques, CMEs or workshops. Studies to address these issues and studies to test the efficacy of these techniques should be undertaken to ensure adherence to the revised malaria control guidelines.

Keywords: Malaria, National Guidelines, Awareness, Udupi, Healthcare Provider
Study of Single Dose Methotrexate for Treatment of Tubal Pregnancy

Nankali Anisodowleh ¹, keshavarzi Farahnaz ¹ *, Fakheri Taravat¹, Daeichin Sara¹, Shakhodabandeh Mohsen ², Rezaei Mansour ³

¹Maternity Research Center, Department of Obs & Gyn, Imam Reza hospital, Kermanshah University of medical sciences (KUMS), Kermanshah, Iran
²Kermanshah University of medical sciences (KUMS), Kermanshah, Iran
³Biostatistics department, Medical Biology Research Center, Kermanshah University of medical sciences (KUMS), Kermanshah, Iran

Corresponding Author*: Dr. Farahnaz Keshavarzi
Phone number: +989181313316
Email: Fnkeshavarzi@yahoo.com

This work was performed in partial fulfillment of the requirements for (M.D.) of Mohsen Shakhodabandeh, Kermanshah University of Medical Sciences.

Abstract
Introduction: Ectopic pregnancy (EP) occurs in ∼1% of pregnant women, and may seriously compromise women’s health. Systemic administration of methotrexate (MTX), has gained acceptance in selected patients.
Objective: The propose of this Descriptive analysis study was to determine the success rate of single dose methotrexate (MTX) protocol for the treatment of unruptured tubal ectopic pregnancy.
Method: This retrospective study included 139 patients with ectopic pregnancy who were treated with MTX therapy (single dose protocol 50 mg/kg, Intramuscularly) during the years 2009-2010. Data analyzed through SPSS software version 13.
Main and secondary outcome measures:
Decline of plasma human chorionic gonadotropin < 15% on the 4th day of MTX administration, mean of primary β-hCG level, need to additional dose of MTX, need to surgery, presence of free fluid in culdesac, length of hospitalization, mean of gestational and maternal age, mean of ectopic mass size.
Result: The success rate was 64%, mean of primary β-hCG level was 523.72±674.13 MIU/ml, need to additional dose 23.74%, need to surgery 21.6%, free fluid was observed in 23% of patients, mean hospitalization was 6.46% days, mean of maternal age 27.74 years and mean of gestational age was 5.97±1.82 weeks and mean of ectopic mass size was 2.45±0.79 cm.
Conclusion: In women with an ectopic pregnancy medical treatment with single dose MTX tends to be successful options.

Keywords: MTX, Ectopic Tubal Pregnancy, Success Rate
Abstract

**Background:** The undergraduate medical course is known to be a stressful course within the University structure but there are no national studies available to review this.

**Aim and Objectives:** To compare the levels psychological stress between medical and non-medical students and to distinguish stress levels over the five years of undergraduate study of the Bachelor of Medicine and Surgery Honours degree at the University of Malta.

**Method:** Two separate depression and stress related questionnaires were distributed to a medical and non-medical student population. The results obtained of the two questionnaires were compared and analysed using SPSS version 16.

**Results:** A total number of 561 students completed the questionnaires including 208 medical and 253 non-medical students. The medical students scored an average of 32.71 (Q51) and 16.30 (Q52) whereas the non-medical students scored lower with a 29.17 (Q51) and 14.70 (Q52). This indicated a statistically significant difference in scores between medical and non-medical students (p<0.05). Female students were also noted to be statistically more stressed than male students (p<0.05). When comparing the different grades of student the third year students were noted to be the least stressed cohort (p<0.05) whereas the 2nd (Q-2) and 5th (Q-1 & Q-2) year students were the most stressed groups (p<0.05). There was no significant difference between the 2nd and 5th year students with regards to their scores of Q-2 but there was a difference noted when comparing the Q-1 scores.

**Conclusion:** The results confirm the need for a framework to support medical students during their course, especially during the two more demanding years (2nd and 5th year). Further scope for investigation may be the manner in which males cope as the stress levels appear to be generally lower and also to compare with future groups of students following a move from one venue to a newer medical school.

**Keywords:** Psychological, Stress, Students, Medical, Undergraduate
Obstetric Outcomes of Teenagers and Older Mothers: Experience from Saudi Arabia

Abdel-Hady El-Gilany ¹, Sabry Hammad ²
¹Prof. of Public Health, College of Medicine, Mansoura University, Egypt
²Director of Preventive Medicine, Northern Region Health Affairs, Ministry of Health, Saudi Arabia
ahgilany@gmail.com, ahgilany@hotmail.co.uk

Abstract:

Background: Extremes of maternal age adversely affect pregnancy outcomes. Teenage pregnancy is a public health problem and is known to be associated with adverse pregnancy outcomes. Advanced maternal age is a risk factor for pregnancy outcome. Saudi Arabia suffers the dual burden of teenage pregnancy and older pregnancy.

Objectives: To explore the effects of maternal age on pregnancy and its outcome among mothers adequately covered with maternity care.

Methods: A retrospective record-based comparative study was carried out in Northern region of Saudi Arabia. We compared the obstetric outcomes of mothers aged less than 20 years (teenage pregnancy); mothers aged 35 years and more (older mothers) with mothers aged 20 to 34 years (reference group). Data was abstracted from family files, and maternity cards kept at primary health care centers.

Results: Teenage pregnancy and older mothers accounted for 9.0% and 16.8% of the total registered mothers. Antenatal morbidity, mode of delivery and neonatal outcomes did not differ between teenage mothers and the reference group. On the other hand, gestational diabetes mellitus, pregnancy induced hypertension, and caesarean section were more frequent among older mothers, compared to the reference group.

Conclusion: teenage pregnancy in Saudi Arabia is not associated with bad obstetric outcomes. In the contrary older age mothers experienced more prenatal morbidity and caesarean section. Adequate antenatal and natal care mitigated the adverse effects of younger and advanced maternal age.

Keywords: Adolescent Mothers, Maternal Age, Teenage Pregnancy, Older Mothers, Adverse Pregnancy Outcomes
A Comparative Study between Collagen Dressings and Conventional Dressings in Wound Healing

Dr. HARISH RAO, Dr. ASHWIN PAI, Dr. Irshad Hussein, Dr. HS SHANKAR RAM, Dr. Sheila R Pai, and Dr. Shobha Pai
Manipal University, India
drashwinpai@gmail.com

Abstract

Background: Treatment of foot ulcer remains a major health-care issue; and especially diabetic foot ulcer which is the commonest cause of lower-extremity amputation. Although several investigations have examined topical collagen-based dressings, none have specifically looked in India. We, therefore, evaluated the effect of the collagen dressing on foot ulcer.

Methods: A Hundred patients with foot ulcer were evaluated. A collagen or conventional dressings were applied, and the patients were followed as per standard post-application treatment protocol. Patients underwent dressing changes every 3 to 4 days until wound healing or for maximum period of 12 weeks. Changes in wound size were recorded when the dressing was removed; and at 4 and 12 weeks.

Results: In 75 patients collagen dressing was applied, whereas conventional dressing in 25 patients. All the patients were prospectively available for evaluation. On enrolment, the median wound size was 33.5 cm$^2$ in collagen dressing group and 48 cm$^2$ in conventional dressing group. Healing time (4.02 ± 0.59 Vs 7.6 ±1.38), duration of antibiotic therapy (15.12±4.55 Vs 24.08± 6.5) and mean follow up period (2.40 ± 0.61 Vs 2.96 ± 1.2) were significantly less in collagen dressing group as compared to conventional dressing group (P<0.001). No adverse event was reported in both the groups.

Conclusions: Collagen dressing is safe and effective in the treatment of foot ulcer and significantly reduces healing time, duration of antibiotic therapy and follow up time.

Keywords: Foot Ulcer, Collagen Dressing, Wound Healing
If “Women are from Venus and Men are from Mars”, does an Answer Lie with Neuroanatomy?

Tabinda Hasan¹* and Mahmood Fauzi²
Department of Anatomy, Faculty of Medicine, Jazan University, Saudi Arabia
Jazan General Hospital, Jazan, Saudi Arabia
* drtabindahasan@gmail.com

Abstract
Introduction: Since times immemorial, the difference of genders has prompted philosophers to divide the civilized society into patriarchic and feminist.
Objective: This paper answers an age-old question:”Why do men and women behave differently”? Method: General and Meta search engines were employed to harvest medical database and infer relevant information from 100 representative articles. (Year 2000 to 2011) Result: Published literature suggests that the ‘difference of genders’ goes deeper than mere psychology. It stems from underlying ultra-structural variations in brain morphology, embryology and bio-molecular physiology.
Conclusion: ‘Difference of sexes’ is not merely the result of ‘post natal cultural socialization’ or ‘linearly taught mannerism styles’; rather, it is due to an ‘innate neural hardware program’. It appears that slowly down the evolutionary chain, nature has designed two completely different sets of blue prints to ensure successful survival. Dimorphism does not impart any overall superiority to either sex; however it could play a pivotal role in social / educational theory implications, cognitive / behavior conditions and natural disease progression.

Keywords: Brain, Anatomy, Behavior
Vulvar Tuberculosis in a Virgin Girl: A Rare Case Report

Farahnaz Keshavarzi, Taravat Fakheri, and Anisodowleh Nankali
Assistant Professor of Obstetrics & Gynecology, Maternity Research Center, Obs. & Gyn. Department, Imam Reza Hospital, Kermanshah University of Medical Sciences (KUMS), Kermanshah, Iran
fakheritaravats@yahoo.com

Abstract
Primary tuberculosis (TB) of the vulva is very rare. The authors reported here a case of primary ulcerative vulvar TB in a 14-year-old virgin girl. The diagnosis was based on the pathological finding on tissue biopsy, followed by anti tuberculosis therapy; the vulvar ulcer was completely healed. Vulvar TB must be considered when a persistent vulvar ulcer fails to respond to ordinary treatment.

Background: TB in female most frequently affects the upper genital tract. The prevalence varies from 1-19% depending on the countries [1] and occurs in 10% of patients with pulmonary TB [2]. A peak age frequency ranges between 21-31 Years [3]. External genital TB involvement is very rare [4] specially, primary vulvar TB [5]. There were only 10 reported cases of vulvar TB in the literature [6]. This is a very rare case report of primary painful ulcerative vulvar TB in a 14-year-old virgin girl.

Keywords: Tuberculosis, Vulva, Ulcer
Abstracts of 5th International Online Medical Conference (IOMC 2012)

Comparison of Abnormal MRI Findings in T2weighted Spin Echo and T2weighed Gradient echo in Chronic Traumatic Brain Injuries

Hamid Reza Saeidiborojeni¹, Elham Shobeiri¹*, Mansour Rezaei¹, Zahra Aslani¹, and Sepehr Saeidiborojeni²
¹Kermanshah University of Medical Sciences, Kermanshah, Iran
²Tehran University of Medical Sciences, Tehran, Iran
* elhamshobeiri@gmail.com

Abstract

Background: Traumatic brain injury (TBI) is a common problem nowadays and a significant number of traumatic patients are involved in mental and cognitive disorders, the most common CT finding is small hemorrhagic lesions in cerebral white matter, these hemorrhagic lesions can be effective in occurrence of neuropsychiatric symptoms in Post Traumatic Stress Disorder patients. Many diagnostic modalities such as T2GE and T2SE have been employed to detect brain hemorrhagic lesions.

The goal of this study is the comparison between these two sequences for diagnosis of brain hemorrhagic lesions in patients with a history of previous head trauma that were referred with neuropsychiatric symptoms.

Purpose: The comparison between abnormal findings in T2SE and T2GE sequences in chronic traumatic brain lesions in MRI.

Material and Method: Thirty patients who had a history of previous head trauma, referred to neurosurgeon because of neuropsychiatric symptoms (PTSD) were prospectively studied using MRI. Then the correlation between T2GE and T2SE sequences finding and patient’s clinical symptoms were analyzed by Wilcoxon Signed Ranks Test (all the patients had these symptoms at least three months after head trauma).

Findings: 80% of patients had hemorrhagic lesions in T2GE which was significantly (p<0/01) greater than those detected by T2SE (23%). Therefore T2GE is significantly better than T2SE in detecting the cause of clinical symptoms in traumatic patients (p<0/01).

Conclusion: T2GE was found to be more useful for evaluating the neuropsychiatric symptoms in patients with previous history of head trauma so this sequence could play a major role in diagnosis and treatment of these patients especially in their legal problems. Thus we recommend that this sequence to be a routine method for evaluation of chronic traumatic patients.

Keywords: Traumatic brain injury, MRI, T2GE, T2SE
Has a Time Arrived to Talk about Cure of AIDS?

Dr. Matin Ahmad Khan
MGM Medical College, Jamshedpur, Jharkhand, India
mak5962@hotmail.com

Abstract

Background: Cure can have different meanings in the context of epidemiology, clinical care and programmatic evaluation as in RNTCP (Revised National TB Control Program). It could range from ‘remission’ (cancer model) to ‘eradication’ (Infectious diseases model). Antiretroviral drugs have reached the limit of their effectiveness. The cost of providing universal access has become unsustainable, and accumulating evidence underscores the detrimental effects of persistent HIV infection even while plasma viral load is low and CD4 cell count is high. There could be host of factors attributed for this scenario — life long treatment involving the cost of therapy and requiring a very high level of adherence unpleasant side effects, including risk for CVD and cancer increasing with age, ultimately HAART failing, leading to resistance, and absence of a therapeutic/preventive vaccine in near future. Naturally ever than before, much need has been felt for the quest for a ‘cure’. Achieving either a functional cure (long-term control of HIV in the absence of HAART) or a sterilizing cure (elimination of all HIV-infected cells) remains a major challenge.

Two men—both dubbed “the Berlin Patient # 1 & # 2”—who will be remembered as ‘harbingers in the discovery for a cure have changed the course of history, particularly with the publication of the Berlin patient # 2 case report (2009) with AML BMT from a donor who carried a 32 base pair deletion in the CCR5 gene, has infused new hope in researchers for at least a ‘functional cure’.

Ultrasensitive tests reveal very low levels of plasma HIV RNA (as little as 1 copy/mL) in most people with “undetectable” viral load. Replication-competent HIV can still be isolated from resting CD4 T-cells from people with the longest duration of HAART use—now around 15 years—and viral rebound almost always occurs soon after treatment interruption. HIV can persist inspite of continuing ART as it hides in reservoirs, some of them becoming latent ones, that are not sensitive to current therapies. The most significant barrier to cure is the establishment of a latent or ‘silent’ infection in resting CD4+ T cells and the persistence of HIV in a latent form in different cellular and anatomical reservoirs. Mathematical modeling suggests that it would require 70 years of treatment with HAART to eradicate latent reservoirs.

Researchers are exploring many approaches for eradicating HIV or achieving a functional cure, which are --- Starting ART very early before viral reservoirs are fully established, Intensifying antiretroviral therapy to stop residual HIV replication, Activating resting T-cells to purge or flush out latent virus, Maintaining latency to keep proviral DNA permanently silenced, Eliminating or disabling HIV-containing resting cells, Protecting uninfected cells against viral entry, Strengthening the immune system’s response to HIV.

Aim & Objectives: This presentation focuses on the key scientific and clinical variables that we need to understand in order to significantly expand the breadth and scope of the various approaches aimed at finding a cure for HIV. In addition we will focus on limitations of long term HIV Therapy, obstacles coming in finding a ‘cure’ and explores for eradicating HIV or achieving a ‘functional cure’.

Methods/Study Design:
Data Source: The scientific literature and eligible materials were surveyed related to ‘cure/eradication of AIDS
Data Selection: Building on this conceptual framework, the related observational studies and modeling works, who met the selection criteria of being related to ‘cure of AIDS’

Data Extraction: Reports were screened and information from eligible studies was abstracted independently and synthesized.

Design: A descriptive study on the issues of ‘cure from AIDS’ comprising several randomized and non-randomized studies

**Results/Findings:** Several randomized clinical trials have demonstrated that treatment intensification with additional antiretrovirals has little impact on latent reservoirs. Some potential other approaches that may reduce the latent reservoir include very early initiation of HAART and the use of agents that could reverse latent infection. Drugs such as histone deacetylase inhibitors, currently used and licensed for the treatment of some cancers; methylation inhibitors; cytokines such as IL-7 or activators of nuclear factor kappa B (NF-kB) such as prostratin, show promising activity in reversing latency in vitro when used either alone or in combination. Alternate strategies include using gene therapy to modify expression of CCR5 and therefore make cells resistant to HIV. One multicenter, open-label, non-randomized trial, called ‘New Era study’ to evaluate treatment with multi-drug class (MDC) HAART and its impact on the decay rate of latently infected CD4+ T cells has been going on in Germany with primary objective of reducing proviral DNA in PBMC (peripheral blood mononuclear cells) and achieving HIV eradication. The ‘EraMune trials are evaluating whether an intensified ART regimen with either Interleukin-7 or a therapeutic vaccine can eliminate HIV from the body. Another investigational approach to curing HIV is modifying CD4 T-cells to make them resistant to HIV entry, by removing CCR5 by a zinc finger nuclease.

**Study Limitations:** There are multiple barriers to the eradication of HIV infection and despite some recent significant advances in in-vitro models of latency, better animal models and the identification of several compounds that can reverse latency in vitro, there is still a need for more research.

**Conclusion:** In summary, research to date on HIV eradication and the likely more achievable goal of a functional cure has spotlighted several promising proofs of concept, but none of these approaches are ready for widespread clinical application. It is likely that multiple combined approaches will be needed to eradicate HIV given that HIV can persist in diverse cell populations in patients on HAART. A well funded multidisciplinary approach that includes basic virologists, immunologists, clinicians, pharmacologists and the infected community will be needed if we are ever going to meet this challenge.

**Keywords:** Functional Cure, Eradication, Berlin Patient, HAART, Activated & Latent CD4 Cells, HAART Intensification
Study of Incidence and Treatment of Radial Nerve Palsy in Fracture Shaft of Humerus

Amit Bhardwaj¹ and Kye Mon Min Swe²
¹Department of Orthopaedic, Melaka Manipal Medical College, Malaysia
²Department of Community Medicine, Melaka Manipal Medical College, Malaysia
khmoneminswe@manipal.edu.my

Abstract

Background: A radial nerve injury associated with a humeral shaft fracture is an important injury pattern among trauma patients. It is the most common peripheral nerve injury associated with this fracture. Injuries to the radial nerve can result in significant motor impairment of the arm and the wrist with the loss of wrist extension, the ability to grasp is significantly reduced leading to a serious handicap.

Aim and objectives: To find out the incidence of radial nerve palsy in case of fracture shaft of humerus. To analyze results of various modalities of treatment of fracture shaft of humerus associated with radial nerve injury; To establish a probable guideline for the treatment of radial nerve injuries in fracture of the shaft of humerus.

Material and methods: This is a prospective study of 80 patients with closed and open diaphyseal fracture of Humerus with 20 complete primary radial nerve palsy and 5 secondary nerve palsy treated in Government Wenlock Hospital, K.M.C. and associated Hospitals, Mangalore during the period from January 2004 to September 2006.

Results: A total of 80 patients of fracture shaft of humerus were analyzed in this study with 20 immediate and 5 secondary radial nerve palsy. The youngest patient was 20 years and the oldest was 70 years old. Majority of the patient were in 21 – 40 years of age. Radial nerve palsy was more commonly seen in fractures involving the middle third of Humeral shaft P(0.004). The incidence of radial nerve palsy was highest in patients with oblique fracture and average time of recovery was 22 weeks. All the cases that were explored showed the nerve to be in continuity and no surgical repair of the radial nerve was required P( 0.831). Radial nerve palsy associated with upper third fracture recovers faster; though it needs to be further confirmed as the sample size was small.

Conclusion: The outcome of radial nerve palsy was not found to be related to age group, sex, side, mechanism of injury, intra-operative condition of nerve, method of treatment of fracture and time of exploration of radial nerve.

Recommendation: Our study recommends a conservative and expectant line of management for both primary as well as secondary nerve palsies. As complete recovery of the nerve can be quite delayed, patience is merited before considering tendon transfers.

Keywords: Radial Nerve Palsy, Fracture Shaft of Humerous
Are Partially Activated Non-dividing Effector Cells (PANDEs) Tolerant or Anergic T-cells?

Aravindhan Baheerathan, Mr. Ian Jackson, Dr. Maria Hernandez-Fuentes, and Professor Andrew Cope
MRC Centre for Transplantation, GKT, UK
Email: Ab379@le.ac.uk

Abstract
The effector functions of activated T-cells are diverse and include cytokine production, proliferation, cytolysis and intracellular signalling events; it has been shown that T-cell activation is not “all or nothing” response and thus, these effector functions can be dissociated from one another. The phenomenon of activation in the absence of proliferation has been demonstrated both in CFSE based proliferation studies as well as in certain pathological settings. Yet despite being demonstrated in a pathological context, very little is known about cells that exhibit this phenotype. Thus, the aim of our project was to further characterise this cell population and elucidate the mechanisms that underlie their lack of proliferation.

Our first aim was to identify the activating reagent (out of anti-CD3/CD28 dynabeads, SEB and PHA at varying concentrations) that generated the highest proportion of partially-activated non-dividing effector cells (PANDEs) from CD4+ T-cells that were activated and left in cell culture for 6 days.

Following our finding that anti-CD3/CD28 dynabeads (1/10 dilution) was the best method to obtain PANDEs in-vitro, we then identified that a significantly higher proportion of PANDEs were formed in an RO+ memory phenotype.

Another target of this project was to identify whether PANDEs exert other effector functions; using intra-cytoplasmic cytokine staining and flow cytometric acquisition, we were able to show that PANDEs are cytokine-producing cells. We also showed using reverse-transcriptase PCR that PANDEs express significantly higher levels of the transcription factor FOXO1; down-regulation of this transcription factor has shown to be critical in allowing the clonal expansion of T-effector cells. PANDEs are a cell-population that predominate in the RO+ cell-line, are capable of cytokine production and express higher levels of the transcription factor FOXO1. Further research must focus on whether PANDEs remain resistant to proliferation on secondary activation and whether they are present at a higher percentage in active auto-immune inflammatory disease (as implied by current literature). Our research so far, combined with findings from studies that identify PANDEs in a pathological context, justify further research on this cell type.

Keywords: T-cell biology, T-cell activation, Non-proliferative activation, Partial activation
Knowledge and Practice of First Year Medical Students about Smoking

Kye Mon Min Swe
Assistant Professor, Department of Community Medicine,
Melaka Manipal Medical College, Malaysia
khmoneminswe@gmail.com

Abstract

Background: Myanmar is one of South East Asian countries and tobacco consumption and exposure to environmental smoking in Myanmar youth is high from the report of Global Youth Tobacco Survey. Tobacco control experts and Global Health Professional Survey on youth reports have emphasized the importance of training medical students about tobacco smoking. This study examined cigarette smoking among a sample of newly intake medical students of famous medical university in Myanmar. The knowledge and practice and factors associated with cigarette smoking in students were discussed and issues which need to be implemented to control the smoking among them in the future are presented.

Objectives: To find out the knowledge upon tobacco smoking among first year medical students, to determine the smoking practice of first year medical student and To determine the gender difference of smoking among the students

Material and method: A questionnaire-based, cross-sectional survey was done among first year medical students of the University of Medicine-1, Yangon, during August 2007. Data were collected using a pretested structured self-administered questionnaire. Questionnaire included sections about socio-demographic information, smoking behaviour and knowledge. Current smoker was defined as a person who practiced tobacco smoking at the time of data collection. Ex-smoker was defined as a person who quit smoking more than a year ago.

Results: There were total 400 first year medical students were participated in the survey. Median age of the students was 17 years, 53.3% were males and 45.8% females. Overall prevalence of current smokers and ex-smokers was 5.8% and 3.5% respectively. Median age at initiation of smoking was 14.5 years. The difference in rates smokers between male (8.9%) and female (2.1%) students was statistically significant. Most of the students aware of the health hazard of smoking but nearly half the students had poor knowledge about prevention and control of smoking.

Conclusion: Smoking among medical students was less frequent than youth in Myanmar. Medical educators may utilize this positive mindset of future doctors to train them about prevention and control of tobacco smoking.

Keywords: Smoking, Medical Students, Control of Smoking, Tobacco Education
**Single Nucleotide Polymorphism of SSU rRNA Gene among Plasmodium Knowlesi Isolates of Sabah**

**Fread Anderios**

1Diseases Section, Sabah State Public Health Laboratory, Kota Kinabalu, Sabah, Malaysia

2Department of Community & Family Medicine, School of Medicine, Universiti Malaysia Sabah, Malaysia

3Department of Pathodiagnostics, School of Medicine, Universiti Malaysia Sabah, Malaysia

* Corresponding author Email: fread_anderios@yahoo.co.uk

**Abstract**

**Background:** The advent of PCR (Polymerase Chain Reaction) assays helped in correctly identifying *Plasmodium knowlesi*, which was previously misdiagnosed by microscopy as *Plasmodium malarie* in Sabah, Malaysia. The PCR-based diagnosis of *P. knowlesi* in Sabah is currently using a set of oligonucleotide primers namely Pmk8 and Pmk9 that target one of the parasite’s small subunit rRNA (SSU rRNA) genes. PCR also helped in discovering a variant form of *P. malariae* which has a deletion of 19 bp and seven substitutions of base pairs in the target sequence of the small-subunit rRNA gene among isolates of Sichuan province of China and Thai Myanmar Border. The sequences of eight isolates identified as *P. knowlesi* in Kapit, Sarawek were not identical, showing within-species polymorphisms. Thus the possibility of variation in the DNA sequence of SSU rRNA gene of *P. knowlesi* isolates was expected.

**Aim & Objectives:** To determine the within-species polymorphism of the fifth human malaria species among Sabah population in relation to geographical regions.

**Methods:** The samples of *P. knowlesi* isolates, sent to the Sabah State Public Health Laboratory from the districts with *P. knowlesi* high prevalence, were included. In 10 samples, which gave positive in PCR with Pmk8 and Pmk9 primers in Nest 2 PCR, the Nest 1 PCR products were analysed by automated sequencer for DNA sequence to find out genetic variation of SSU rRNA of *P. knowlesi*.

**Results/Findings:** All 10 samples showed SNPs (single nucleotide polymorphism) at 14 nucleotides when compared with the same gene of Standard Strain of *P. knowlesi*. The locations of SNPs were quite similar to the SNPs found in Kapit Division of Sarawek, Malaysia. No typical SNPs pattern in each geographical region could be identified. However, SNPs in each region have only 2-3 nucleotides in difference.

**Study Limitations:** SSU rRNA gene is 2096 bp in length. However, Nest 1 product sequenced in this study is only 1622 bp in length that this study could not describe the variation in the sequence of the whole gene.

**Conclusion:** There exists a somewhat similar regional pattern of Single Nucleotide Polymorphism in the sequence of SSU rRNA gene of *P. knowlesi* isolates from Sabah, Malaysia. It is recommended to conduct further studies, involving the whole gene sequence and covering a larger amount of samples derived from different geographic regions of Sabah.

**Keywords:** SSU rRNA gene, Single Nucleotide Polymorphism, *P. knowlesi*, PCR, Sabah
A Study on Job Induced Stress among Pharmaceutical Sales Representatives in Jaipur City of Rajasthan

Raizada H.¹* and Bhagwandas M.²
¹Student, ²Professor, School of Public Health, SRM University, SRM nagar, Kancheepuram, Tamil Nadu, India
* Corresponding Author
haarsh.raizada11@gmail.com

Abstract
Introduction: As the pharmaceutical industry is growing day by day the need for the Pharmaceutical Sales Representatives (PSRs) are also increasing simultaneously. The pressure of achieving targets is transforming the nature of job which eventually resulting into the Job Induced Stress (JIS) among PSRs.

Objective: This study is trying to assess the JIS and the various factors responsible for it, some of the health consequences are also taken into the consideration.

Method: Data has been collected using a self-administered questionnaire which has been distributed to the PSRs (n=68). Data were entered into SPSS (version 17) & analyzed using descriptive statistics.

Result: Almost 56% of PSRs are feel under pressure & have some form of stress main reason are found to be dissatisfaction with job profile (59%) & working hours (60.35%), continuous pressure for improved performance (69%) and conflicting demands between work & home (75%).

Conclusion: Any development in professional practice of job need to be considered in the context of the well being of the PSRs who implement and are affected by the changes. Unless JIS for the PSRs is recognized and reduced they will remain on the brim of getting many health consequences.

Keywords: Pharmaceutical Sales Representatives, Job Induced Stress, India
Amyand’s Hernia in a 4 Year Old Child

Tarik Ibrahem Ali FRCSI
Associate Professor / Surgery Department, Faculty of Medicine & Health Sciences, Kampus Kota, Universiti Sultan Zainal Abidin (UniSZA)
tarikali@unisza.edu.my, tarikibrahemali@yahoo.com

Abstract

Introduction: Acute appendicitis is a common condition most often occurring in children and young people. A Congenital Inguinal Hernia is also a common condition to be presented at the surgical clinics, when the hernial contents are usually found to be either a Loop of Bowel, Appendix, Bladder or Omentum, but for it to be presented as an Incarcerated Congenital Indirect Inguinal Hernia due to an Inflamed Appendix (Amyand’s Hernia) is a very rare finding indeed and warrants reporting. The incidence of a normal appendix within an inguinal hernial sac is estimated to be approximately 1%, whereas acute appendicitis presented in an inguinal hernia is a very rare event (0.1% of all cases of appendicitis)1-5

Amyand’s Hernia is named after Claudius Amyand (1680-1740), who was the first one to perform the first recorded successful appendectomy on an 11-year old boy with a perforated appendix within an inguinal hernial sac in 1735[1]. Of course the clinical presentation varies, depending on the extent of the inflammatory process in the hernial sac and the presence or absence of peritoneal contamination due to perforation. In our case, it is a 4 year old male child patient, who was presented to the surgical department of the University of Science & Technology Hospital, Sana’a, Yemen, on February 27th 2007, with a right scrotal swelling, which was tender to touch. The child had been crying with abdominal pain during the night and had had two attacks of vomiting. His mother also stated that her child had had a right scrotal swelling since birth. The case was diagnosed as an Incarcerated Congenital Right Indirect Inguinal Hernia. During surgery it was discovered to be an Amyand’s Hernia (Inflamed appendix in the inguinal hernial sac). A classical appendectomy and herniotomy was performed. The child was discharged home in good health on the second postoperative day, with uneventful postoperative course.

Method: A 4 year old male child patient was presented at our Surgical Department in the University of Science & Technology Hospital, Sana’a, Yemen, on February 27th 2007, with a right scrotal swelling tender to touch. The mother stated that the child had been crying since the previous night and would not allow her to touch his lower abdomen or genitalia. He had vomited twice since the early morning and was feverish. She admitted that he had had right reducible scrotal swelling since birth.

A clinical diagnosis of Incarcerated Right Congenital Indirect Inguinal Hernia was set. The family was informed about the diagnosis and the need for an urgent surgical operation to be performed. Formal consent for the performing of surgery and the use of photographs for academic purposes was obtained from the family. Laboratory tests done included a FBC and a General urine examination. The results were all within normal limits except for mild leucocytosis (WBC: 11300mm³). The operation was performed through a right inguinal incision.

Result: Right Indirect Inguinoscrotal Hernia; when the hernial sac was opened, an inflamed appendix was revealed inside.

Keywords: Inguinal Hernia, Congenital, Incarcerated, Amyand’s Hernia, Paediatric, Inflamed Appendix
Supernumerary Penis (Diphallia Terrata)

Tarik Ibrahem Ali FRCSI
Associate Professor / Surgery Department, Faculty of Medicine & Health Sciences, Kampus Kota, Universiti Sultan Zainal Abidin (UniSZA)
Emails: tarikali@unisza.edu.my, tarikibrahemali@yahoo.com

Abstract

Introduction: A congenital anomaly affecting the male penis is an extremely rare incident, especially when presented as a case of supernumerary penis (diphallus) with no other anomalies affecting the other systems or organs, as in our case.

(Approximately 100 cases have been reported since the first case report by Wecker in 1609. There are broadly three types of diphallus, viz. true diphallus with two independent penises, bifid phallus that may be glandular or complete and pseudodiphallus having a rudimentary phallus in addition to the normal penis. Numerous associated genitourinary and gastrointestinal anomalies have been described with diphallus.) KK Sharma

Reviewing medical literatures, nearly all reported cases of Diphallia were accompanied by at least one other congenital anomaly such as another urogenital, an imperforated anus, vertebral deformities or a gastrointestinal anomaly. Reviewing medical literatures, nearly all reported cases of Diphallia were accompanied by at least one other congenital anomaly such as another urogenital, an imperforated anus, vertebral deformities or a gastrointestinal anomaly.

Method: A 19 year-old man was presented to our surgical clinic in May 1979, complaining of dripping of urine from a small bud at the ventral surface of his mid-penile shaft. The problem, which he had had since birth, proved to be a small Supernumerary penis, originating from the ventral surface of the main penile shaft. On examination, the small bud on the ventral surface of the penile shaft was seen to resemble a tiny penis of 1.5cm length. It consisted of a small glans about 5mm in length and diameter with an external urethral opening and a small shaft measuring about 10mm in length with a retracted prepuis or foreskin.

Result: Reconstructive surgical removal of the supernumerary penis was done. The post-operative course was uneventful and the patient was discharged home next day. The stitches were removed on the 7th post-operative day. The gross appearance of the surgical specimen was clearly a small penis of 1.5cm in length. No histopathological study of the surgical specimen was done at the time, but the specimen was preserved and saved and is still available for inspection.

Keywords: supernumerary penis, Diphallia Terrata, pseudodiphallus, congenital anomaly
Prevalence and Predictors of Postnatal Depression in Mothers of Karachi

Uddin Kalar1, Iqbal Fatima2, Kalar Nabila3, Ausaf Zainab4, Ghori Wardah2, Rizwan Zara2, Waseem Wajiha2, Rasheed Umaima2, Farhat Jafri5

1Senior Registrar, Research Monitoring & Training Cell, Karachi Medical & Dental College, Pakistan
kalar747@gmail.com
2Research Associate MBBS, Research Monitoring & Training Cell, Karachi Medical & Dental College, Pakistan
3Gynecologist Almofraq Hospital Abu Dhabi, UAE
4FCPS Gynecologist Abbasi Shaheed Hospital, Karachi Medical & Dental College, Pakistan
5Associate Professor MBBS, MPH Department of Community Health Sciences Karachi Medical & Dental College, Pakistan

Abstract

Introduction: Postnatal depression (PND) is a vital public health problem affecting maternal and child health. The prevalence of postnatal depression varies between 3.5% and 40%. Postnatal depression normally occurs within 6–8 weeks after childbirth. This study examined the etiological role of risk factors recognized to be relevant to the onset of postpartum depression and poverty in developed societies faced by women.

Objectives: The first objective was to determine the prevalence of postnatal depression in mothers of Karachi. The second objective was to determine the risk factors associated with postnatal depression in mothers of Karachi.

Method: This was a cross sectional study, data was collected from three different districts of Karachi from December 2010 till April 2011. The study population was selected by a cluster sampling method. Using probability cluster sampling 150 women were selected from each cluster for the study population of 700 women. A total of 450 women were selected for participation in the study. All women who gave their written consent and were more than 30 weeks pregnant were included. Women, who were transient visitors and had missing data, were excluded. General Health Questionnaire, a 12 item measure was used for psychological health. Cronbach’s alpha was 0.71. At 6–8 weeks after birth, the mothers were administered Edinburgh Postnatal Depression Scale. Cronbach’s Alpha of Edinburgh Postnatal Depression Scale 0.80. Postnatal depression was determined from binary logistic regression analysis of antenatal and early postnatal variables.

Result: Among antenatal factors mothers who had current score of five or more on twelve item General Health Questionnaire had a prevalence of 48.6% of postnatal depression(252/519; p=0.037) These mothers were 1.52 times (95% CI, 1.026-2.263) at the risk of postnatal depression. Protective factors against post natal depression include planned pregnancy, (relative risk=0.63, CI: 0.431-0.946) help from family members, (relative risk=0.62, 95% CI: 0.418-0.918) and help from husband (relative risk=0.54, 95% CI: 0.369-0.817). Among postnatal factors, mothers who had cesarean delivery had a prevalence of 48.4% of postnatal depression (251/519; p-value=0.025. These mothers were 1.57 times (95% CI, 1.057-2.33) at the risk of postnatal depression.

Conclusion: Postnatal depression is a common mental illness in our local population; it is usually a consequence of preexisting antenatal morbidity and is a chronic disorder for one half of the women who suffer from this illness. Key message: Cognitive behavioral therapy and antidepressants help for postnatal depression.

Keywords: Postnatal Depression, Poverty, Psychosocial Problems, Cultural Norms, Education
Back from the Brink: Biliary Stenting and Chemotherapy in Cholangiocarcinoma

Smiley Rose Crane*, Jennelle Francis* and Ahmad Ridha Roney*
*Joint first authors, St.George’s University of London, UK
smiley_crane@hotmail.com

Abstract

Introduction: Cholangiocarcinoma is a malignancy arising from the epithelial cells of the intrahepatic and extrahepatic bile ducts1. The incidence is rare with about 1000 cases per year in the UK; however, the incidence is rising2. These tumours progress insidiously, with liver failure, biliary sepsis, malnutrition and cachexia as the usual modes of death3. Cholangiocarcinoma is usually detected at an advanced stage, by which time management is palliative. The median survival rate is approximately four months without treatment4 and twelve months if treated aggressively5.

Case report: A 46 year old Caucasian female presented with obstructive jaundice and pruritus in March 2009. She was diagnosed with cholangiocarcinoma and had full interventional stenting. Despite this, four weeks later she developed biliary sepsis resulting in multi-organ failure and admission to ITU. However, the Oncology team intervened and instigated an aggressive chemotherapy regime with 8 cycles of gemcitabine and carboplatin. The patient responded well and for the next year had an excellent quality of life. After 1 year the original stent was no longer compliable and the patient once again developed obstructive jaundice and had to be re-stented. The patient was re-stented 10 times until she died in May 2011.

Discussion: Controversies exist regarding the appropriate workup and choice of management approach. Aggressive treatment may improve patient survival and a better stent would improve quality of life.

Conclusion: Aggressive treatment with chemotherapy and stenting can dramatically increase survival time and improve quality of life in patients and should be considered in patients with cholangiocarcinoma.

Keywords: Cholangiocarcinoma, Stenting, Chemotherapy
Competency of Gaining Consent: a Foundation Trainee’s Perspective in the North Western Deanery

Hiew K.¹, Eyres G.¹, Chauhan S.², Ekta P.³, Haddock C.⁴, Heath R.⁵, Jawaheer L.⁶, Looi E.⁷, Rai. C.⁸, Thampy A.⁹, and Baker P.¹⁰

¹Blackpool Teaching Hospitals NHS Foundation Trust, ²Salford Royal NHS Foundation Trust, ³Pennine Acute Hospitals NHS Trust, ⁴East Lancashire Hospitals NHS Foundation Trust, ⁵University Hospitals of South Manchester NHS Foundation Trust, ⁶Bolton NHS Foundation Trust, ⁷Wrightington, Wigan, and Leigh NHS Foundation Trust, ⁸Stockport NHS Foundation Trust, ⁹University Hospitals of Morecambe Bay NHS Foundation Trust, ¹⁰North Western Deanery

genesisken@doctors.org.uk

Abstract

Background: The General Medical Council (GMC) and the National Health Service Litigation Authority (NHSLA) have strict guidance on how informed consent should be gained and how trainees should be supported when learning to take consent, however foundation trainees often feel vulnerable when expected to gain consent for a procedure they have little or no expertise for.

Aims/ Objectives:

1. To examine the perceptions and confidence level of new Foundation year 1 doctors in gaining consent.
2. To look at the factors that favourably influenced confidence.
3. To outline the best method of teaching in gaining a valid consent of a procedure.

Methods: Questionnaires were distributed in 9 hospital trusts in the North Western Deanery and completed by 203 FY1s in the first 6 months of their post.

Results: 71% had taken written informed consent, of these 43% felt they had been put in a position in which they were unhappy to do so, 33% were supervised and 16% were formally supervised. Confidence levels were increased by: supervision (Mean confidence 7.26 vs 6.58, 2 sided P value 0.0036); and formal assessment (Mean confidence 7.26 vs 6.64, 2 sided P value 0.0277). Respondents preferred the following modes of teaching consent: one-to-one session with supervisor (47%), organised tutorial session during induction (21%), and medical school (20%).

Conclusion: Results show low levels of supervision and formal assessments in gaining consent, despite being key factors in increasing confidence. A mandatory Mini CEX or similar activity early in Foundation training could lead to better prepared doctors in gaining a valid consent.

Keywords: Informed Consent, Trainees, Perceptions
Investigation of Validity and Reliability of Lung Cancer Quality of Life from European Organization for Research and Treatment of Cancer (EORTC QLQ – LC13) in Iran

Karbasi Motlagh, M.¹, Anjedani, E.³, Zamanian, H.², Fathollahbeigy, F.¹, Kiyaye, N.³, Aghaei Meibodi, F.²,², and Beheshtee, M.¹

1) Student Scientific Research Center of Tehran University of Medical Science, Tehran, Iran
2) Qom University of Medical Science, Qom, Iran
3) Tehran University, Tehran, Iran

*Corresponding author: markar1985@gmail.com, m-karbasimotlagh@razi.tums.ac.ir

Abstract

Introduction: Lung Cancer has a great impact on different aspects of quality of life of patients who are diagnosed with such cancer; therefore, conducting research on such patient’s quality of life is essential. In this study we will examine the effects of lung cancer on quality of life of patients who are diagnosed with this cancer and propose a suitable questionnaire for the purpose of determining various scopes of quality of life of patients as well as the validity and reliability of such questionnaire.

Objective: The aim of this study is to investigation of validity and reliability of lung cancer quality of life from European Organization for Research and Treatment of Cancer (EORTC QLQ – LC13) in Iran.

Method: 75 lung cancer patients admitted to hospitals in Iran cancer Institute of Tehran University of medical science and Masih Daneshvari Hospital were chosen by non-random sampling. Demographic questionnaire EORTC QLQ – LC13 and EORTC QLQ – C30 were completed by the questioner. Descriptive data by frequency tables were analyzed and content validity we used translation for translating and internal consistencies were measured by the Cranach’s α coefficient.

Results: Total Cranach’s α coefficient (The reliability or internal consistency) was 0.720. Spearman correlation coefficient of symptom and side effect subscale was 0.0601 not showed any overlap between questions of these subscales and the high measure of spearman rank correlation between symptom subscale and its questions was in the range of 0.357 to 0.754 and side effect subscale and its questions were 0.366 and 0.708 that indicated subscales of LC13 have significant correlation.

Conclusion: In general, the findings of this study indicated that the Iranian version of the EORTC QLQ-LC13 is a reliable and valid supplementary measure of the quality of life in lung cancer patients and can be used in clinical trials and studies of outcome research in oncology.

Keywords: Validity, Reliability, Lung Cancer, Quality of Life, (EORTC QLQ LC13) Questionnaire
Assessing Relation between Cancer Patient’s Demographic Factors with Informational Sources

Karbasi Motlagh, M.\textsuperscript{1}, Fathollahbeigy, F.\textsuperscript{1}, Zamanian, H.\textsuperscript{2}, Beheshtee, M.\textsuperscript{1}, Dastan, M.\textsuperscript{1}, Anjedani, E.\textsuperscript{3}, Safaefar, M.\textsuperscript{1}, Nochamani Zare, M.\textsuperscript{1}, and Aghaei Meibodi, F.*\textsuperscript{3}

1) Student Scientific Research Center of Tehran University of Medical Science, Tehran, Iran
2) Qom University of Medical Science, Qom, Iran
3) Tehran University, Tehran, Iran
markar1985@gmail.com, m-karbasimotlagh@razi.tums.ac.ir

Abstract

Introduction: Evidence emphasize on information provision that can facilitates adjustment to cancer by increasing perceptions of control, reducing feelings of threat and anxiety, and improving quality of life (QoL) and if patient’s information needs are not addressed, they are likely to continue feeling anxious and distressed about treatment and may fail to complete treatment.

Objective: The goals for this study were to realize which sources of information more frequently used by patients and evaluate the relation between patient’s characteristics with source of information.

Method: This cross-sectional study was performed at the Iranian cancer institute of Imam Khomeini hospital of Tehran University of Medical Science (TUMS). 154 cancer patients were chosen nonrandom sampling participated in this study who were 43 male (27/0\%) and 111 female(72/1\%).Two questionnaires were used contain Background information (Demographic, Socioeconomic ,Medical information) and Informational need: Sources that patients received information (oncologist, medical doctor, nurse, consular, family, friends, media) and Satisfaction of received information from sources. frequency and chi-square test and Fisher’s exact test were used for analyzing.

Result: Ages group of our subjects were teen (8/45), young (37/75), middle age (37/75), elder (15/6\%) and their educational level predominately were primary school (28/6\%). The most frequency source that had been used was specialist physician (n=119, 77/3\%) and less frequencies belong to NGO informational source (n=1,0/6\%), socialist (n=1<0/6\%). 80/7% of patients who used specialist physician as a informational source were satisfied. There was significant relationship between type of cancer, age with satisfaction of patient from information that they received (p=0.03).

Conclusion: Our result shows that availability of informational sources can influence patient’s informational source preference. Healthcare team is reliable and available sources for cancer patients. We recommend that all members of healthcare team should be aware of patient’s informational needs.

Keyword: Informational Source, Cancer
Blips and its Clinical Relevance in HIV Patients on Treatment

Dr. Matin Ahmad Khan
MBBS, PhD (Public Health, USA)
AAHIVS (American Academy of HIV Medicine Specialist, USA)
Fellowship in HIV Medicine (School of Tropical Medicine Kolkata)
matinahmadkhan@hotmail.com, matinahmadkhan@gmail.com

Abstract

Background: With HAART being used extensively, transiently detectable viremia, usually 50–400 copies/ml, has been found to be a common phenomenon, occurring in about one-quarter of HIV/AIDS patients who had achieved viral suppression below the limits of quantification while remaining on the same antiretroviral regimen. Though measurable viremia may be a harbinger of drug resistance and treatment failure, and may simply reflect variability in the assay, such as that resulting from specimen processing, or could be caused by extraneous factors, such as immunization or intercurrent illness, usually these “blips of viremia” appear to represent no increased risk for subsequent virologic rebound. Rebound to persistent levels of viremia of 50–400 copies/ml occurred in fewer than 5% of patients, and lasting rebound viremia > 400 copies/ml, ‘virologic failure,’ occurred in fewer than 10%. There was no statistically significant evidence that patients who had had a previous episode of transient viremia were at a greater risk of developing persistent viremia than those who did not experience transient viremia. The characterization of this phenomenon (low viremia) in the setting of clinical practice including patients both naive and experienced to antiretroviral drugs and on both protease inhibitor (PI)-based and non-PI-based regimens in terms of long-term virologic and immunologic outcomes, are very important in the outcome of HAART.

Aim & Objectives: To examine and disseminate the prevalence and clinical correlates of subsequently measurable viremia from studies done on HIV-infected patients who have achieved viral suppression below the limits of quantification (< 50 copies/ml)

Study Design: Non-randomized dynamic cohort study of ambulatory HIV patients in nine HIV clinics in eight cities and host of other Studies on ‘blips’

Results/Findings: Of the 448 patients, 122 (27.2%) had transient viremia, 19 (4.2%) had lasting low-level viremia and 33 (7.4%) had lasting high-level viremia (defined as 50–400 and > 400 copies/ml, respectively). Only 16 (13.1%) of those who had transient viremia later had persistent viremia > 50 copies/ml. The occurrence of transient viremia did not vary with whether the patient was ART-naive or experienced (P = 0.31), or currently taking protease inhibitors or not (P = 0.08). On consistent ART, the median percentage increase in CD4 cell count was statistically different between subgroups of the cohort (Kruskal-Wallis, P = 0.002.

Study Limitations: The definition of a “viral blip” or transiently detected low-level viremia is evolving, but a number of working definitions have been used for research purposes. As a result, care must be taken when comparing data regarding the significance and management of blips

Conclusion: Transiently detectable viremia, usually 50–400 copies/ml, was frequent among patients who had two consecutive HIV-1 RNA levels below the limits of quantification. In this analysis, such viremia did not appear to affect the risk of developing lasting viremia. Caution is warranted before considering a regimen as ‘failing’ and changing medications.

Keywords: HAART (Highly Active Anti retro viral therapy), Blips, HOPS (The HIV Outpatient Study) virologic failure, Protease Inhibitors
A Study of ‘Rational Use of Investigations’ in a Tertiary Hospital

Yasir Alvi¹, SZ Rahman², and MS Zaheer³

¹MBBS (Final) Student, Jawaharlal Nehru Medical College, AMU, Aligarh, India
²Department of Pharmacology, Jawaharlal Nehru Medical College, AMU, Aligarh, India
³Department of Medicine, Jawaharlal Nehru Medical College, AMU, Aligarh, India

Yasiralvi13@gmail.com

Abstract

Introduction: A cross-sectional study for the prevalence and features associated with Rational Use of Investigations in a tertiary hospital of North India. A scope is always there to further enhance evidence based teaching and practice in healthcare. Medical students should develop at some point of time of their studies or early in their career, a set of preferred investigation (P-investigation) which they could use rationally and regularly. Somehow, this choice of investigations is often made on irrational background e.g. by copying pedagogically the prescribing behaviour of their teachers or peers without considering alternatives or knowledge gained by them in choosing the best, efficacious, economical and productive set of investigations.

Objective: The objective of the study is to estimate the prevalence of rational use of investigations and its associated factors; to give practical advice on how to assist patients with reference to investigations; to enable the faculty to produce case specific P-investigations for their ready-reference.

Method: This study was conducted at the In-patient Department (IPD) of Jawaharlal Nehru Medical College & Hospital (JNMCH), Aligarh, India. In a period of 3 months, 90 patients were selected by random sampling with proportionate number from surgery and medicine wards. The prescribed investigations were analysed and compared by standard algorithm, made after group discussion with experts of the diagnosed case, in relation to investigations sought from the patients. Finally, a list of P-investigations was noted with proper reasons.

Result: In our study, we observed 42 different types of clinical and laboratory investigations out of 2653 investigations ordered by physicians before any intervention. These investigations were done in 90 patients. Among those, 70.1% were not considered to have contributed towards management of patients (mean avoidable 3.07% tests/patient/day). 20% of the patients were advised thrice or more routine blood test. Senior residents (SRs) ordered more laboratory examinations, but the percentage of avoidable tests requested by junior residents (JRs) was higher.

Conclusion: Patient of geriatric age groups, and those who are hospitalised for many days for reasons including case difficulty to establish a diagnosis were the factors independently associated with overuse of laboratory tests. We found that there is no set guideline for laboratory investigations, physicians themselves decide to order investigations which may be rational or irrational. We must have logic based flow chart or algorithm in all investigations for diagnosis as a part of good laboratory or good clinical practices.

Keywords: Rational Investigations, Tertiary Hospital, P-investigations
Pain Management in Nursing Practice of Intensive Care Post-Operational Stage Patients

Iveta Strode
Faculty of Medicine
P.Stradiņš Medical College of the University of Latvia, Latvia
E-mail: ivetastrode@inbox.lv

Sandra Seimane
Faculty of Medicine
P.Stradiņš Medical College of the University of Latvia, Latvia

Dzintra Biķsāne
Riga Eastern Clinical University Hospital, Intensive care unit, Latvia

Abstract

Background: Pains are one of the commonest symptoms of illness in any branch of the medicine. International Association for the Study of Pain defines pains as an unpleasant sensations and emotions associated with the real and potentially possible tissue damage or are described as such damage. In spite of different causes and mechanisms, pains always are subjective sensations with multidimensional nature, formed by physical, emotional and cognitive components. Post-operative pains represent a kind of acute pains and are related to extensive lung tissue injuries and traumatic edemas of surgical wounds that turn into the sources of long lasting pathological impulsations. There is a certain risk for intensive care unit patients to evaluate their pains and it is based on utilization of pain assessment scales and pain management resulting from the severity of patient’s condition.

Aim of the study: The aim of the work was to study the pain management in post-operative period of intensive care unit patients.

Material and methods: Study utilizes quantitative research method. As an investigation tool was chosen questionnaire. Study took place in intensive care and post-operative observation wards in two university type clinics in Latvia. In research were involved 50 intensive care unit nurses and 50 postoperative period patients (74% - female, 26% – male) undergoing treatment in intensive care and post-operative observation wards.

In the research participated nurses, 10% of them were with length of service in health care 0-3 years, 26% - 4-15 years, 34 % - 16-29 years, but 24% -30 years. But, nurses particularly from the intensive therapy ward and anesthesiology: 26 % of respondents had length of service 0-3 years, 28 % - 4-15 years, 30 % - 16-29 years and 16 % over 30 years. Professional education of respondents: secondary vocational education – 58%, 1st level higher professional education – 28%, higher education – 14%. 98% of respondents were women, 2% men.

P.Stradiņš Medical College of the University of Latvia Ethics commission has given the permission to conduct the study. There are no risks associated with this study. Data is collected only via survey and responses to the survey will be confidential. Participation is voluntary.

Statistical data analyses were performed using MS Office Excel program. For assessment of statistical credibility was utilized \( \chi^2 \) test method (Chi-square method).

Results: One of the preoperative stage tasks is to provide patients with the information about the post-operative stage pain assessment and possibility of pain relief therapies. Research data present that information was rather sufficient and patients felt safe. Such answers were given by the 32%
nurses and 72% patients. 62% patients consider that pains are normal sensation in post-operational stage and 14% of nurses agree with them.
In pain management of intensive care patients 5% of nurses utilize pain assessment scales (verbal or visual analogue scale). 59% of respondents like to question patients about their pains, whereas 25% mention, that they assess pains by performing activation of patient or by changing their position. 8% of respondents use special equipment but did not inform patients about it.
Evaluating the mutual connection between the nurse’s length of service and visual, as well as analogous pain scale, the acquired data point at mutual connection between the nurses with working experience more than 15 years and the use of analogous and verbal pain evaluation scale (p < 0.02).

**Conclusions:** Efficiency of pain management in post-operational stage increases due to psychological preparation and information of patients about the post-operational stage pains and methods that can be used in assessment of pain intensity and possible pain relief therapies already in pre-operational stage. In intensive care practice verbal and visual analogue scales are utilized less while more common and for patients more understandable are nursing staff’s questions about the pains they experience. Pain management is mostly based on World Health Organization’s advised “analgesic ladder” guidelines, monitoring data and it’s analyze.

**Keywords:** Acute Pain, Assessment of Pain, Nursing, Pain Management in Intensive Care, Pain Assessment Scales
Information Security Behavior among Nurses in an Academic Hospital

Ahmed I. Albarrak
Chair of Health Informatics, Medical Informatics Unit, College of Medicine, King Saud University, Riyadh, Saudi Arabia
Associate Professor of Health Informatics
Chairman, Medical Informatics, College of Medicine
Email: albarrak@ksu.edu.sa, ksuahmed@yahoo.com

Abstract

Background: High quality healthcare services can be achieved only by utilizing information technology. Information security is an ongoing challenge and security breaches emerging from user misbehavior are considered to be a devastating latent source of threats to patient data. This study evaluated information security practices of nurses at the King Saudi University Hospitals in Saudi Arabia.

Method: A random sample of nurses (n=352; 328 females and 24 males; age 40 ± 0.6 yr (mean ± SE)) was interviewed.

Results: The results show that while 92% of nurses agree that the principle of password authentication is important, their behavior in practice is completely inconsistent with this principle. This is clearly indicated by the fact that 81% of the interviewed nurses have never changed their system generated passwords, 54% do not change their passwords after these have been released to unauthorized persons, 33% share and communicate passwords with colleagues, 32% allow others to use their account credentials, and 16% do not log off applications after work sessions.

Conclusion: The current study has demonstrated that the information security practices of nurses may represent a potential threat to the information security and privacy of patients. The study calls for raising the level of security awareness among nurses to reduce the security threats posed by user misbehavior.

Keywords: Hospital Information Systems, Information Security, Nursing Informatics, Privacy, User Behavior
NT-proBNP Levels, as Predictor of Left Ventricular Systolic and Diastolic Dysfunction in Patients with Chronic Heart Failure

* Faida O., MBBS, MS, ** Said A., MT, * Samir P., MBBS, D. Car., * Oteh M. MBBCh, MRCP, **A. Latif M., MD, MRCP, PhD, and * Fadilah A., MD, PhD
* Medical department-Cardiology unit, UKM medical center
Jalan Yaacob Latiff, Bandar Tun Razak, Cheras 56000 Kuala Lumpur, Malaysia
**Cyberjaya University College of Medical Sciences
Unit No 2 Street Mall 2. 63000 Cyberjaya, Selangor Darul Ehsan, Malaysia

Corresponding Author:
Prof. Madya Dr Oteh Maskon
Head of Cardiology Unit, Department of Medicine, Universiti Kebangsaan Malaysia Jalan Yaacob Latiff, Bandar Tun Razak, Cheras 56000 Kuala Lumpur, Malaysia
Tel : +603-91733333
H/P +60193217391
Email: dr_faida@hotmail.com

Abstract

**Background:** Heart failure (HF) is a complex clinical syndrome that can result from any structural or functional cardiac disorder that impairs the ability of the ventricle to fill with or eject blood. Diastolic and systolic heart failure are the two clinical subsets of the syndrome of heart failure (HF). Regardless of ejection fraction (EF) the severity of HF and its prognosis and degree of exercise intolerance are closely related to the degree of diastolic filling abnormalities. Echocardiography parameters and the amino-terminal pro-B-type natriuretic peptides (NT-proBNPs) provide powerful incremental assessment of left ventricular (LV) diastolic and systolic functions.

**Aim:** The objective was to assess the correlation between echocardiographic parameters and plasma N-terminal pro brain natriuretic peptide (NT-proBNP) level in patient with systolic or diastolic dysfunction.

**Method:** The study included 109 heart failure patients. They underwent conventional and tissue Doppler imaging (TDI) echocardiography and NT-proBNP level was measured at the same time.

**Results:** Significant correlations were found between NT-proBNP level and late diastolic mitral annulus velocity A_m (r=-0.72, P=0.0001), systolic mitral annulus velocity S_m (r=-0.72, p=0.0001), early diastolic mitral annulus velocity E_m (r = 0.51, p=0.0001), early transmitral to E_m velocity ratio (r=0.51, p= 0.0001), LV ejection fraction (r=0.83, p=0.0001).

In multiple regression, log NT-proBNP levels were independently related to age, LV ejection fraction, A_m velocity and E_m velocity (R^2=0.78, P=0.0001), the relation to ejection fraction was the strongest (β=-0.56).

**Conclusions:** NT-proBNP levels correlate with echocardiographic parameters, and are simple, accurate markers of systolic and diastolic heart failure.

**Keywords:** Chronic Heart Failure, Conventional Echocardiography, Tissue Doppler Imaging, NT-pro BNP
The Stem Cell Debate

Tehseen Fatima Ali1 *, Dr. Tabinda Hasan2, and Dr. A. R. Siddiqui3
1Faculty of Pharmacy, J.J.T University, Rajasthan, India
2Faculty of Medicine, Jazan University, Jazan, KSA
3Shri Bhagwan College of Pharmacy, Aurangabad, India
*1 tehseenfatimaali@gmail.com
2 drtabindahasan@gmail.com
3 aquil_sid@yahoo.co.in

Abstract

Purpose: The use of human embryos for stem cell based researches is currently high on the ethical and political agenda in many countries. Despite their immense plasticity and promising potential in regenerative and reconstructive medicine, the use of human embryonic stem cells (HESC) remains controversial because of their derivation from killing early embryos.

This paper addresses complex bio-ethical and social issues related with the instrumental use of embryos and HESC in context of state-of-the-art research on development of stem cell based transplantation therapy.

Methods: Published literature with strict inclusion and exclusion criteria was extensively reviewed through use of general and meta search engines to elucidate the applications and implications of HESC in modern medicine. A systematic meta-analysis of 95 representative articles from the year 2000-2010 was performed.

Results: Numerous studies have demonstrated that environmental, political, and societal factors are important contributors to the development of stem cell researches and policy models in any country. The therapeutic potential of HESC is indisputable but complex social and moral issues remain hopelessly intertwined beneath the pleasant facade.

Conclusions: Stem cell research is dynamic and alluring. It opens up novel therapeutic avenues to alleviate most of Man's ailments at the cellular level, in terms of organ replacement, reversing ageing and disease phenomenon and eliminating congenital or inherited disorders. Yet there are many questions and 'unknowns' in terms of crossing moral, religious and biological boundaries when it comes to matters of deciding about ‘Life & death’, ‘Eternal life’, ‘Chimeras’, ‘A-temporal existence’, ‘Teratogenecity’, ‘Immune rejections’…. The list is long and demands some serious reflection. New insights into the effectiveness, risks and usefulness of HESC and exploring various uncontroversial alternatives may have immediate consequences for the ethical evaluation and legal standardization of the isolation of HESC. While a categorical ban on reproductive cloning is at present unjustified and premature; stem cell debates must be progressed with caution to avoid untimely political truncation of the true potential of these cells. In the end, the wisdom to choose wisely between ‘responsible utilization’ and ‘senseless exploitation’ rests with us.

Keywords: Human Embryonic Stem Cell, Ethical Issues
Prevalence and Correlates of Unmet Need for Family Planning among Ever Married Reproductive Age Women in the District of Kalutara, Sri Lanka

Indrani Malwenna
National Institute of Health Sciences, Sri Lanka
indrani.malwenna@yahoo.com

Abstract
Objective: To determine prevalence and the demographic, socio economic and fertility related correlates of unmet need (UN) for family planning (FP) among 15 - 49 year old ever married women in Kalutara district.

Methodology: Sri Lanka is divided into 24 districts and each district is subdivided into 300-400 Public Health Midwife areas in aimed at providing public health services. A PHM area is the smallest unit in public health system providing primary health care in Sri Lanka; consisted of average of 3000 population.

A descriptive study was conducted to assess the prevalence of UN for any method of FP on 1200 individuals selected from 60 clusters (Public Health Midwife areas) using probability proportional to size (PPS) of population. A case control study was conducted to determine correlates. Computed sample size was 72 cases and 288 controls; but all cases (n=105) with and controls (n=1014) without UN, identified in the prevalence survey were included in the analysis. Data were collected using an interviewer administered questionnaire by trained Public Health Nursing Sisters during the prevalence survey. Statistical analysis included bivariate and multivariate logistic regression.

Results: Prevalence UN for any method was 9.4 % (95% CI: 7.7-11.1) [n=105] with 1.5 % (95% CI: 0.79-2.2) [n=17] for spacing and 7.9% (95% CI: 6.3-9.5) [n=88] for limiting. UN for modern methods was 18.7% (95% CI=16.1 - 20.6) [n=205]. Among the common reasons for UN were low perceived risk of pregnancy (36.2%; n=38), fear of side effects (30.5%; n=32) and less frequent sexual intercourse (19%; n=20).

Correlates of UN were being >35 years (OR=1.8; 95% CI=1.12-2.88; p=0.010), educated below primary level (OR=2.21; 95% CI=1.1-4.5; p=0.03), being unemployed (OR=2.13; 95% CI=1.1-4.2; p=0.03), having sex less than once/ week (OR =1.9; 95% CI=1.2-2.9; p=0.01), desire of not having any more children (OR= 2.43; 95% CI=1.4-4.4; p=0.001), not expecting to use a modern method (95% CI=2.1-5.4; p=0<0.001;) and not being counseled on FP (OR=1.74; 95% CI=1.01-3.0; p=0.04).

Conclusions: Prevalence of unmet need was 9.4% with 7.9% for limiting and 1.5% for spacing. Correlates were age >35 years, primary level education, unemployment, less frequent sex, desire of limiting the family, not willing to use a modern method and not being counseled on FP.

Recommendations: Intervention studies to address the high risk groups to identify the best approach must be conducted prior to design any programmes to reduce unmet need for family planning since the correlated are very different from one to another individual.

Keywords: Prevalence, Unmet Need, Family Planning, Correlates, Reproductive Age, Married Females
Effectiveness of a Community Based Health Educational Intervention in Reducing Unmet Need for Modern Methods of Family Planning among Ever Married Reproductive Age Women in the Kalutara district, Sri Lanka

Malwenna, L.I.1*, Jayawardana, P.L. 2, Balasuriya, A.3
1Senior Registrar, National Institute of Health Sciences, Kalutara, Sri Lanka
2Professor in Community Medicine, University of Kelaniya, Sri Lanka
3Senior Lecturer, Faculty of Medicine, Defense University, Rathmalana, Sri Lanka
indrani.malwenna@yahoo.com

Abstract

Introduction: Unmet need is defined as the percentage of all fecund women who are married or living in union and thus presumed to be sexually active but are not using any method of contraception, either do not want to have any more children or want to postpone their next birth at least for two more years or do not know when or if they want another child. Unmet Need for Modern Methods includes all in the unmet need group and those who are using natural and traditional methods at the time of survey (The Westoff Model). It describes the discrepancy between sexual and contraceptive behaviors and stated fertility preferences of women in the reproductive age.

Objective: This study was designed to evaluate the effectiveness of a health educational intervention in improving the knowledge and attitudes on family planning (FP) among Public Health Midwives (PHMM) who function as community health workers and acceptance of modern FP methods planning which eventually reduce the Unmet Need (UMN) and thereby reducing the risk of unintended pregnancy among 15 - 49 year old married women in the Kalutara district.

Method: Initially the perceptions on unmet need in community service providers was assessed by three Focus Group Discussions conducted among Medical Officers of Health, Public Health Nursing Sisters and PHMM. It was followed by assessment of the baseline knowledge and attitudes on FP and UMN among all the PHMM and a group of married women in reproductive age (15-49) with unmet need for modern methods selected from cluster sampling of PHM areas in the district using PPS technique, allocating 22 clusters of 12 women in each Intervention (IA) and Control Area (CA).

The developed health education intervention was applied on PHMM followed by the selected group of women with unmet need for modern methods only to the IA. The effectiveness was assessed in terms of the change in knowledge and attitudes of PHMM after 2 months of intervention, of target group of women after 6 months of intervention and the reduction of unmet need for modern methods in the IA compared to CA.

Result: In PHMM, overall percentage mean knowledge score in IA at pre and post intervention were 29.9% and 65.7% respectively with a statistically significant difference (p<0.001) but with no such difference (p=0.10) in CA between pre (20%) and post (30%) scores.

Median attitude scores were 37.5% and 86% in IA at pre and post intervention with a statistically significant difference (p<0.001). For CA respective figures were (40%) and (41%) with no significant difference (p=0.09)

Regarding the target group, in IA had pre (37.6%) and post (70.6%) mean knowledge scores with a statistically significant difference (p<0.001); but with no significant difference (p=0.06) in CA between pre (39.0%) and post (40.2%) scores. Similarly, between groups comparison shows statistically significant difference (p<0.001) between IA and CA in post intervention, the scores being 70.6% and 40.2% respectively.
**Conclusion:** The training conducted on PHMM revealed a significant impact on knowledge and attitudes in both service providers and clients leading to change in the FP practice and reduction in unmet need for modern methods of FP.

**Keywords:** Family Planning, Unmet need, Married Women, Reproductive Age, Health Education Intervention
Renal Doppler Diagnostics in Lead-, Nickel- and Manganese-Exposed Children

Nina Zaitseva, Olga Ustinova, Olga Vozgoment, Alfiya Aminova*, Alevtina Akatova, Yuliya Perlova, and Irina Shtina
Federal Scientific Center for Medical and Preventive Health Risk Management Technologies
aminova@fcrisk.ru

Abstract

Introduction: Under current unfavorable environmental conditions, chronic diseases of human systems, including the urinary system, which have a protective function are becoming more and more prevalent.

Objective: The aim of the study was to identify ultrasound criteria for early diagnostics of renal pathologies in children who were exposed to metals of anthropogenic origin (lead, nickel, manganese). In order to achieve this aim, we have assessed renal hemodynamics in children with high blood metal levels. We have also identified a relationship between blood metal levels and an ultrasound examination of renal blood circulation as well as ultrasound criteria for the signs of early renal disorders in patients exposed to the metals of anthropogenic origin (lead, nickel, manganese).

Materials and Methods: A total of 90 children with minor changes in uranalysis in their anamnesis were examined in this study. The children were divided into a study group (54 patients) and a control group (36 patients). All the patients underwent renal scanning which was performed using a Toshiba Aplio XG ultrasound scanner (Japan) with a 7-14 MHz linear-array transducer and a 3-6 MHz curved array transducer from multiple views.

Results: We have found out that children with urine and blood samples contaminated with metals of anthropogenic origin (lead, nickel, manganese) typically demonstrate renal hemodynamic disorders which can be detected by ultrasound diagnostic methods. The extent of hemodynamic changes was affected by the blood levels of lead, nickel and manganese.

Conclusion: We have determined Doppler ultrasound criteria for early diagnostics of renal pathologies in children with biological samples contaminated with the metals of anthropogenic origin (lead, nickel, manganese). The criteria are poor blood circulation in color Doppler mapping in the subcapsular area (a qualitative assessment); a reduction in relative characteristics of blood circulation (RI < 0.6; PI < 1.1); the difference between the lower and upper bounds of RI value range from the arterial trunk to the peripheral arteries higher than 0.04-0.05. We have shown a true correlation between relative parameters of blood circulation which characterize renal vascular resistance and the blood levels of the metals (lead, nickel, manganese). We have determined high risks for the development of inflammatory and abacterial diseases of the urinary system in children with blood and urine levels of lead, nickel and manganese exceeding the reference concentrations by 1.5-1.7 fold in environmentally unfavorable areas.

Keywords: Metals, Ultrasound Diagnostics, Renal Pathology
The Emotional Intelligence Features of Substance Use Disorders Patients: Pilot Research Results

Velga Sudraba¹, Elmars Rancans², Inga Millere³

¹Doctoral Studies, Riga Stradiņš University; Riga Centre of Psychiatry and Addiction Disorders, Riga, Latvia
²Department of Psychiatry and Addiction Disorders, Riga Stradiņš University, Riga, Latvia
³Academic School of Nursing, Riga Stradiņš University, Riga, Latvia

*Corresponding author’s Email: velgasudraba@gmail.com

Abstract

Introduction: Previous research has revealed that differences in Emotional Intelligence (EI) competency existed related to gender and substance use disorders (SUD). Moreover, SUD patients had a high correlation between EI and drug/alcohol use.

Objective: The aim of this pilot research project is to establish and describe SUD patient personality factors relating to Emotional Intelligence and its constituting competencies.

Method: Bar-On Emotional Quotient Inventory - EQ-i ³ was used as the research instrument, which was adapted in Latvia by A.Gaitniece-Putane that includes five factors and 15 respective scales.

Results: The target population for this research were SUD patients (n=241) - 154 (63.9%) men, with an average age of 38.5 (SD=10.7) and 87 (36.1%) women, with an average age of 37.8 (SD=11.2; t=0.485; p=0.628) from two departments of Riga Centre of Psychiatry and Addiction Disorders. There were 183 alcoholics and 58 drug addicts in the participant group. There were statistically significant differences for alcoholics and drug addicts in two EI factors (Interpersonal and Adaptation) and on five scales (Self-actualization, Empathy, Social Responsibility, Problem Solving, and Impulse Control Scales). There were statistically significant differences between genders in the Interpersonal factor and on the Empathy and Social Responsibility scales. There were statistically significant differences for male alcoholics and drug addicts in the Interpersonal and Adaptation factors and on four scales (Self-actualization, Empathy, Social Responsibility, Problem Solving), but no difference on the Impulse Control scale. There were statistically significant differences for female alcoholics and drug addicts on only one EI scale (Problem Solving).

Conclusion: SUD patient EI indicators had a tendency to higher indicators, which leads one to believe that addict patients had difficulty being critical towards themselves, their illness and other people in their lives. This study requires additional investigation including repeat testing of the participant group six months after treatment as well as enlarging the sample group.

Keywords: Emotional Intelligence, Alcoholics, Drug Addicts, Gender Difference
Measurement of Fetal Heart Dimensions at Different Stages of Development in Indian Population of Maharashtra Region

*MRS. HARITHA KUMARI N.*
Department of Anatomy, MGM Medical College, Navi Mumbai, India
haritha_anat@yahoo.com

DR. ARUNA MUKHERJEE
Department of Anatomy, MGM Medical College, Navi Mumbai, India
arunamukherjee46@yahoo.com

DR. B.K.MATHUR
Department of Surgery, MGM Medical College, Navi Mumbai, India
bkmathur65@gmail.com

Abstract

**Background:** The growth of the embryonic and foetal heart is usually measured by ultrasonography in the first and early second trimesters of pregnancy. There is insufficient knowledge on the dimensional measurements of the heart in fetuses.

**Objective:** To define the average dimensions of the fetal heart at various stages of development.

**Materials and Methods:** The dimensions of fetal heart that is the antero-posterior length from the apex to the base of the heart and the transverse diameters, in the four chambered view were collected during routine obstetric ultrasonography of 100 healthy pregnant women at different gestational ages from 16 weeks to the end of pregnancy, in Mahatma Gandhi Mission’s Hospital, Kalamboli, and Navi Mumbai. From the listed results the average dimensions of fetal heart were evaluated.

**Results:** A relative growth was seen along with the gestational age of the fetuses. There was a significant growth from age group 20-24 weeks and 32-36 weeks compared to rest of the gestational weeks.

**Conclusion:** The present data could serve as a good source to investigate the cardiac changes during pregnancies with fetuses at risk of cardiac abnormalities.

**Keywords:** Fetal Gestational Age, Cardiac Dimensions, Ultrasonography
Eating Habits and Influential Factors for Mothers and Children in Romania

Corina-Aurelia Zugravu
University of Medicine and Pharmacy “Carol Davila”, Bucharest, Romania
dr_corinazugravu@yahoo.com

Abstract

Background: In an era of obesity, healthy food habits are essential. Changing already established habits is difficult, so it is very important to seed from the earliest years of life the seeds of an appropriate nutritional behavior. The role of parents is essential, since they are main role models for their children.

Aim: In the present study, the aim was to evaluate mother-child correlation of nutritional habits and to find factors determining them.

Methods: The research was a cross sectional study carried out on a random sample of urban Romanian mothers, who had to answer to demographical and nutritional questionnaires. The nutritional investigation concerned mothers’ and children’s nutritional habits.

Results: The study showed that nutrition of mother and of child in Romanian families are highly correlated, that mother’s education, on first place, and income, on the second place, are the main determinants of child’s and women’s nutrition, and that more educated women deal better with challenging nutrients like fats.

Conclusions: More educational programs regarding the adequacy of nutrition have to be put in place and have to target important demographical groups, like women with children. Programs have to be specially adapted to different levels of understanding, in order to reach all women, overtaking differences in background and education.

Keywords: Women Nutrition, Children Nutrition, Mother’s Education, Healthy Eating, Nutritional Habits
Medical Emergency Knowledge Assessment in a Malaysian Special Needs Agency

Martin Soosai Francis Sinnappar\textsuperscript{1}, Teoh Eu Vin\textsuperscript{1}, Venushia Chandran\textsuperscript{1}, Phoebe Lim Xue Yee\textsuperscript{1}, Jaya Vejayan\textsuperscript{1}, and David Chin Hoong Weng\textsuperscript{2}

\textsuperscript{1}Jeffrey Cheah School of Medicine and Health Sciences, Monash University Sunway Campus, Jalan Malaysia

martinsoosai@ymail.com

\textsuperscript{2}Persatuan Kanak-kanak Istimewa Kajang Selangor (PKIK), No. 17 Jalan Seksyen 2/14, Taman Kajang Utama, 43000 Kajang, Selangor

Abstract

Background: In any medical emergencies, administration of first aid is crucial in saving lives especially when it comes to people with special needs as the consequences of a crisis to them is drastically amplified. As no credible data was found on the implementation and practice of standardized first aid specifically in agencies of special needs individuals in Malaysia, this has led to further investigation.

Aim & Objectives: To assess the knowledge level of medical emergency procedures among staff and volunteers of an agency catering to the needs of people with intellectual disabilities.

Methods: A questionnaire titled “Assessment of Knowledge of Medical Emergency Procedures” was developed to assess the level of knowledge of medical emergency procedures or first aid among the staff and volunteers of Persatuan Kanak-kanak Istimewa Kajang (PKIK). The questionnaire was administered before and after a first aid workshop among 14 participants (n=14). The data obtained were analyzed.

Results: The median score for the total in the pre-questionnaire was 99 (68.8%), while the median score in the post-questionnaire was 123.5 (85.2%). Hence, there was an overall improvement of 24.5 (16.9%) in the median score before and after the first aid workshop. A high standard error (SE=3.870) in the pre-questionnaire showed that knowledge level was not consistent in each staff overall. After conducting the workshop however, the standard error reduced (SE=2.876) which indicate increased standardization in first aid knowledge amongst PKIK staff and volunteers.

There was also an increase in the median score for the seizure and asthma subsection by as much as 7.5 (16.9%) and 6 (24%) respectively. Moreover, there was an increase in the mean scores for the unconsciousness 3.36 (14%) and injuries 5.42 (15.5%) subsection. Therefore, it can be concluded that there was an overall increase in knowledge among the participants after the first aid workshop is given as compared to before it.

Conclusions: The existing level of awareness of medical health emergencies among the staff in PKIK was quite high however with large variation in the knowledge level among the participants. The level of awareness increased significantly and the variation in the knowledge was reduced. A consistent level of first aid knowledge in each staff is ideal for adequate emergency care for special needs children in medical emergencies.

Keywords: First-aid Workshop, Asthma, Injuries, Special Needs Agency, Emergency Procedures
A Clinical Study on Malignant Pleural Effusion

Dr. Zay Soe
DTM&H (London), FACTM. FCCP (USA)
zaysoe13@gmail.com

Dr. Zaw Aung
MB, BS. M Med Sc (Int Med).
Senior Lecturer, Department of Internal Medicine, School of Medicine,
UCSI University, Malaysia

Dr. Khin Darli Tun
MB, BS. M Med Sc (Pathology). MACTM
Senior Lecturer, School of Medicine,
UCSI University, Malaysia

Abstract

Background: Malignant pleural effusion (MPE) is one of the commonest causes of pleural effusion in Myanmar. The diagnosis of MPE can be sometimes difficult to make because of the inconclusive result of pleural biopsy report. We studied the clinical features of MPEs as well as diagnostic procedures.

Objective: Our research goal and the objective of the study are to review the natural history of patients with a malignant pleural effusion but without obvious evidence of a primary lesion and to assess the value of diagnostic investigations to confirm the malignant pleural effusion. To follow the objectives, we collect the information on the disease characteristics such as age, gender, clinical features, nature and microscopic examination of pleural fluid, positivity rate of blind pleural biopsy results in patients diagnosed with bronchogenic carcinoma in the Chest Medical Department in Yangon General Hospital, Myanmar.

Methods: This study was a hospital based descriptive cross sectional study, performed at Chest Medical Department, Yangon General Hospital, Myanmar, from January 2004 through January 2005. Thorough history taking and physical examinations, radiological findings, hematological and serum biochemical profiles were recorded. Pleural aspiration and biopsy were also performed.

Results: 43 males and 30 females presenting with malignant pleural effusion were included in this study. The commonest age group lies between 61 to 70 years old with mean ± SD age of 63.45. 60 patients (82.2%) of malignant pleural effusions are heavy smokers or ex-smokers. 65 patients (88.9%) were diagnosed by identification of malignant pleural tissue in blind pleural biopsy. 8 patients (11.1%) were diagnosed by identification of malignant cells in the pleural fluid cytology because biopsies revealed chronic nonspecific pleuritis. Among histologically identified cell types most patients (33) had metastatic large cell carcinoma. Pleural fluid cytology for malignant cells was positive in 47 patients (64.4%). Common symptoms of malignant pleural effusions were breathlessness, cough, chest pain, weight loss and loss of appetite. Common physical signs were cachexia, fever on admission, palpable lymph node. Clinical features of consolidation and collapse were also noted in chest examinations. 45 patients had left sided effusion (61.6%) and 28 had right sided (38.4%). 47.9 % of pleural aspirate were blood stained. Mean ADA activity (SD) in malignant pleural effusion was 23.83 U/L. Mean protein concentration was 41.02 g/l, mean pleural fluid / serum protein ratio was 0.61, LDH was 599.56 U/L, mean pleural fluid / serum LDH ratio was 1.18. Mean
total and differential white cell counts of peripheral blood were within normal limits. Mean ESR was 62.23.

**Conclusion:** Pleural fluid biochemical analysis can have an important contribution for investigation of patients with pleural effusion. The Light’s criteria is fulfilled in all cases of MPEs. Repeated pleural biopsy procedures will be necessary if first session failed to fetch the definitive tissue diagnosis. Pleuroscopy is recommended procedure for tissue diagnosis in MPEs.

**Keywords:** Malignant Pleural Effusion (MPE), Pleural Biopsy, Light’s Criteria, Pleural Fluid Chemical Analysis
Abstract

**Introduction:** The main aim during any dental treatment is to maintain vital pulp as long as possible.

**Objective:** The aim of this study was to assess clinically the use of MTA in direct pulp capping in adult patient.

**Method:** MTA was performed in two visits treatment protocol on direct pulp capping in adult.

**Results:** Clinical and radiological examination conducted after 7 months post treatment of direct pulp capping in adult resulted in proper pulp vitality and normal radiographic image of the tooth.

**Conclusions:** MTA can be a reliable pulp-capping material on direct pulp exposures in permanent teeth in adults.

**Keywords:** Adults, Direct Pulp Capping, MTA
Assessment of Food Habits and Their Association with Cardiovascular Risk Factors in Employees

Shahab Rezaeian* and Jamal Ahmadzadeh
Department of Epidemiology & Biostatistics, School of Public Health, Hamadan University of Medical Sciences, Hamadan, Iran
* shahab_fs@yahoo.com

Abstract

Introduction: Cardiovascular disease (CVD) is one of the most causes of mortality in worldwide.

Objective: We evaluated the food habits and their association with cardiovascular risk factors in employees.

Method: A descriptive, cross-sectional study, including employees of offices in the city of Sarvabad, the west of Iran in 2010 was conducted. Data were collected by using questionnaires including demographic factors and dietary habits. The individuals’ food habits were ascertained using an 11-item food frequency questionnaire. Frequency of consumption of various food groups and beverages (i.e., meat, fish, milk, fruits, vegetables, cereals, oil, salt, fast food and etc) on daily, weekly or monthly basis was assessed. For statistics, STATA 11 was used; associations were calculated by t-test; p<0.05 was considered significant.

Result: A total of 455 employees were included in the study of which 25% were female with mean age of 34 years (male 33.1 vs. female 38.1, P < 0.001). About 1.5% of employees had elevated blood pressure, 10.5% were smokers, 11.2% had family history of CVD, 5.9% were diabetes (male 3.7% vs. female 12.5%, P < 0.001) and 9.2% were obese.

The mean of dietary habits of 11-item was significantly higher in the females, obese and diabetes, (P < 0.001) but the mean of dietary habits in smoker employees was lower than in non-smoker ones, P < 0.001).

Conclusion: Majority of employees had high prevalence of cardiovascular risk factors such as obesity, diabetes, smoking and family history of CVD. Therefore, the results suggest that nutrition education for employees needs to be more focused on the improvement of dietary habits of staff.

Keywords: Food Habits, Employee, Cardiovascular Risk Factor, Iran
Stress Related Work Environment Factors: Nurses Survey Results

Kristaps Circenis* and Inga Millere
Rīga Stradiņš University, Faculty of Nursing, Riga, Latvia
* Kristaps.Circenis@rsu.lv

Abstract

Introduction: The nursing profession is one of the most stressful occupations today, due to the quantity and diversity of risk factors associated with the work environment. The common contributory factors include higher nurse workloads and characteristics of the work environment such as administrative support, nurse-physician relationships, and support services. Clinical supervision enables nurses to discuss patient care in a safe, supportive environment and may lead to lower levels of burnout for emotional exhaustion and depersonalization.

Objective: The aim of the present study was to explore stress related work environment factors in practicing nurses in Latvia, and to find out nurses opinions about clinical supervision.

Method: Demographic questionnaire and survey about environmental factors in nurses, as well as nurses’ opinions about clinical supervision necessity for nurses, were the instruments used for data collection. The nurses were asked to choose 10 factors from 20 and rank them from 1 to 10, where the most significant was 10.

Results: The participants of the study were 241 nurses from several hospitals and outpatient care institutions in Latvia. All participants were women, age range - from 21 till 59 years. The most frequently marked factor in nurses’ surveys was “risk of infection”, 220 nurses in total chose this factor and 101 (41.9%) ranked it like the most important of all proposed. Frequently marked factors also were “Inadequate remuneration for work” (217 marked, 22.4% ranked with 10), “Emotionally intensive work with people” (179 marked, 7.9% ranked with 10). More than a half (59.8%) of participating nurses never heard about supervisions, 95.5% did not attend supervisions for nurses in past 5 years.

Conclusion: During a study the main stress-related factors were indentified. The most frequently marked factors in nurses’ surveys were “risk of infection”, “inadequate remuneration for work” and “emotionally intensive work with people”. Most of nurses participating in this study considered that the practicing nurses need the supervisions.

Keywords: Nurses, Stress, Working Conditions
Differentiation of Tumors with Specific Red Cell Adherence (SRCA) Test

Dr. Abhishek A Mangaonkar¹ and Dr. A G Valand²

¹) Intern, Grant Medical College and Sir J.J. Group of Hospitals, Mumbai, India
abhi7789@gmail.com

²) Professor, Dept. of Pathology and Vice-Dean, Grant Medical College and Sir J.J. Group of Hospitals, Mumbai, India

Abstract
Introduction: The A & B blood group antigens present on various body tissues are lost following a malignant transformation. Through this study, we have made an attempt to differentiate benign & malignant tumors by the use of this concept. The technique used was Specific Red Cell Adherence (SRCA) based on the principle of Mixed Cell Agglutination on Fine-Needle Aspiration (FNA) samples.

Objective: Our aim was to perform the SRCA test on FNA samples of various human solid tumors and compare them with histopathology (Gold Standard).

Method: A total of 35 FNA samples of swellings suspected to be tumors were collected & the SRCA test was performed on them. The results were compared with histopathology.

Result: The sensitivity of SRCA test was found to be 88.23%; specificity was 72.22%; positive predictive value was 75%; negative predictive value was 86.66% (p<0.05).

Conclusion: SRCA test is an easy & cost-effective technique that can be used for differentiation of benign & malignant tumors on FNA samples.

Keywords: Specific Red Cell Adherence (SRCA), FNA (Fine-Needle Aspiration), Mixed Cell Agglutination
Hepatitis C Virus Infection in Diabetes Mellitus Patients

Dr. Han Ni
Assistant Professor, Department of Medicine, Melaka Manipal Medical College, Melaka Malaysia
hanni.dr@gmail.com

Dr. Soe Moe
Department of Community Medicine, Melaka Manipal Medical College, Melaka, Malaysia
soemoe2006.40@gmail.com

Dr. Aung Htet
Consultant Radiologist, Department of Radiology, No.2 Defense Services General Hospital (1000-bedded), Naypyitaw, Myanmar
dr.ahtet@gmail.com

Abstract

**Background:** Chronic hepatitis C virus infection (HCV) and type 2 diabetes mellitus cause long-term complications in affected patients. Moreover, both disorders are common. Recent cross-sectional studies performed worldwide suggest that they are indeed closely linked. Diabetic patients are at an increased risk of acquiring Hepatitis C virus (HCV) infection because of the nature of the disease and its complications or frequent parenteral exposure. On the other hand Hepatitis C infection may itself contribute to the development of Diabetes Mellitus. The epidemiological evidence of this association has not been studied in Myanmar.

**Aim & Objectives:** Objective of this study was to study the frequency of HCV infection among adult diabetic patients attending the diabetic clinic of a hospital in Myanmar.

**Methods/Study Design:** The study is a hospital based cross sectional study, comprised of 100 diabetic patients visiting the diabetic clinic of Yangon General Hospital, in Myanmar. Subjects were previously confirmed diabetes cases or newly diagnosed diabetes according to World Health Organization criteria. The presence of Hepatitis C infection was tested by SERODIA-HCV Gelatin Particle Agglutination Test method at the National Health Laboratory of Union of Myanmar. A concise history of the patient, examination and laboratory findings were recorded on a proforma.

**Results/Findings:** Out of the hundred diabetics, 19 were found to be anti HCV positive and all of them had type 2 diabetes mellitus. There was no gender difference in the seropositive cases. Serum alanine aminotransferase (ALT) level was raised in 73.7% of the positive cases as compared to the 18.5% of the seronegative patients. Hepatomegaly was found in 68.4% in seropositive cases in contrast to 18.5% of seronegative cases.

**Study Limitations:** Being a cross sectional study, the temporal relationship between these two disorders to verify whether hepatitis C virus has a role in the aetiopathogenesis of type 2 diabetes mellitus could not be studied.

**Conclusion:** HCV infection occurs more often in type 2 diabetics and further investigations should be done in diabetic patients with raised ALT for the presence of chronic HCV infection.

**Keywords:** Diabetes Mellitus, Hepatitis C Virus Infection, Alanine Aminotransferase, Hepatomegaly, Myanmar, Melaka Manipal Medical College
Bilateral Secondary Non- Hodgkin’s Lymphoma of the Breasts: A Rare Case Report

D. K. Das¹ and U. Choudhury²
1) Department of surgery, UCSI University, Malaysia
digantadas03@gmail.com
2) O&G specialist. India

Abstract

Introduction: Non–Hodgkin’s lymphoma of the breast is a rare malignancy. Lymphoma breast could mimic the clinical presentation of inflammatory breast carcinoma. Confirmatory diagnosis is usually performed by fine needle aspiration cytology (FNAC). Prognoses mainly depend on histological grade and stage of the disease. Chemo-radiation is the most actable treatment.

Objective: Rare occurrence and important differential diagnosis with carcinoma breast justify reporting our case.


Results: We report a case of bilateral secondary Non-Hodgkin’s Lymphoma (NHL) of the breast in a 39 years old Malay female. She presented to us with the chief complaints of left breast lump and pain with general weakness for last two months. On examination she was cachexic, had bilateral breast lumps with inflammation of the left breast skin and multiple axillaries lymph nodes on both sides. True cut biopsy of the both breast lumps showed NHL, type B. Ultrasound of abdomen was suggestive of lymphomas of the kidneys with enlarged para aortic lymph nodes. X-ray chest revealed multiple right sided ribs fracture. Laboratory investigations showed anemia and markedly raised lactic dehydrogenase (LDH). During hospital stay she deteriorated very fast and developed fever and respiratory failure. She was planned for palliative management due to her advanced disease. Relative took discharge on request from hospital on 8th day of her admission & she died at home on the same day of discharge from the hospital.

Conclusions: Although Non-Hodgkin’s lymphoma of the breast is a rare malignancy but it is an important differential diagnosis of the carcinoma of the breast.

Keywords: Breast, Non-Hodgkin’s Lymphoma
Occult Breast Cancer Presenting as Axillary Nodal Metastasis: A Case Report and Literature Review

D. K. Das*, Teo ZC**, and U. Choudhury ***

*Associate Professor, Department of surgery, UCSI University, Malaysia
digantadas03@gmail.com

**5th year medical student, UCSI University, Malaysia

*** O&G specialist

Abstract

Introduction: Axillary lymph node (ALN) metastasis from an occult breast cancer is a rare presentation and can be a diagnostic and therapeutic challenge. After ruling out the other sites of malignancy by metastatic workup, mastectomy and axillary clearance or breast conservation surgery should be carried out with appropriate adjuvant therapy.

Objective: Rare occurrence and controversies in investigations and recommended treatment justify reporting our case.

Method: Report of a rare case and literature review.

Results: We report a case of 42 years old woman presenting with right sided axillary mass for last four months. On examination she had a 3x4 cm. mass in the right axilla, both breasts were normal. General physical and systemic examinations were within normal limits. Fine needle aspiration cytology (FNAC) of the right axillary mass showed metastatic adenocarcinoma, rest of the investigations including chest X-Ray, ultrasound of the abdomen, mammogram and MRI of the breasts were normal. She was offered mastectomy and axillary clearance followed by adjuvant chemo-radiation and hormone therapy. Histopathological examinations of the axillary lymph nodes revealed infiltrating ductal carcinoma and positive hormonal receptor status however, mastectomy specimen failed to reveal any carcinoma. She did not have evidence of any recurrence after 3 years of follow-up.

Conclusions: All isolated ALN metastasis should be considered as occult primary breast cancer unless otherwise prove.

Keywords: Occult Breast Cancer, Axillary Nodal Metastasis
Gastrointestinal Stromal Tumour of stomach: A Case Report and the Role of Imatinib

D. K. Das* and Quah WJ **
*Associate Professor, Department of Surgery, UCSI University, Malaysia
digantadas03@gmail.com
**5th year medical student, UCSI University, Malaysia

Abstract

Introduction: Gastrointestinal Stromal tumour (GIST) is relatively an uncommon tumour, accounting for <1% of all gastrointestinal tract (GIT) tumours. Surgical resection for resectable cases remains the mainstay treatment. However, imatinib and most recently sutinib has emerged as a vital care for locally advanced, recurrent or metastatic cases.

Objective: We are reporting our case due to its rare occurrence and to address the important role of imatinib in GISTs.


Results: A 62 years-old man was referred to surgical department with haematemesis for 2 days. On examination patient was grossly anaemic with tachycardia and hypotension. Haemoglobin was 6.2 g/m%. Upper GI endoscopy showed a growth in the fundus of stomach with an ulcer in its canter. Biopsy of the growth reported as GIST. CT scan abdomen reported as having a mass of 3x4 cm. in the fundus of the stomach without any other abnormalities. After resuscitation patient was subjected to proximal gastrectomy followed by gastro-oesophageal anastamoses. Histopathological examination of the specimen reported as GIST of the stomach. Post operative period was uneventful and at the end of 4th year follow-up patient is disease free.

Conclusion: Haematemesis is a cardinal presentation of GIST of the stomach. Surgery alone is adequate for resectable GIST.

Keywords: Gastrointestinal Stromal Tumour of GIT, Imatinib Therapy
To a Holistic Classification in Medical Theory and Education

Georgi Mihaylov Sarov
MD, PhD, PhD
Department of Pathophysiology, Trakia University,
Medical Faculty, Stara Zagora, Bulgaria
gsarov@yahoo.com

Abstract
Introduction: Nowadays teaching medicine is based only on structural functionalism. Thus the conventional organization of the content of functional medical sciences like physiology, pathophysiology and internal medicine is sometimes ridiculous and difficult for learning and practicing.
Method: In an attempt to improve teaching I reorganized the content of pathophysiology in a functional classification and then I applied it in the training of a group of medical students for three months.
Results: The comparison of the results of the annual examinations of experimental and control groups shows that the functional approach significantly decreased the time required for the successful taking examinations.
Conclusion: The results suggest that the functional classification of the content of some medical science must be available, if not as a basis, at least as an additional alternative in medical education.

Keywords: Holistic, Structural, Functional, Pathophysiology, Education
Abstract

Introduction: Every year in the UK, there are more than 160,000 high-risk surgical patients who have a mortality rate of 12.3% and account for greater than 80% of postoperative deaths. Derangements of circulation are a reoccurring feature during major surgery and have been associated with a poor post-operative outcome. Haemodynamic optimisation may be considered in the perioperative period of this high-risk group and could show a significant improvement in outcomes.

Objective: To identify those patients who are at high-risk of postoperative complications and mortality following major surgery and to evaluate the haemodynamic optimisation of the patient during the perioperative period and its effects on the outcomes of the patient.

Method: Keywords were used to perform literature searches using the University of Liverpool’s access to online databases to find appropriate articles. Literature was then selected using predefined selection criteria and the cited references were screened for further articles.

Haemodynamic Optimisation: The use of goal directed therapy involves a haemodynamic protocol with well-defined therapeutic goals. Goal directed therapy shows conflicting results regarding a reduced mortality; however there is a reduced length of hospital stay and post-operative complication rate. Dopexamine appears to have a dose dependent effect on mortality, with better outcomes seen with low doses. Perioperative beta-blockers reduce mortality in those at risk of cardiac events.

Conclusion: Cardiac output monitoring has shown to play a key role in high-risk surgical patients to provide the benefits of goal directed fluid resuscitation. The value of goal direct therapy is most likely because it is individually tailored to the needs of the patient.

Keywords: Haemodynamic Optimisation, Cardiac Output Monitoring, Goal-Directed Therapy, Dopexamine
Reality vs Illusion: Knowledge, Attitude and Practice among Diabetic Patients

1Shu Hui Ng, 1Kheng Hooi Chan, 1Zi Yang Lian, 1Yee Hooi Chuah, 1Aishath Noora Waseem, 2Amudha Kadirvelu*

1Second Year Medical Students, Tan Sri Jeffrey Cheah School of Medicine, Monash University Sunway Campus, Malaysia
2Tan Sri Jeffrey Cheah School of Medicine, Monash University Sunway Campus, Malaysia
* Corresponding Author: amudha.kadirvelu@monash.edu

Abstract
Background: Type II diabetes mellitus (DM) is a chronic metabolic disorder associated with high morbidity and mortality among patients. The data from NHMS III has reported that the present prevalence of DM in Malaysia has exceeded the projected prevalence for the year 2025 as estimated by the International Diabetes Federation. Assessment of knowledge, attitudes, and practices (KAP) is a crucial element of DM control. However, very few studies have focused on this area and there is paucity of KAP data among Malaysian diabetic patients.

Objectives: This cross-sectional study aims to assess the Knowledge, Attitude and Practices (KAP) towards DM and the association between the patients’ KAP and control of DM among patients with type II DM (T2DM).

Methods: Diabetic patients were recruited using the convenient sampling method from an urban diabetes care centre managed by a non-government, non-profit organisation. KAP were assessed using a 25 item structured KAP questionnaire and control of DM was evaluated from the HbA1C and fasting blood glucose levels respectively.

Results: Seventy five patients with T2DM participated in this study. There was a strong association between knowledge and attitude as well as knowledge and practice (P<0.05). The mean (± standard deviation (SD) knowledge score was 11.85 ± 2.45; attitude 3.36 ± 1.29 and practice 4.39 ± 1.36, with the maximum possible scores for knowledge, attitude and practice being 14, 5 and 6 respectively. The scores suggested the presence of good KAP among our study participants. However, there was no correlation between the KAP and blood glucose control, based on patients’ fasting blood glucose and HbA1c results with 85.7% of the participants’ having a unsatisfactory HbA1C value of ≥6.5% and 69% of participants’ had fasting blood glucose of >7mmol/l.

Conclusions: Our data suggests that factors beyond knowledge and attitude contribute to disease management. The plausible factors could be poor self-management, lack of motivation, inadequate social support or lack of resources that are necessary for sustained life style modification behaviour. A patient/self-empowerment approach to diabetes care may enhance the efficiency of DM prevention and control programs in countries experiencing DM as a major public health problem.

Keywords: Knowledge, Attitude, Practices, Diabetes Mellitus, Malaysia
Oral Disease as a Risk Factor for Acute Coronary Syndrome: Single Center Experience

Sachin Kumar Amruthlal Jain, Timothy Larsen, Michael Shaw, Patrick Alexander, Shukri David
Division of cardiology, Providence Heart Institute, Southfield, MI, USA
doctorsachin@gmail.com

Abstract

Objective: Poor oral health is common in the United States. The incidence of periodontal disease in young adults in USA is around 7-10%. The current review finds that periodontal disease is associated with a 24% increase in the risk for CHD.

Background: Evidence for a link between periodontal disease and several systemic diseases is growing rapidly. Current evidence suggests that periodontitis is associated with an increased likelihood of coronary heart disease, diabetes and metabolic syndrome. In recent times there has been increasing awareness that immune responses are central to atherogenesis and a mechanism by which infection may initiate and facilitate the progression of atherosclerosis. The passage of periodontal pathogens, and their products, through ulcerated epithelium into the circulation, leading to bacteraemia and/or provocation of systemic immune and inflammatory responses is of concern. In a meta-analysis, periodontal disease increased the risk for incident CHD by a risk ratio of 1.24. Almost 1/3 of diabetes has severe periodontal disease.

Methods: A retrospective analysis was performed from January 2007 to December 2009 in all acute coronary syndromes admitted in Providence Hospital’s Heart Institute, who are less than 50 years old. Patient charts were reviewed. Patient’s demographics and traditional risk factors were charted. Patients were called and specific questions regarding periodontal disease were asked.

Results: A total of 130 patients were included in the analysis. 97 patients (70%) responded. The Patients were matched to the baseline demographics and traditional risk factors. Periodontal disease is found almost among 37% of patients in this study, which is approximately four and a half times the expected prevalence for this age group according to the findings of The National Health and Nutrition Examination Survey, 1999-2004. There is no increase in MACE events because of small sample size.

Conclusion: The mouth is, thus, a significant contributor to both the total burden of infection and inflammation and, hence, to overall health and well-being. The examination of the oral cavity is often neglected. Our findings support considering periodontal disease as a nontraditional risk factor for coronary artery disease and thus the implementation of screening for both primary and secondary prevention. We also recommend patient compliance with the American Dental Association recommendations regarding basic oral health.

Keywords: Periodontal Disease, Coronary Heart Disease, Nontraditional Cardiovascular Risk Factor
The Effect of Cardiovascular Risk Factors on the Relationship between the First Korotkoff Sound and the Return of Arterial Blood Flow in the Arm during Blood Pressure Measurement

Christopher T MANSBRIDGE¹; Michael D BURKE¹; Philip S LEWIS¹,²
1. The University of Manchester, UK
   chrismansbridge@hotmail.com
2. Blood Pressure and Heart Research Centre, Stepping Hill Hospital, UK

Abstract

Background: The pressure at which the first Korotkoff sound appears during sphygmomanometer cuff deflation (K₁) is presumed to represent the point of return of limb arterial blood flow and thus systolic blood pressure (SBP).

Aim and objectives: To investigate the relationship between K₁ and the return of arterial blood flow during sphygmomanometer cuff deflation, and the effect body mass index (BMI), age and SBP have upon this relationship.

Methods: In 34 subjects with a normal BMI and 31 obese subjects, K₁ was measured by auscultation over the brachial artery and the pressure at which the limb arterial blood flow returned was simultaneously assessed by return of a Doppler radial arterial signal (D₁). With the subject seated, three sequential recordings were made on the right arm at one minute intervals with the forearm supported at heart height.

Results: D₁ was detected at a pressure 3.65 mmHg (95% CI 2.24 to 5.05) higher than K₁ in the obese group, compared to 0.15 mmHg (CI -1.70 to 2.00) higher in the normal BMI group (p=0.0036). In linear regression analysis, D₁-K₁ increased with age (standardised correlation coefficient (β)=0.368, p=0.004), but not SBP (β=0.081, p=0.521).

Conclusion: Measuring SBP by auscultation may underestimate the true SBP within the arm in obese or older subjects.

Keywords: Blood Pressure, Korotkoff, Blood Flow, Anthropometrics, Cardiovascular Risk
Knowledge and practice of caries prevention in mothers from Bialystok, Poland

Joanna Baginska¹*, Ewa Rodakowska¹
¹Department of Conservative Dentistry, Medical University of Bialystok, Poland
jbaginska@wp.pl

Abstract

Introduction: Parents are directly responsible for the dental health of their offspring and can play an important role in preventing oral diseases in children.

Objective: The aim of this study was to assess knowledge and practice of mothers of young children from the area of Bialystok, Poland, on the prevention of tooth caries.

Method: 140 mothers of 3-4 year old children took part in an anonymous voluntary survey. The questionnaire used in the survey related to the knowledge of principles of dental caries prevention, the sources from which mothers obtain their knowledge and the methods of implementing oral health behavior.

Results: In the survey, 95.7% of mothers knew about the importance of regular removal of dental plaque by brushing teeth, 85.7% knew of the role of fluoride-containing toothpaste and 82.8% indicated avoiding the consumption of sweets. They were also aware that oral health required regular dental visits (89.2%). Most of them (87%) knew that deciduous teeth should be treated as permanent ones, but only 65.7% were convinced that a direct relationship of the condition of deciduous and permanent dentition exists. The survey revealed a discrepancy between the knowledge of principles of dental caries prevention and their implementation in everyday life among mothers of young children from Bialystok, Poland. There was a large percentage of 3-4 year old children who brushed their teeth 1-3 times a week (15%) or less frequently (3.6%). In the sample, 10% of 3-4 year old children visited a dentist for the last time a year ago, and another 42.8% had never been on such a visit.

Conclusion: Mothers in Bialystok, Poland, had basic knowledge of caries prevention. However, their theoretical knowledge has been not fully reflected in the way they cared for their children's teeth.

Keywords: caries, children, dental health, knowledge, mothers
Biokinetica Study of the Wrist joint

Thida Than, Aye Aye San, Tin Tin Myint*
1University of Dental Medicine, Yangon, Myanmar
2University of Medicine 2, Yangon, Myanmar
3School of Medicine, Universiti Malaysia Sabah, Malaysia
* Email: ttm187@gmail.com

Abstract

Introduction: Quantification of joint mobility by ROM (range of movement), meaning the maximal range of joint angle, is used to evaluate the degenerative joint disorders and the efficacy of treatment. Age, gender, individual habits, daily activities and tissue degeneration influence the joint ROM. The wrist joint, with many supporting tissues to perform a motion, is a complex structure. Many studies mentioned ROM may be different in various racial groups because of their body built, underlying diseases.

Objective: This study aims to establish a database of wrist joint ROM and factors influencing it among Myanmar population.

Method: 120 Myanmar volunteers with no past history of musculoskeletal or neural lesions, but with normal functional wrist joints of both sides, were included. 30 subjects (15 males and 15 females) each from 5-17 year, 18-40 year, 41-60 year, 61 year and above age groups participated. Various ranges of wrist joint motions were measured by hand goniometry in pronation position only as most of the daily activities were usually performed in pronation.

Result: The average of ROM of wrist joint flexion was 68.3 degrees, extension was 68.2 degrees, radial deviation was 19.6 degrees and ulnar deviation was 26.1 degrees. Significant difference between male and female was found in ulnar deviation of right side. 5-17 year age group had wider range of motion than other age groups while over 60 people has lowest.

Conclusion: The findings highlighted the decline in wrist joint motion capability with age. If facilities are available, ROM of wrist joint during both pronation and supination should be measured by using electrogoniometer.

Keywords: Range of movement, radial deviation, ulnar deviation, Myanmar, daily activities
Prevalence, Intensity and Extent of Oral Impact on Daily Performances and their relationship to Oral health problems among rural females

Dr. Arpit Gupta 1*, Dr. Anil V. Ankola 1, Dr. Mamata Hebbal 1
1 Public Health Dentistry, KLE VK Institute of Dental Sciences, KLE University, Belgaum – 590010, India.
doc.arpit.gupta@gmail.com

Abstract

Background: Oral diseases are not usually fatal, but can affect the ability to eat, speak and socialize without embarrassment and contribute to one’s general wellbeing. When oral health related quality of life (OHRQoL) measures are used alongside traditional clinical methods of measuring oral health status, a more comprehensive assessment of the impact of oral diseases on the several dimensions of subjective wellbeing becomes possible. Assessment of oral health outcomes is vital to planning oral healthcare programmes. Moreover, little is known about this impact of oral diseases on rural females and research on the social outcome related to dental diseases is limited in developing countries.

Objective: To evaluate the current status of oral health related quality of life by measuring the prevalence, intensity and extent of Oral Impact on Daily Performances (OIDP) and their relationship to oral health problems among rural females of Belgaum District, South India.

Method: A cross-sectional study was carried out among 267 females at three randomly selected rural areas in Belgaum District, Karnataka, India. The data was collected by means of a structured interview containing questions related to socio-demographic details. OHRQoL was assessed using the OIDP questionnaire. The World Health Organization (WHO) criteria were used to obtain data on clinical oral conditions and self-reported oral symptoms.

Result: 50.2% (95% CI: 44.2 to 56.17) participants reported oral impact on daily performances in the last 6 months. 32.6% and 22.8% subjects reported impact on eating and speaking performances respectively. 11.6% and 20.6% reported impacts of very severe and severe intensity respectively. The mean number of performances impacted was 1.19 (95% CI: 1.01 to 1.37) and the median was 1 performance with impact. The correlations with Missing teeth and Toothache were found to be stronger.

Conclusion: The prevalence of oral impacts on daily performances in this rural female population was high. Oral impacts affected their quality of life mainly through difficulty in eating and speaking. There is a need for further longitudinal studies to better understand and interpret OHRQoL measures in such populations. Moreover, appropriate policy changes and proper programme implementation is required for the upliftment of such deprived population.

Keywords: OHRQoL, Quality of life, OIDP, performance with impacts, rural female.
Blood Pressure Lowering Efficacy of Perindopril/ Indapamide Fixed Dose Combination in Uncontrolled Hypertension

PHIMDA Kriangsak\textsuperscript{1} and CHOTNOPARATPAT Paiboon\textsuperscript{2}

\textsuperscript{1} Diabetes and Hypertension Clinic, Department of Internal Medicine, Udonthani Hospital, Bangkok, THAILAND
\textsuperscript{2} Department of Medicine, Bangkok Metropolitan Administration Medical College Vajira Hospital, Bangkok, THAILAND
\textsuperscript{1}kriangsak_kp@hotmail.com

Abstract

Introduction: The national health examination survey in Thailand determined that T2DM and dyslipidemia were probable risk factors resulting in higher rate of uncontrolled hypertension. This had been reported with controlled rate as low as 15%. The authors investigated if the choice of antihypertensive agents render better blood pressure control in Thai hypertensive patients.

Objective: To assess the blood pressure (BP) lowering efficacy of Perindopril/indapamide Fixed Dose Combination (P/I FDC), as an antihypertensive of choice in Thai hypertensive patients with multiple co-morbidities and risk factors.

Method: A prospective consecutive open-blind evaluation short-term follow-up was initiated with Perindopril 4 mg/Indapamide 1.25 mg Fixed Dose Combination (P/I FDC) among 1,364 Thai hypertensive patients, as newly diagnosed monotherapy, or switched from either inhibitors of angiotensin converting enzyme or angiotensin receptor blocking agents, with addition of either calcium channel blockers of beta-blockers allowed in a multi-center trial hypertensive patients with safety monitoring program demanded by Thai health authority.

Result: After 3 months of treatment, the SBP/DBP of patients receiving P/I FDC-based treatment (mean ± SD), [95% CI] was 131.6±9.6 [131.0-132.1] /78.7±7.1 [78.3-79.0] mmHg resulting from SBP/DBP reduction of 26.6/11.8 mmHg respectively. In the overall cohort, only 9.7% of patients required additional antihypertensive agents. The authors founded that in newly diagnosed stage 2 hypertensive patients, hypertensive patients with diagnosed dyslipidemia, and with diagnosed T2DM, P/I FDC mono-therapy or in combination effectively reduced SBP/DBP by 33.9/16.0 mmHg, 30.7/12.8 mmHg and 23.5/11.0 mmHg respectively. Overall blood pressure normalization with P/I FDC with SBP/DBP<130/80 mmHg and <140/90 mmHg were 48.2% and 91.4% respectively which were above earlier reported in Thai hypertensive patients. P/I FDC was well tolerated by patients, with a reported cough incidence of 5.1%.

Conclusion: The choice of antihypertensive agents is a critical factor for the control of hypertension. P/I FDC is an effective antihypertensive agent in Thai hypertensive patients for uncontrolled hypertension. It is effective in both newly diagnosed stage I, stage II hypertension and among patients with diagnosed Type 2 Diabetes and dyslipidemia. In daily clinical practice, P/I FDC should be recommended as the first choice antihypertensive among uncontrolled Thai hypertensive patients.

Keywords: Perindopril/Indapamide Fixed Combination, Angiotensin Blocking Agent, Uncontrolled Hypertension, Type 2 Diabetes Mellitus, Blood pressure staging
Good Medical Record Keeping

Maiedha Raza

Abstract

Introduction: Good medical record keeping is at the forefront of medical practice. Not only do medical notes act as a learning tool, they are needed in medico-legal circumstances and more importantly, for patient safety and communication between multi-disciplinary team members. The General Medical Council wishes for clinicians to keep ‘good’ notes in a coherent, chronological and accurate order.

Objective: The Royal College of Physicians (RCP) audit tool released in 2008 assesses 12 standards of medical notes, with which this audit has been conducted. The objective was to measure medical note keeping in accordance with published guidelines.

Method: A concurrent review of inpatient notes on a medical ward, Fairfield General Hospital (FGH) was undertaken with standards set at 100%. A questionnaire exploring attitudes to medical record keeping was also piloted.

Result: Standards measured increased over the 3 audit cycles with 3 of the indicators (writing a date, patient name and hospital number) reaching 100%. The questionnaire showed 60% of the cohort had not read guidelines on note keeping and were dissatisfied with the standard of medical notes on their wards.

Conclusion: These results indicate medical note keeping has scope for improvement and auditing can improve standards. They also highlight a need for development in the way doctors are trained, with regards to medical note keeping.

Keywords: medical, note, keeping, records.
Dental caries, salivary parameters and plaque scores as caries risk predictors among 12 year old school children – A follow up study

Mamata Hebbal 1 *, Anil V Ankola2, Sharada .C. Metgud 3
1Reader and Ph. D scholar, Dept of Public Health Dentistry, K.L.E VK Institute of dental sciences, Belgaum, Karnataka, India.
2Professor and Head, Dept of Public Health Dentistry. K.L.E VK Institute of dental sciences, Belgaum, Karnataka, India.
3Professor and Former Head, Dept. of Microbiology. J. N. Medical College, Belgaum, Karnataka India.

dramamatahebbal@rediffmail.com, Contact No - +919844217300

Abstract
Introduction: Dental caries is a disease with multifactorial etiology and many other factors influence indirectly. The important factors are Streptococci mutans, Lactobacilli counts, saliva flow rate, buffering capacity and past caries experience.
Objective: To find the association between caries increment and various risk factors: Caries experience, dental plaque, salivary flow rate, buffering capacity, Streptococcus mutans and Lactobacilli counts.
Method: Dental caries and plaque scores were assessed using Modified Dentition Status and Treatment Needs and Silness and Loe index respectively. Stimulated saliva was collected to estimate salivary flow rate, buffering capacity, Streptococcus mutans and lactobacilli colony forming units. Bivariate analysis was carried out using caries increment (dichotomous for DMFT and DMFS) and each variable dichotomized at baseline (Pearson’s χ2 test with continuity correction as required).
Result: WPDMFT and WPDMFS were associated with caries increment (DMFT and DMFS) after 8 months (p=0.01, p=0.04 respectively). Salivary Streptococcus mutans counts alone showed a statistically significant association for caries increment (WPDMFT and WPDMFS).
Conclusion: The results of the present study suggest initial caries to be the strongest predictor of caries occurrence in future.

Keywords: Dental Caries, plaque, Streptococcus mutans and Lactobacilli colony forming uni
Is Awareness of Dots Among Medical Practitioners a Worry? A Developing Nation Scenario

Vinayak Nagaraja1*, Ganraj Bhat Sankapithilu2, Mudassir Azeez Khan3
1Research Assistant, Dept of Community Medicine Mysore Medical College & Research Institute, Mysore, Karnataka, India.
2Research Assistant, Dept of Community Medicine Mysore Medical College & Research Institute, Mysore, Karnataka, India.
3Professor & Head, Dept of Community Medicine, Mysore Medical College & Research Institute, Mysore, Karnataka, India.
vnrsn@rediffmail.com

Abstract

Introduction: Annually 2 million people in India develop Tuberculosis and 330,000 die. WHO-recommended DOTS strategy was pilot-tested in 1993 and launched as Revised National Tuberculosis Control Program (RNTCP) in 1997. Awareness of DOTS among the doctors in the private sector was appalling although nationwide coverage was attained by 2006.

Objective: To study awareness of DOTS among Medical Practitioners of urban and rural Mysore.

Method: 401 Medical practitioners in hospitals and nursing homes of urban and rural areas of Mysore who treated Tuberculosis patients (private and public sector) were approached. They were grouped under different specialties as per the year of graduation (before or after introduction of DOTS).

Result: 38 % doctors who graduated before the introduction of DOTS didn’t follow DOTS compared to 14.9% doctors who graduated later. 100% doctors working in Government sector felt that DOTS was better than daily regimen while 85% from the private sector felt so. Only 47.9% of the doctors in the private sector practiced DOTS compared to 95.1 % in the Govt. Sector. Hence, the number of doctors practicing DOTS in Private Sector was less than 50 % of that in the Govt. Sector. Both of these comparisons were found to be statistically highly significant (p<0.001). Awareness of DOTS was alarmingly low among Orthopedic Surgeons, Gynecologists and Pediatricians when compared to Physicians and General Practitioners.

Conclusion: DOTS awareness is still low among doctors who graduated before the introduction of DOTS. Private practitioners harbored myths and misconceptions about DOTS.

Keywords: DOTS AWARENESS, TUBERCULOSIS, MEDICAL PRACTITIONERS
The exam skills workshop as formative assessment for medical students

Hashim Z.1*, Miller A., Fahim N.2
1 United Lincolnshire Hospitals NHS Trust
2 Northern Lincolnshire & Goole Hospitals NHS Foundation Trust

Abstract

Background: The assessment of medical students is a complicated process with medical schools making constant updates. This ensures that assessment is not only comprehensive and robust, but also standardised and fair. Nowadays, there is more stress laid upon the importance of formative assessment in medical schools.

Introduction: Some University of Nottingham students undertake their final year surgical placement at the Lincoln County Hospital. Each rotation has 6 students and runs over 9 weeks with an exam skills workshop being conducted in the final week of the placement as a formative assessment tool. The workshop is a 6 station OSCE conducted using real patients and a number of examiners with varying levels of experience. Candidates have 7 minutes to perform the allocated task in each station, followed by 2 minutes for the examiner to give feedback to the candidate about his/her performance in that particular station.

Objective: To assess the importance of an exam skills workshop as a formative tool for final year medical students at the end of their surgical placement at the Lincoln County Hospital.

Method: All the candidates were asked to complete an anonymous post-exam questionnaire. The results were tabulated on an excel database and then analysed. Student performance in the summative (annual) OSCE was compared against those Nottingham students who had not attended the workshop (control group).

Results: 24 students attended the workshop during the course of the academic year (2010-2011). 75% of them felt that it was reflective of the summative OSCE. 16% of the students felt that the examiners were not being strict with time-keeping in the exam skills workshop, which made this less reflective of the annual OSCE where time-keeping is strict. All the students felt that this experience would help them in coping better with the summative OSCE as they now had an idea about what to expect on the day. Pass rate in the annual OSCE for the students who attended the exam skills workshop was 100% as compared to 83% for the control group (p-value 0.0197).

Limitations: The results are limited by the small number of students who were exposed to this workshop. Another difficulty is ascertaining the extent that the exam skills workshop contributed to the student’s overall success in the summative OSCE.

Conclusion: The use of a formative assessment, an exam skills workshop, is valued by students. An exam skills workshop may improve performance in summative assessment. Further research that identifies and controls for confounding factors is needed to confirm this observation.

Keywords: formative, assessment, OSCE, medical students.
Teaching Fellows in undergraduate medical education-the student’s perspective

Hashim Z.*, Miller A., Fahim N., Sam M.
1 United Lincolnshire Hospitals NHS Trust, UK
2 Northern Lincolnshire & Goole Hospitals NHS Foundation Trust, UK
3 University of Leicester Medical School, UK

Abstract

Background: Currently there is a lack of data exploring the value added by Clinical Teaching Fellow posts over teaching led by regular working clinicians.
Aim: To explore the perceptions of medical students regarding the value attached to having fulltime Teaching Fellows to deliver undergraduate medical education.
Method: A total of 521 clinical year medical students from the University of Leicester were asked to complete an online questionnaire.
Result: 375 medical students responded to the questionnaire (72%). Forty five percent of students felt that full time clinicians did not have adequate time to teach, as opposed to 22% that felt otherwise, this result was statically significant (p value <0.0001). There was a demand amongst medical students to have doctors, with a clinical background, employed to teach, particularly because Teaching Fellows were more reliable in delivering high quality teaching (82%)(p value <0.0001). However, only a minority (21%) felt that formal teaching qualifications were required to deliver the best teaching. There was a mixed opinion regarding the cost-effectiveness of such full time posts.
Conclusion: This study highlights the need for Clinical Teaching Fellows as perceived by medical students. However, issues such as financially sustaining these roles on a large scale nationally and the need for formal qualifications in teaching to deliver effective medical education need to be analyzed further.

Keywords: Undergraduate, medical students, Teaching Fellows
Factors affecting dental anxiety and beliefs in an Iranian population

Jalaleddin Hamissi 1*, Hesameddin Hamissi 2, Adeleh Ghoudosi 3, Shahrzad Gholami 4
1 Associate Professor Department of Periodontics & Preventive Dentistry, College of Dentistry, Qazvin University of Medical Sciences, Qazvin, Iran. H/P: ++989121812543
2 Dental Student, College of Dentistry, Qazvin University of Medical Sciences, Qazvin Iran
3 Department of Biostatistics, College of Medicine, Qazvin University of Medical Sciences, Qazvin, Iran
4 Post-graduate student of library and information science, University of Tarbiat Modares, Tehran, Iran

Abstract

Introduction: The dentists feel influenced in taking care of patients, showing fear, anxiety, and avoidance in the dental situation.

Objective: The aim of this study was to decide current prevalence of dental anxiety and fear in a population of high school students in Qazvin, Iran.

Method: The study group comprise of seven hundred and eighty randomly selected high school students participate in this research. There were 315 (40.38%) boys and 465 (59.62%) girls of the ages between 15 and 16 years. The questions were formulated to evaluate information without the need for dental examination. The data were obtained from the epidemiological study to assess anxiety and fear, with the questionnaire were used. We distributed questionnaires of, Dental Anxiety Scale (DAS), Dental Fear Survey (DFS).

Result: According to the results, dental anxiety and fear were found to be noticeably higher in the study group. 29% were found High anxiety and also in 21.8% of students had high fear in 30.4% of the study subjects, in that order the highest anxiety and fear levels were found in adolescents who had an extraction at their last visit. Those adultcnet who had visited the dentist recently found to have higher fear and anxiety levels, while lower fear and anxiety levels were associated with adolescents who had never been to the dentist. The lowest fear and anxiety levels were oral prophylaxes.

Conclusion: According to our finding it may conclude that anxiety and fear are high among the students with previous traumatic dental exposure.

Keywords: Dental anxiety; Fear; Dental health; Epidemiology; Iran
Needle Stick Injury and Inadequate Post Exposure Practices among Health Care Workers of a Tertiary Care Centre in Rural India

Rambha Pathak 1*, Arunpreet S Kahlon 2, S K Ahluwalia 3, Surina Sharma 4, Raveesha Bhardwaj 5

1 Assistant Professor, Department of Community Medicine, MM Institute of Medical Sciences & Research, Mullana, Ambala, India, rambha_p@yahoo.com
2 Intern, MM Institute of Medical Sciences & Research, Mullana, Ambala, India
3 Prof & Head, Department of Community Medicine, MM Institute of Medical Sciences & Research, Mullana, Ambala, India
4 Intern, MM Institute of Medical Sciences & Research, Mullana, Ambala, India
5 Intern, MM Institute of Medical Sciences & Research, Mullana, Ambala, India

Abstract

Introduction: Occupational exposure to pathogenic microbes as a result of needles stick injury is associated with significant risk to health care professional’s career, health, families and also the patients.

Objective: This study was carried out to find out the incidence of needle stick injury (NSI), probable reasons for getting it and to determine barriers in seeking care after NSI among health care workers (HCWs) of a tertiary care centre in Northern India. It was also planned to assess awareness, acceptability and availability of post exposure prophylaxis (PEP) in the above population.

Method: A cross-sectional study was conducted among HCWs of MM Institute of Medical sciences and Research, Mullana. A total of 300 health care workers were selected for the study by simple random sampling method. A self designed, semi-structured interview schedule was used to collect data from the participants by interview method.

Result: 80.5% of HCWs reported having had one or more NSI in their career, maximum among the nursing staff (94.2%). The average number of NSIs was found to be 1.85 per HCW per year (±2.29 SD). 17.8% of HCWs had a NSI involving a high risk patient. 56.8% of the NSI were from a hollow-bore type of needle. Most of NSIs were while recapping a needle after use (27%) or bending the needle for breaking it before disposal (20%). Majority of the NSI were not reported to the hospital administration. 72% of the respondents had heard about PEP and less than 10 % of them knew about the availability of PEP services in the hospital.

Conclusion: Training of HCWs regarding safety practices needed to avoid NSI should be an indispensable ongoing activity at the hospital . Besides health promotion, there should be setting up of an adequate surveillance mechanism in every large hospital and also of facilities for prompt response and treatment of NSI.

Keywords: Needle stick injury, post exposure prophylaxis, health care worker
Histopathological Changes In White Matter Of Cerebellum In Pyrethroid Exposed Albino Rats

Saim Hasan 1*, Mohd. Shahid 2, Pawan Kumar 3

1 Assistant professor, Department of Anatomy, SHKM Govt. Medical College, Nalhar, Haryana
2 Senior resident, Department of Pathology, J. N. Medical College, A.M.U, Aligarh
3 Demonstrator, Department of Biochemistry, SHKM Govt. Medical College, Nalhar, Haryana

Abstract

Introduction: The liquid vaporizers are very commonly used as residential insecticides in developing countries. Neurotoxic effects of pyrethroids have been reported earlier but studies regarding their effects on white matter of cerebellum are scanty in spite of its direct exposure. So the present study was planned to assess and compare the effects of long term prallethrin (a pyrethroid) exposure on white matter of cerebellum.

Method: Twenty albino rats were divided into two groups of control and experimental. Rats in experimental group were exposed to 3.2% w/v prallethrin vapors 12 hours daily for 180 days. Control animals were kept under identical conditions without exposure to said repellent. The animals were sacrificed after 180 days. Their Cerebellum removed and processed. Sections cut and stained with Haematoxylin and Eosin.

Result: The loosening of the white core along with cellular microcystic change with interstitial oedema was present in Experimental Group. White matter showed large empty looking cells with darkly stained nucleus and increased cytoplasmic vacuolation compared to control

Conclusion: This study showed that long term pyrethroids exposure resulted in loss of white matter of cerebellum in rats. At present, the significance and manifestation of such a loss of white matter is not known. Further behavioural study is required to shed some light on this issue.

Keywords: pyrethroids, liquid vaporizers, rats, cerebellum, white core, histology
Cerebral Blood Circulation Diagnostics in Children Exposed to Industrial Toxicants

Nina Zaitseva 1, Olga Ustinova, Alfiya Aminova 2*, Victoria Diner 3

1,2,3 Federal Scientific Center for Medical and Preventive Health Risk Management Technologies
aminova@fcrisk.ru.

Abstract

Introduction: The problem of early diagnostics of cerebral circulation pathology in children, who are exposed to industrial toxicants, is not well-studied.

Objective: The study was designed to assess the features of impaired cerebral circulation in children, when exposed to environmental formaldehyde, phenol, cresol and methanol.

Method: A total of 120 children (6 to 10 years of age) who lived in the area influenced by the emissions of chemical companies. The children were randomized to two groups, depending on the concentrations of chemicals in their bio-samples. The examination was carried out using a Toshiba Aplio XG ultrasound scanner (Japan) with 1.8-2.5 MHz multi-frequency linear-array transducers. All the measurements were performed under standard conditions.

Results: In order to assess cerebrovascular disorders caused by exposure to environmental chemicals of industrial origin, the authors proposed to use transcranial Doppler sonography. The children, exposed to phenol, cresol, formaldehyde and methanol, demonstrated such features of cerebrovascular disorders as lower compliance, increased stiffness and resistance of cerebral artery walls. These changes in the vascular tone correlated with the blood level of chemicals of industrial origin.

Conclusion: The investigation of the features of cerebrovascular disorders in children in environmentally unfavorable areas is of importance for the prevention of cerebrovascular diseases and the reduction of the mortality rate associated with their complications in adults.

Keywords: cerebral circulation, environmentally unfavorable area, transcranial Doppler sonography.
Dengue Hemorrhagic Fever and Natural Disaster: The Case of Padang, West Sumatra

David Fanany 1*
1 La Trobe University, Bundoora, VIC, Australia

Abstract

Introduction: The earthquake that struck Padang, West Sumatra on September 30th, 2009 was a significant turning point in the city’s recent history. The aftermath and responses to the disaster were shaped by longstanding practices and attitudes towards development, and it has resulted in ongoing effects and changes to the city’s health environment, including, significantly, to issues relating to vector control and the occurrence of dengue hemorrhagic fever.

Objective: Establish and document the links between the earthquake and changes to the environmental health situation in Padang.

Method: Consideration of statistics on dengue hemorrhagic fever, combined with an assessment of issues arising from the earthquake that impact on environmental health, as reported in official documents and media discussion

Result: The earthquake has resulted in significant long-term changes to the living environment, which have impacted on health issues, most notably through an increase in dengue hemorrhagic fever.

Conclusion: The importance of planning for sustainable development in the context of prevention and control of environmental disease is illustrated by natural disasters such as the Padang earthquake, and cannot be overlooked in developing regions.

Keywords: West Sumatra, disaster, dengue, development
Analysis of deaths from traffic accidents in a Brazilian capital

Maria Stella Jakeline Alves de Farias¹, Henrique Pinheiro Afonso Cavalcante¹, Yuri Silva Toledo Brandao¹*, Dyego Taffarel Rosendo de Barros¹, Divanise Suruagy Correia², Jairo Calado Cavalcante²

¹ Student of the Faculty of Medicine, Federal University of Alagoas; Campus of Maceio, Maceio-AL, Brazil
² Professor of the Faculty of Medicine, Federal University of Alagoas; Campus of Maceio, Maceio-AL, Brazil

Abstract

Introduction: Over the past 60 years, the urbanization process has intensified around the world. It is estimated that each year 1.2 million people die due to traffic accidents (TA) in the world. Annually, about 37,000 people die and another 180,000 are hospitalized due to TA in Brazil. The frequency of deaths in Brazilian States and Capitals and how they occur, comply with different standards and specific locations. Thus, it becomes essential to know their distribution according to variables such as sex, age and injury type to guide the creation of interventional measures to begin to settle the TA and their victims.

Objective: To assess the deaths from traffic accidents occurred in the city of Maceio in the period of 2001 to 2010.

Method: It is a descriptive study, which used secondary data from the Database of the Mortality Information System (SIM), available on the Department of Health of Maceió (SMS) in July 2011. The variables studied were deaths by type of accident, sex and age. Data were analyzed using EpiInfo version 3.5.3.

Results: In the period of 2001-2010, occurred 53,186 deaths, which 1,369 (2.57%) were due to traffic accidents. The type of fatal accident that occurred most frequently was involving pedestrians (48.88%), followed by accidents classified as "other' transport accidents" (37.61%). Death in men is more often presented with 1,122 (81.95%) cases. The deaths were more prevalent among persons of 15 to 49 years, with 924 cases (67.49%), followed by the deaths of those 50 years or more (23.59%).

Conclusion: This study showed that the deaths from traffic accidents (TA) in the city of Maceio, as well as in Brazil and elsewhere in the world are alarming and could be prevented. Thus, there is the need to create interventional measures, which must include improvements on the structural conditions of the roads, with more rigid enforcement of the laws of the traffic, and also realizing programs of education in the transit in a more frequent and proficient way.

Keywords: traffic accidents, deaths, Brazil
Thyroid hormones status features at different professional law-enforcement officer groups

Koubassov R. *1, Barachevsky Yu. 2, Yuriev Yu. 3
1, 2, 3 Russia, Arkhangelsk, Northern State Medical University
Email: romanas2001@gmail.com

Abstract

Introduction: The law and order authority service including military are characterized with higher physical exercises and psychoemotional stress that result in forming specific functioning of regulation system in organism. Endocrine system (hypothalamus – hypophysis – thyroid or hypothalamus – hypophysis – adrenal axis etc.) provides increasing or decreasing of organism stability and depends from environment and life activity. In army the processes of long-term adaptation are activated. Under this circumstances the hormones (including thyroid) changes biosynthetic organization processes

During long-time effects of severe factors in hypothalamus – hypophysis – thyroid regulation system occurred changes that reflect in other regulatory mechanisms. This changes results in natural adaptation reactions in energy metabolism, total metabolism in tissues and organs.

In consideration of endocrine system importance, social factors in adaptation forming the investigation of hormonal levels in different conditions are actual scientific and practical problem.

Objective: The aim of our investigation is analysis of hormonal supplying by hypophysis – thyroid regulation system at different law-enforcement officer groups in dependence from professional stress.

Method: The two healthy men group (130 persons), aged 23-35 years that living in Archangelsk (Russia) were investigated. The first group is Ministry of Home Affairs law-enforcement officers, but second group is civilians unrelated to law-enforcement service. In according to professional occupation the first group was divided in three categories. In first category were combatants that send on a mission to Caucasus (Chechen, Ingush Republics) for maintenance of law order. The mission duration was 3 month. The total number of missions to war conflict territories in all service life was 2-3 times. The investigation of combatants were doubly: before 2 day from mission to war conflict territory and in 2 days after returning to principal place of service (Archangelsk city, Russia). The second category of law-enforcement officers includes law-enforcement school students. At last, the third group consists from policemen that maintain law order in territory without war conflict and never take part in combat mission.

The fasting blood samples from ulnar venous were exercise at all people. The blood serum thyrotrophic hormone (TSH), thyroxin (T4) and triiodothyronine (T3) were determined by enzymoimmunoassay (commercial assay kit “Monobind Inc.” USA).

The database was analyzed statistically by computer programme (SPSS 15.0). The significance critical level (p) in check of statistic hypothesis was taken low than 0.05 but 0.1≤p>0.05 estimated as tendency. For estimation of universe distribution we used Shapiro-Wilk normality test that revealed abnormal distribution in all groups. In connection with it comparative analysis of means provided by nonparametric criterions: for dependent samples (combatants before and after mission) we used Wilcoxon criterion, but for independent samples (combatant – students – policemen – civilians) we used Mann-Whitney criterion.

Result: Analyses of our results are shown that hormonal levels at all persons were in normal physiological limits.
Together with it, we revealed significant differences of hypophysis and thyroid gland serum hormonal means between comparative groups as for dependent samples well as for independent samples.

The maximal blood serum TSH mean were detected at before mission combatants and in law-enforcement school students, but minimal this ne index were at policemen and civilians. The blood serum thyroid hormones (thyroxin and triiodothyronine) in different groups of law-enforcement officers are vary in dependence from professional stress. At law-enforcement school students and before mission combatants a $T_4$ were minimal in comparison with policemen and after mission combatants. In this time as to $T_3$ were revealed counterpositions that’s law-enforcement school students and before mission combatants have maximal levels but policemen and after mission combatants – minimal levels.

**Conclusion:** The revealed differences of endocrine system indexes in law-enforcement officer group with intense load are probable adaptive reactions to extreme professional factors. This one provides optimal physiological adjustments to military stress etc.

**Keywords:** law-enforcement officers, thyrotrophic hormone, thyroxin, triiodthryonine, stress, adaptation
Alcohol Epidemic: Do hospital staff have the knowledge to curtail this?

Kwong E 1*, Gardiner N 2, Chatterjee M 3, McCrea D 4
1 North West London Hospitals NHS Trust, London, NW10 7NS, UK
2 North West London Hospitals NHS Trust, London, NW10 7NS, UK
3 Geriatric Medicine, North West London NHS Trust, London, NW10 7NS, UK
4 Geriatric Medicine, North West London NHS Trust, London, NW10 7NS, UK

Abstract

Introduction: Alcohol misuse can be improved with health promotion by frontline staff, however they need to be knowledgeable about intervention strategies.

Objective: To explore alcohol knowledge of frontline staff in a hospital serving an area with higher than average alcohol related harm levels.

Method: 265 staff completed a questionnaire survey exploring baseline knowledge of alcohol content in beverages and interventions for reducing consumption.

Result: 19% correctly stated the alcohol content across all beverages in the questionnaire. 51% of the cohort underestimated the alcohol content, and 11% had no knowledge of alcohol units.

Conclusion: Alcohol knowledge amongst frontline staff is poor, further training in this area is paramount to ensure alcohol reduction interventions are delivered effectively at the point of care.

Keywords: alcohol, units, misuse, frontline, intervention
A Study of Sperm Quality Characteristics Changes in Different Storage Temperatures above Freezing Point

1* Jamaludin Mohamed, 1Maizatul Nadhirah Ismail, 1Tham Yu Chou, 2Santhana Raj Louis & 1Siti Balkis Budin

1 Programme of Biomedical Science, School of Diagnostic and Applied Health Sciences, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia
2 Unit of electron Microscope, Institute for Medical Research, Kuala Lumpur, Malaysia

jamal3024@yahoo.com

Abstract

Introduction: Sperm is very sensitive to temperatures changes as it is capable of changing the sperm characteristics. Therefore, the aim of this study was to identify the optimum storage temperature above freezing point for sperm transportation in order to maintain the good sperm characteristics.

Objective: Sperm characteristics such as motility, viability and morphology were evaluated after 1, 2 and 3 hour(s) stored at different temperatures (4°C, 25°C and 37°C).

Method: The fresh semen bovine were collected using artificial vagina at Institut Biodiversiti Veterinar Kebangsaan, Jerantut (Pahang). Sperm motility and viability were carried out using computer-assisted sperm analysis (CASA) while sperm morphology was carried out using scanning electron microscope (SEM).

Result: The results obtained demonstrated that 25°C has high sperm progressive movement as well as sperm viability compared to 4°C and 37°C. Sperm stored at 25°C showed normal morphological structure whereas there were morphological alteration at storage temperature of 4°C and 37°C.

Conclusion: In conclusion, 25°C is the best storage temperature above freezing point to maintain sperm characteristics during sperm transportation.

Keywords: Sperm Quality, Temperature, Motility, Viability, Morphology
A Histological Studies of Rats’ Lung Subacutely Treated with Fenitrothion

1Siti Balkis Budin, 2Hanis Saimin, 1Izatus Shima Taib, 1Putri Ayu Jayusman, 1Jamaludin Mohamed

1 Programme of Biomedical Science, School of Diagnostic and Applied Health Sciences, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Malaysia
2 Faculty of Health Sciences, Universiti Teknologi MARA (UiTM), Puncak Alam Kampus, Selangor, Malaysia
jamal3024@yahoo.com

Abstract

Fenitrothion or Sumithion \([o,o-\text{dimethyl-o-(3-methyl-4-nitrophenyl)}\) phosphorothiote] is an organophosphorus pesticide widely used in agriculture and public health programmes. This experimental study aimed to evaluate the morphological changes in lungs due to ingestion of this pesticide. The study was performed on 20 male Sprague-Dawley rats. Ten rats were used as control group while another 10 received fenitrothion (FNT) by oral gavage for 28 consecutive days. The animals were sacrificed at the end of treatment period and lung was isolated for histopathology purpose. Rats in FNT group exhibit cholinergic signs such as hypoactivity, tremor, lacrimation and piloerection. At the end of the study, the body weight of the FNT group was significantly lower than the control group. However, the difference in the lung weight between control group and FNT group was not significant. Histological examination using light microscope revealed there is disruption of alveolar walls, swollen alveolar cells, inflammation cells and cells necrosis. Terminal bronchiole also showed destruction of its lining. Presence of highly infiltrate MALT was noted in the rats of FNT group. The results suggest that ingestion of FNT could cause damage and injury towards lung tissues as well as lung toxicity in male Sprague-Dawley rats. It is also suggested that this pesticide leads to neurotoxicity and induces the immune system.

Keywords: Fenitrothion, Lung, Histopathology
An estimation of the efficiency of thrombolytic therapy in patients with myocardial infarction

Margarita Strelcenia * and Gubkin S.V.
Madarita Strelcenia, M.D. Belarusian State Medical University, Minsk, Belarus
margarettstri@gmail.com

Abstract

Introduction: Myocardial infarction (MI) is the most prognostic terrible disease. It is caused by the blockage of a coronary artery by a thrombus or clot. This is usually the result of a rupture of an atherosclerotic plaque within the artery. The heart muscle supplied by that artery is damaged due to the lack of oxygen (ischaemia).

Objective: To study the efficiency of Thrombolytic therapy (TLT) in the emergency department of the 4th City Clinic Hospital of Minsk an estimation was made of the efficiency of TLT for two thrombolytic medications: exogene tissue activator plasminogene alteplasa (Actelyse) and Streptokinase.

Method: A total of 23 adult were divided into two groups: Alteplasa group and Streptokinase group. The effectiveness was observed after thrombolytic therapy.

Result: The diagnosis of AMI was based on WHO criteria, which included clinical symptoms (typically but not exclusively chest pain), typical changes in the 12-lead electrocardiogram (ST segment elevation, which provides the most immediate indication of the diagnosis of AMI for patients requiring thrombolytic therapy for AMI) and myocardial enzyme elevation (Creatine Kinase(CC5MB), Troponin). Male and female correlation was 14:8. An average was 64 years. 16 patients (70%) experienced arterial hypertension, 3 patients (13%) diabetes. One patient had died.

Conclusion: The most important factor determining the choice of treatment tactics and effectiveness of TLT is the time interval from the beginning of anginal attack prior to treatment. The sooner started TLT, the higher the efficiency is.

Keywords: Myocardial infarction, thrombolytic therapy, Alteplasa, Streptokinase
Ischemic Cerebral infarction in a young man by disseminated Neurocysticercosis

Shakya Bhattacharjee *, Mona Tiwari 2, H. Kumar 3

1 Shakya Bhattacharjee (MBBS,DTCD, MRCPI) , Registrar , General Medicine , Peerless Hospital, Kolkata. Phone No: (0091) 9836221939/ 03365190919. Email: shakyadoc@rediffmail.com, shakyabhattacharjee@yahoo.com

2 Mona Tiwari (MBBS, DNB, FRCR) Consultant Radiologist, Institute of Neurosciences, Kolkata

3 H. Kumar (MBBS, MD, DM), Consultant Neurologist, Institute of Neurosciences, Kolkata

Abstract

Background: Disseminated variety with cerebral infarction is a rare manifestation of Neurocysticercosis.

Aims and Objectives: To study a case of disseminated Neurocysticercosis with left hemiparesis

Methods: A 26 year old apparently healthy man presented with recurrent generalized tonic clonic seizure and severe headache. His clinical examinations revealed left hemiparesis and brisk reflexes. His imaging studies revealed multiple ring enhancing lesions all over the brain parenchyma with a ‘Starry Sky’ appearance and right parieto-occipital lobe infarct. He was treated with anticonvulsants and steroids. In the 6th week of follow up his seizure is controlled and headache is relieved considerably but hemiparesis persists.

Results: He is diagnosed as a case of multiple Neurocysticercosis with right Temporo-parieto-occipital infarct.

Study Limitations: Very few cases of disseminated Neurocysticercosis with hemiparesis are reported in recent times. Further studies are necessary to assess the correlation between disseminated Neurocysticercosis and infarction.

Conclusion: Neurocysticercosis should be kept in mind as a differential diagnosis of stroke in young.

Keywords: seizure, headache, Neurocysticercosis, infarct
Relationship between serum and csf glucose in subarachnoid hemorrhage

Sayantani Ghosh *, Saugat Dey, Mitchell Maltenfort, Mathew Vibbert, Jack Jallo
Thomas Jefferson University, Philadelphia, USA
dey_saugat@rediffmail.com

Abstract

Introduction: There has been considerable controversy regarding the effect of serum and cerebrospinal fluid (csf) glucose levels in the prognosis of aneurysmal subarachnoid hemorrhage (aSAH) patients.

Objective: We have explored the relationship between serum and csf glucose serum glucose levels in such patients and have also explored the levels of serum and csf glucose required to maintain a good outcome.

Methods: Retrospective review of 2000 aSAH patients, from a prospectively collected database of Thomas Jefferson University Hospital, was done. The Hunt-Hess (H-H) grade of the SAH, cerebral and serum glucose on admission, serum glucose on the day of surgery and 14 days post the surgery as well as the GOS-E score at discharge was noted. Parameters were analyzed individually for significance via contingency tables and significant parameters ($p < 0.05$) were further examined. Relationship between serum and csf glucose is established via Spearman's rank correlation coefficient.

Result: Correlation between csf and serum glucose at admission was found to be 0.52, it increased from HH grade 1-4 and then became negative but more tightly bound at HH5. Serum glucose higher than 151.58 mg/dl (95% confidence interval, 141.36- 160.63) and csf glucose higher than 77.83 mg/dl (95% confidence interval, 75.05- 80.61) was found to be associated with worse outcome. 95.57% of the patients, who had even a single event of hypoglycemia, have had a previous episode of hyperglycemia, have had a previous episode of hyperglycemia and fared badly. Csf glucose < 38 mg/dl also led to more deaths.

Conclusion: Serum and csf glucose bear a linear relationship in mild to moderate SAH. Incidences of hypoglycemia in aSAH patients are mainly due to the intensive insulin therapy to combat a hyperglycemic episode and results in worse outcome. Hence, serum glucose level of 80-140 mg/dl and csf glucose level of 38-75 mg/dl should be maintained in all aSAH patients.

Keywords: Aneurysmal subarachnoid hemorrhage, serum glucose, cerebral glucose, correlation, extended Glasgow outcome score
Acute renal failure and Fanconi’s syndrome in an HIV patient treated with tenofovir

Shkendie Velia *, Irida Hasalla, Tauseef Sarguroh, Muhammad Umer Aslam, Padmini Muthyala

* Corresponding Author: Shkendie Velia MD, Internal Medicine, Saint Barnabas Hospital, Bronx NY, USA | Email: shkendie.velia@yahoo.com

Abstract

Introduction: Fanconi’s syndrome (FS) is a disease of proximal renal tubule with inherited or acquired etiology. Nucleotide reverse transcriptase inhibitors (NtRTIs) are well known causes of this entity. Tenofovir is one of the safest drugs in this group, successfully used in HIV and Hep B infected patients. Case reports have shown FS occurring at the initiation of therapy and recommend renal function and electrolyte monitoring up until 18 months. We present a case of Fanconi’s Syndrome in an HIV patient occurring more than 6 years after starting Tenofovir therapy.

Objective: To increase awareness of clinicians on the side effects of Tenofovir and the necessity of kidney function monitoring as long as patients are taking this medication.

Method: A case report

Results: Case- A 46 year old female with medical history of Human Immunodeficiency Virus (HIV) infection diagnosed more than 6 years ago and treated with tenofovir since then, CD4 count 371, presented with severe epigastric pain and multiple episodes of nonbloody, nonbilious vomiting for one day. Patient was found to have dry mucous membranes and epigastric tenderness. Labs revealed hypercloremic nonanion gap metabolic acidosis and acute renal injury, hypokalemia, hypophosphatemia, proteinuria, glycosuria, fraction excretion of sodium 0.67 %, serum protein electrophoresis normal and alkaline phosphatase- bone fraction increased, Patient was transferred to intensive care unit with impression of Acute renal injury and Fanconi’s Syndrome supported by the presence of hypophosphatemia, hypokalemia, proteinuria and glycosuria in a non-diabetic patient. Tenofovir was suspected as the culprit and was discontinued. Generous intravenous fluids, potassium, phosphate and bicarbonate replacement were the mainstay of therapy. Patient improved gradually and was discharged home with normal creatinine and electrolytes.

Conclusion: Fanconi’s Syndrome is a well-known complication of NtRTIs and a well-known preceding syndrome of acute and chronic kidney injury. Tenofovir is considered the safest. With recent data coming up, showing renal dysfunction occurring years after starting therapy, monitoring renal function for life, every three months initially and then every 6 months is crucial in preventing disabling disease such as CKD, AKI and osteomalacia. Our case of Fanconi’s syndrome, occurring more than 6 years of starting tenofovir supports this.

Keywords: renal tubular acidosis, nephrotoxicity, Fanconi’s syndrome, Tenofovir
Heterotopic pregnancy in a natural conception cycle

Anisodowleh Nankali*, Farahnaz Keshavarzi, Taravat Fakheri
Maternity Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran
Fnkeshavarzi@yahoo.com
Tel: +989181313316

Abstract
Introduction: Heterotopic pregnancy is a rare event in natural conception cycles. Diagnosis of heterotypic pregnancy requires a high index of suspicious. Described here in is a reported case of Heterotopic pregnancy presenting as adnexal mass.
Case: A young nulliparous woman with her last menstrual period 10 weeks before presentation complained of hypogastric pain beginning about 2 weeks ago. Initially the pain started from upper abdomen, then distributed to the hypo gastric region and then localized in LLQ accompanying with nausea. Transabdominal sonography diagnosed intra uterine 9.5 weeks live pregnancy with a heterogeneous mass with approximate diameter of 7 cm and moderate free fluid in pelvic cavity suggesting of torsion of left ovarian cyst or ectopic pregnancy. Emergency laparotomy revealed ruptured ectopic mass in the midportion of left fallopian tube. The uterus was soft and enlarged (a pregnant uterus). Salpingectomy was performed. Eventually a healthy baby was delivered at 37 weeks.
Conclusion: Although heterotopic pregnancy is a rare event, it should be considered in the situation of viable intrauterine pregnancy and tender adnexal mass.

Keywords: Heterotopic pregnancy, tubal pregnancy, salpingectomy
The relation between arterial blood pressure variables and ventricular repolarization parameters

Ioana Mozos 1*, Corina Serban 2, Rodica Mihaescu 3

1 Department of Functional Sciences, “Victor Babes” University of Medicine and Pharmacy, Timisoara, Romania, ioanamozos@yahoo.de

2 Department of Functional Sciences, “Victor Babes” University of Medicine and Pharmacy, Timisoara, Romania

3 Department of Medical Semiology, “Victor Babes” University of Medicine and Pharmacy, Timisoara, Romania

Abstract
Introduction: Ventricular arrhythmia and sudden cardiac death risk are associated with prolonged electrocardiographic (ECG) QT and Tpeak-Tend intervals.

Objective: To evaluate the influence of blood pressure variables on ventricular repolarization parameters, especially QT and Tpeak-Tend intervals.

Method: Two groups of patients were enrolled in the study. The first group included 77 patients, with essential hypertension, aged 62±12 years, 40% males. The control group included 56 patients, age and sex matched, with optimal, normal and high normal blood pressure. They underwent 12-lead ECG and ventricular repolarization parameters were assessed. QT intervals: QTmax (maximal QT interval duration), QTc (heart rate corrected QTmax), QTm (mean QT interval duration in all leads), QTIIc (heart rate corrected QT interval duration in lead DII), and T wave variables: T0e (maximal T wave duration), Tpe (maximal Tpeak-Tend interval) and Ta (maximal T wave amplitude) were manually measured. Arterial blood pressure variables: systolic (SBP), diastolic (DBP), mean arterial (MAP) and pulse pressure (PP), were recorded.

Result: SBP was 139±24 mmHg, DBP 86±13 mmHg, MAP 103±15 mmHg, PP 53±16 mmHg, QTmax 430±51 ms, QTc 474±48 ms and Tpe 100±26 ms in the hypertensive group. Multiple regression analysis revealed significant associations (multiple R=0.985, significance F<0.01) of DBP with QTIIc (p<0.01) and Tpe (p<0.01). MAP was significantly associated (multiple R=0.986, F<0.01) with QTc (p=0.001) and QTm (p=0.014). Multiple regression analysis also revealed significant associations between blood pressure variables and ECG parameters in the control group. Arterial blood pressure values and mean arterial blood pressure were sensitive and specific predictors of prolonged QT intervals in the hypertensive group.

Conclusion: Elevated systolic and diastolic blood pressures and mean arterial pressure are predictors of prolonged QT intervals. Blood pressure variables are associated with the ventricular repolarization parameters.

Keywords: hypertension, QT interval, Tpeak-Tend interval, pulse pressure
Comparative analysis of serum protein electrophoresis’ profiles of people infected with HIV and those not infected with HIV in Kinshasa

KAMANGU NTAMBWE ERICK1*, KALALA LUNGANZA RICHARD1, MVUMBI LELO GEORGES1, MESIA KAHUNU GAUTHIER2

1 Faculty of Medicine, Department of Basic Sciences, Department of Biochemistry, University of Kinshasa (UNIKIN)
2 Faculties of Medicine and Pharmaceutical Sciences, Clinical Pharmacology Unit, Department of Pharmacology, University of Kinshasa (UNIKIN)

* KAMANGU NTAMBWE Erick, erick.kamangu@unikin.ac.cd or Erickamangu@gmail.com

Abstract
Introduction: It is necessary to consider the analysis of electrophoresis’ profiles of serum proteins as an alternative and less expensive for the biological monitoring of patients infected by HIV in countries with limited resources.

Objective: The aim of the study was to establish a comparison between the electrophoresis’ profile of sera proteins of people infected by HIV naïve of treatment and people not infected by HIV.

Method: A transversal study was conducted at AMO-CONGO Kasa-Vubu in Kinshasa with people who came for a voluntary HIV screening test. Eighty one people, naïve of HAART, participated voluntarily in the study. HIV screening was systematically done according to WHO recommendations. Blood sample was obtained in a dry tube for the electrophoresis’ profile of sera proteins, and in a tube with EDTA for numeration of CD4 for HIV positive patients. The statistical test of Chi-squared was used for qualitative data, and the test of Student for quantitative data.

Result: Out of 81 volunteers, 30 were confirmed HIV positive and 51 negative. The results obtained demonstrate that HIV infection is associated with a hyperprotidémie (60%), a hypoalbuminémie (100%) also a hypergammaglobulinemia (100%) according to CD4 level. No significant modification was observed for the alpha and beta-globulins.

Conclusion: The HIV infection induces some significant modifications of different fractions of sera proteins according to immune status.

Keywords: hyperprotidemia, hypergammaglobulinemia, hypoalbuminémie, total proteins, HIV
Estimated rates of treatment failure in first-line antiretroviral treatment in Kinshasa: Case of the ACS AMO-Congo

KAMANGU NTAMBWE ERICK¹*, KAWILA MAFANDA EUPHRASIE², MUKUMBI HENRI², MVUMBI LELO GEORGES¹

¹ University of Kinshasa (UNIKIN), Faculty of Medicine, Department of Basic Sciences, Unit of Molecular Biochemistry, Democratic Republic of Congo
² ACS AMO-CONGO, Kinshasa, Democratic Republic Congo
* Erick KAMANGU NTAMBWE: Erick.kamangu@unikin.ac.cd

Abstract

Introduction: In the Democratic Republic of Congo (DRC), the first line of treatment for HIV adopted since 2008 for the PLHIV is a combination of single-dose Zidovudine (AZT), Lamivudine (3TC) and Nevirapine (NVP). In 2009, 34 947 PLHIV were on the first line HAART in the DRC, of which 28,918 or 82.75% were adults.

Objective: Estimate the rate of treatment failure in first-line antiretroviral therapy in treatment centers in Kinshasa.

Method: This study is a cross-sectional study in three outpatient treatment centers of the NGO ACS AMO-Congo in the city of Kinshasa in the Democratic Republic of Congo in January 2009. Any patient on antiretroviral therapy in first intention followed regularly in one of three centers of study for more than six months in January 2009 was considered. Blood sampling was done in a tube with EDTA anticoagulant, from a venous puncture. The numbering of CD4 has been made in the laboratory of ACS / AMO-Congo Kasa Vubu on FACSCount™ and viral load at the National Reference Laboratory AIDS / STI (LNRS) by NucliSens Easy Q - HIV1, Version 1, 2. Data were entered using Excel and SPSS software. The Student test was used for quantitative variables and Chi-square ($\chi^2$) for categorical variables. The significance (p) was chosen for the probability of p <0.05. Results are expressed as mean ± standard deviation. The tables have been reformatted in Excel. Respect for the individual and the confidentiality of records were found.

Result: A total of 102 patients were included in this work with a female predominance (66.7%) and a mean age of 41.4 ± 9.4 years. The mean CD4 count of third control (395.5 ± 145.2 cells / l) were significantly higher than those of CD4 at baseline (252.1 ± 128.7 cells / l). Controls were performed CD4 at 1 month (control 1), 3 months (control 2) and 6 months (control 3). The viral load (VL) average of 20,258.3 ± 10,209.0 RNA copies / ml. Eighteen patients (17.6%) had a CD4 count lower than the third control values before treatment, 16 patients (15.7%) had a viral load above 1000 RNA copies / ml and 7 patients (6.9%) evolved at the AIDS stage.

Conclusion: The estimated rate of treatment failure of patients on ARV first line in Kinshasa conducted in 3 treatment centers for AMO-Congo gave a rate of 17.6%.

Keywords: HIV treatment failure, viral load, CD4
Stress leading to overweight/obesity in First M.B; B.S. hosteller girls

Verma Khushboo 1*, Goyal Dr. Shuchi 2

1 V semester student at R.N.T. Medical College, Udaipur, Rajasthan.
2 Associate Professor, Department of Biochemistry, R.N.T. Medical College, Udaipur, Rajasthan.

*Corresponding Author: Khushboo Verma: 6-A-6, South Extension, Pawan Puri, Bikaner, Rajasthan, India. Phone number: 0151-2242559, 9414947117. E-mail: srkhushboo@gmail.com

Abstract

Introduction-Stress is body’s response to danger or perceived threat. M.B., B.S. students, particularly the freshers are more prone to stress due to academic pressure, cultural and environmental shock and a large number of uncertainties. In addition, the girls are more emotionally attached to their family so the factors like homesickness and worries for the family members prominently contributed to the stress. The first M.B., B.S. hosteller girls thus constituted a relevant subject group for the study.

Aims and objectives-The aims of the study were to list the factors which caused stress and to determine the behavioral patterns that led to overweight/obesity due to stress. The objective was to illustrate a relationship between stress and the development of overweight/obesity.

Methods-The study was retrospective and observational. It included stress and anthropometric assessment which were done simultaneously. Stress levels were determined using two 4-pointers scales-namely, the standard Perceived Stress Scale (Levenstein et al) and a self prepared Diet History Questionnaire. The Perceived Stress Scale included the factors like worries, tension, joy and demands and the aggregate gave the Perceived Stress Index (PSI). The anthropometric data included B.M.I. calculation(according to the WHO BMI recommendations in adult Europids, 1998), waist –to –hip ratio and weight comparsion, taking into account the weight during the study with that at the time of admission. The study was conducted for 2 months time period from April 2009 to June 2009.

Results-Among the 65 girls, 41 showed an increase in weight. The prevalence of overweight and obesity was found to be 21.53% and 3.07% respectively. The multiple regression analysis of weight comparison and PSI showed a significant effect of PSI on weight during the stay in hostel (F=6.833, p<0.05). A regression study between Diet History Questionnaire and PSI was highly significant (F=69.227, p<0.001). A positive correlation between PSI and B.M.I was obtained. Considering the high degree of association between emotional eating and external eating, it would have been optimal to control emotional eating, however due to space constraints we were not able to do so. Secondly, the results of questionnaire are self-reported by the girls, so are prone to biasing.

Conclusion-The study confirmed the general impression that there is a considerable amount of stress among the medical students. Among the four factors of the Perceived Stress Scale – “demands” was rated the highest, i.e. maximum students felt that they had many things to do and expectations pressurized them. The girls confirmed that they felt nostalgic and longed for the protective environment of school and home. They also found difficulty in sharing emotions which they attributed to the lack of informal conversations. According to the results of Diet history questionnaire, they exhibited behavioral shifts like -an increased consumption of food when stressed, coupled with an increased frequency of emotional eating and sedentary lifestyle. The positive correlation between PSI and B.M.I demonstrated that as stress increases the development of overweight/obesity occurs.

Keywords: Perceived Stress Index, behavioural shift, emotional eating.
Essential Arterial Hypertension occurring in Children and Teenagers
Anthropological Correlations

Adina Baciu
“Fr. I. Rainer” Institute of Anthropology, Romanian Academy, No. 8 Eroii Sanitari Blvd, P.O. Box 35-13, 050 474, Bucharest, Romania, Phone/ Fax: (004) -021-317.50.72,
E-mail:adinabbaciu@yahoo.com

Abstract
Background: Arterial hypertension (AH) manifested during childhood and teenage years has been considered, for a long period of time, as being a rare disease and almost exclusively a secondary one. Within the last 10-15 years, as the diagnosis techniques improved and the research regarding juvenile AH extended, the diagnosis criteria have been reconsidered and as a consequence, the disease has become more frequent until reaching the age of 16, compared to the past periods of time.

Aim & Objectives: The research was carried out during the year 2011, within the partnership educational project, Integration through Schools and Anthropology, No. 357/2011. The general objective stated for the anthropological study implied by this project is to examine interdisciplinary certain aspects of the lifestyle of the children and teenagers belonging to rural Roma people communities and its impact on their health, likelihood to develop certain diseases as well as to propose prophylactic measures. Within the general objective framework, for the purpose of this paper I isolated the findings related to the incidence of AH among children and teenagers and I explored its possible relation to the community lifestyle (eating habits, improper housing, family size) and genetic factors (AH family history, precocious appearance of secondary sexual features as a sign of early adulthood).

Methods/Study Design: The medical and anthropometrical research was carried out on two groups of students from the rural environment, aged between 10 and 16 years: one control group and an experimental group. The control group was formed of 100 Romanian students, 30% boys and 70% girls. The experimental group, formed of 100 Romanian students from a Roma people rural community, 26% boys, 74% girls. The Roma people rural communities preserve a more archaic lifestyle, including culinary habits, that can influence the incidence of AH. Questionnaires comprising 63 questions were administered for the completion of data regarding their lifestyle. For the statistical comparisons we calculated the Odds Ratio (OR) using CHI Square test with Yates’ correction. Statistical analysis of variance (ANOVA) was used for the characterization of the anthropometric variables. The subjects involved in the research were not diagnosed with kidney, cardiovascular or endocrine diseases or with mental retardation.

Study Design: Prospective case-control.

Consent: The volunteers were selected after their parents had freely expressed their informed consent in written form.

Results/Findings: The incidence of AH among the participating children and teenagers in both groups is within the limits mentioned in the field literature, 4.00% for the control group and 7.00% for the experimental group. There is a positive association (OR=1.8064), statistically significant (p<0.0166) between AH incidence and the studied group. Most of the subjects from both groups have AH borderline values. All the subjects diagnosed with AH have AH family history. 84.62% of boys in the experimental group eat daily salty foods comparing to 66.66% of the boys in the control group. There is a positive association (OR=1.6666), statistically significant (p<0.0299) between AH incidence and the salt consumption. There is a positive association (OR=1.95), statistically insignificant (p<0.1) between AH incidence and the number of children per family. There is a
positive association (OR=1.66), statistically significant (p<0.0299) between AH incidence and the presence of secondary sexual characteristics. There are no statistically significant differences (p>0.05) between the two groups regarding the anthropometric variables analyzed pertaining to gender.

**Conclusion:** According to the field scientific literature it is generally accepted that systolic and/or diastolic AH is 3-4 times more frequent among obese children and teenagers comparing to those with normal weight and 6-8 times to underweight ones (I Gherasim 1996). Nevertheless, the findings of the research presented in this paper indicate that certain particularities of the lifestyle (increased salt consumption, overcrowded and improper dwellings) and certain genetic factors (AH family history, early adulthood) may explain a higher incidence of AH even among normal-weight and underweight children and teenagers.

**Keywords:** arterial hypertension, children and teenagers, anthropology.
Value of Endothelial Dysfunction in the Pathogenesis of Portal Hypertension

dynamo_tech@yahoo.com

Abstract

**Background:** Until now it was thought that the main cause of portal hypertension is a mechanical obstruction of blood flow in the portal vein due to proliferation of connective tissue in the liver parenchyma (irreversible factor). The role of reversible factors remained underestimated. These include the following components: tone of the blood vessels, blood rheology, micro thrombosis, swelling of the liver parenchyma. The tone of hepatic blood vessels is provided by a number of factors, among which the most important is nitrogen monoxide (NO) – natural vasorelaxing substance, produced by vascular endothelium. The role of endothelium-dependent factors in the pathogenesis of many chronic diseases is extensively studied for today, but the impact of endothelial dysfunction on liver hemodynamics and forming of portal hypertension is not clear yet.

**Aim & Objectives:** The aim of our research was to examine the condition of hepatic blood flow in patients with portal hypertension, which developed on the background of chronic alcoholic steatohepatitis (ASH) and liver cirrhosis (LC), depending on the degree of endothelial dysfunction in these patients.

**Methods:** Research were carried out at the Gastroenterological Department of Emergency Hospital in Chernivtsi. The study involved 63 patients with ASH, having signs of initial stage of portal hypertension (study group 1). Also 31 patients with LC with expressed portal hypertension were examined (study group 2). As controls 62 ASH patients without any signs of portal hypertension were examined (control group). Exclusion criteria in both groups were: old age, the presence of cardiac failure, kidney failure and other diseases in decompensate stage.

**Results:** Summarizing the results obtained in the research process, it should be noted that in all examined patients with chronic alcoholic hepatitis EGD and Doppler signs of preclinical stages of hyperkinetic type of portal hypertension were observed. Absence of cirrhotic changes of liver tissue in these patients is confirmed by histopathological study of liver biopsies. Blood tests have revealed the decreasing of NO level (endothelial vasorelaxing factor) and depression of endothelium-dependent fibrinolytic activity of plasma. Doppler examination of the brachial artery patients of the 1-st group have revealed decreased endothelium-dependent vasodilation (EDVD) - 7,3±0,18% (against 12,9±0,22% in controls (р<0,05)). Amongst 82 % patients of the 2nd group EDVD was only 5,4±0,15%, what is significantly less, than in 1-st and control groups (р<0,05). Amongst 18 % patients of 2nd group during conducting of test for reactive hyperemia it was registered the paradoxical vasoconstrictive reaction, indicating a more expressed endothelial dysfunction. The analysis of the data determined the availability of reverse correlation between the degree of portal hypertension and the level of NO in blood (r=0.87) and between the degree of portal hypertension. and EDVD index (r=0,54) with a high degree of probability, indicating the important pathogenetic role of endothelial dysfunction in the development and progression of portal hypertension.

**Conclusion:** There are manifestations of endothelial dysfunction in patients with portal hypertension, which have been developed on the ASH background. The gradual increasing severity of portal hypertension is observed in the same moment with the deterioration of the endothelium functional condition. The imbalance of endothelium-dependent vasoactive substances is an important part of potentiating of hepatic hemodynamic failure and formation of high pressure in the portal vein system in such patients.
Prospects for further investigations is the search for medications to correct endothelial dysfunction in order to improve results of treatment of patients with portal hypertension on the chronic alcoholic steatohepatitis background.

**Keywords:** Endothelial dysfunction, portal hypertension, chronic alcoholic hepatitis, liver cirrhosis.
Evaluation of the EHF-therapeutic influence on mice’s prostate state with experimental chronic prostatitis

Krotkova Olga Sergeevna ¹, Guryanova Evgeniia Arkadevna ²
¹ Chuvash state university named after I.N Ulyanov
kosmos-olga@yandex.ru
+79033226198
² Chuvash state university named after I.N Ulyanov
eagurian@rambler.ru
+79033226198

Abstract
Prostatitis is a common disease in men, and its pathogenesis remains to be clarified. The extremely high frequency (EHF) - therapy of the prostatitis is used as one of the methods of treating. The current study aims to evaluate the preventive effect of EHF-therapy during the treatment of the hemodynamic model of experimental chronic prostatitis. The study was carried out on 15 inbred male mice. The animals were divided into 3 groups. Results revealed that the subpopulation of cytotoxic lymphocytes increased insignificantly in the inflammatory prostate in comparison with that in the untouched animals. After the treatment the number of CD8+ cells decreased more than 2 times.

Keywords: Chronic prostatitis, experimental, EHF therapy, Immune response.
A Pharmacogenomical perspective in HIV/AIDS Therapies

Matin Ahmad Khan
MGM Medical College, Jamshedpur, Jharkhand, India

Contact details: GR: 02, Metro Tower, Line No: 03, ‘A’ Block, Dhatkidih, Jamshedpur, Jharkhand, 831001, India
Email: mak5962@hotmail.com

Abstract

Background: It has long been recognized that individuals vary in their susceptibility to diseases and in their response to drugs. Most patient populations show large inter-individual variability in drug response and their toxicities. For all major classes of drugs (ACE inhibitors, β-adrenoreceptor antagonists, selective serotonin reuptake inhibitors, tricyclic antidepressants, statins, and β-agonists) given at standard doses, a substantial proportion of patients do not respond, respond only partially, or experience adverse drug reactions (ADRs). Drug concentrations in plasma can vary more than 600-fold between two individuals of the same weight on the same drug dosage. This variation can be of genetic, physiological, pathophysiological, or environmental origin, but a drug’s absorption, distribution and metabolism, and interactions with its target can be determined by genetic differences. This is Pharmacogenomics which deals with the influence of genetic variation on drug response in patients by correlating gene expression or single-nucleotide polymorphisms with a drug’s efficacy or toxicity. Recent developments in the pharmacogenomics of antiretroviral drugs provide new prospects for predicting the efficacy of treatment and potential adverse effects. However, response to HAART is often limited by the occurrence of toxicity or by the emergence of drug resistance. A relevant number of associations between human genetic variants and predisposition to adverse events have been described and for some antiretroviral drugs a clear and casual genotype-phenotype correlation has already been established.

Aim & Objectives: This article reviews the significant studies published to date in the area of the pharmacogenomics of antiretroviral therapy and summarizes current trends, as well as areas where further research is needed.

Methods/Study Design:

Data Source: The scientific literature and eligible materials were surveyed related to the topic of Pharmacogenomical perspective in HIV/AIDS Therapies

Data Selection: Building on this conceptual framework, the related studies and modeling works who met the selection criteria of being related to ‘Pharmacogenomical perspective in HIV/AIDS Therapies’.

Data Extraction: Reports were screened and information from eligible studies was abstracted and independently and synthesized.

Study Design: A descriptive study on the of pharmacogenomical perspective in HIV/AIDS Therapies comprising of cohort and retrospective studies.

Results/Findings: It has recently been shown that a CYP2B6 genetic variant predicts higher plasma efavirenz exposure and possibly increased central nervous system toxicity. A large number of studies on ABCB1 genetics with antiretrovirals have also been undertaken; however, as in other therapeutic areas, the data have been contradictory, and currently, no firm conclusions can be
reached on the effect of ABCB1 variability as a determinant of efficacy. Indeed, this highlights the need for validation of initial association studies in pharmacogenetic research. By contrast, the clearest association between genetic variants and response relates to the hypersensitivity reaction that occurs with abacavir. The identification that the major histocompatibility complex haplotype 57.1 acts as a strong genetic predisposing factor can be regarded as a prime example of how fundamental research can be translated into a pharmacogenetic test. Nevirapine hypersensitivity has also been related to an HLA gene (HLA-DRB1*0101) but the predictive value does not appear to be sufficient to implement in clinical practice.

**Study Limitations:** Much more work needs to be done to define the genetic factors determining response to antiretroviral agents. These studies need to be sufficiently powered and utilize a modern genotyping strategy. Most importantly, the phenotype needs to be carefully characterized. Some of these issues are now being tackled, but studies need to be sufficiently powered and the phenotype carefully characterized.

**Conclusion:** The ability to predict efficacy and toxicity during antiretroviral therapy for HIV would be of obvious advantage. Drug treatment in HIV disease is characterized by variable responses, in terms of both efficacy and toxicity. Both genetic and environmental factors are important determinants of this variability, although the relative contributions are unclear and likely to vary with different drugs. Many of the antiretrovirals (NNRTIs/PIs) are metabolized by polymorphically expressed enzymes (cytochrome P450, CYP450; glucuronyl transferase, GT) and/or transported by drug transporters (ABC and SLC families). Initial studies of antiretroviral efficacy have therefore focused on these genes. In pharmacokinetics and efficacy studies, issues are complicated by multiple loci effects (driven by the large number of proteins contributing to disposition) and heterogeneity in both study populations and the virus (ie, the target).

**Keywords:** Pharmacogenomics, HAART (Highly Active Anti Retroviral Therapy), Polymorphism, HLA (Human Leucocyte Antigen), efficacy, adverse Drug Reactions (toxicities)
Challenges of a Large Health Insurance Organization in Iran: A Qualitative Study

Ahmad Barati Marnani 1, Ehsan Teymourzadeh 1,2, Mohammadkarim Bahadori 2*, Ramin Ravangard 3, Jalal Saeid Pour 1

1 School of Health Management and Information Sciences, Tehran University of Medical Sciences, Tehran, Iran
2 Health Management Research Centre, Baqiyatallah University of Medical Sciences, Tehran, Iran
3 School of Management and Medical Information Sciences, Shiraz University of Medical Sciences, Shiraz, Iran

* Corresponding author: Mohammadkarim Bahadori (Assistant Professor in Health Management); Health Management Research Centre, Baqiyatallah University of Medical Sciences, Mollasadra Street, Tehran, Iran | Tel: +98.2182482416 | Fax: +98.2188057022 | E-mail: bahadorihealth@gmail.com

Abstract

Introduction: The importance of health insurance coverage can be considered from two viewpoints: protecting people against the costs of providing health; and providing universal coverage of health services so that people have access to affordable and adequate health services. Overview of insurance organizations' performance in Iran indicates that they are faced with various problems such as increasing costs, the lack of comprehensiveness and adequacy of services, the lack of clear boundaries between basic and supplementary health insurance packages, as well as, the problems on determining the scientific and fact-based tariffs. This research aimed to study the problems of health insurance coverage in a large insurance organization from the perspective of its managers.

Methods: This study is an applied and qualitative research conducted in Iran in 2011. The participants in this study were 11 senior managers of one of the largest health insurance organizations selected using purposive method. Data was collected using structured interviews. Framework analysis using Atlas-Ti software was used to analyze the collected data.

Results: Available challenges were categorized into 4 themes including structure and organization, policy making, the management of providing services, and culture and public education which were identified as the effective factors in health insurance coverage, and 69 sub-themes.

Conclusion: Stated challenges can be largely met through making comprehensive and integrated policies by insurance organization, developing an updated and health-oriented structure, purposeful outsourcing of services, the application of modern and mechanized systems in providing services, as well as, providing the insured with information by electronic systems.

Keywords: Challenges, the insurance organization, qualitative research, Iran
Mental foramen: a review

Tabinda Hasan
Anatomy department, Faculty of medicine, Jazan University
Post box 114, Jazan University, Saudi Arabia, Mobile- 00966532315920, Email: drtabindahasan@gmail.com

Abstract
Background
The mental foramen is an oval or circular opening on the anterior surface of the mandible, through which inferior alveolar nerves and vessels, after passing through the inferior alveolar canal, exit as the mental nerves and vessels. The mental foramen is a clinically important landmark and should be considered with respect by anatomists, dentists and orthosurgeons alike.

Objective
This paper aims to elucidate the anatomy and clinics of the human mental foramen.

Materials and Methods
General and meta search engines were employed to conduct an extensive review of published medical literature with strict inclusion and exclusion criteria in order to elucidate the morphology and variations of the mental foramen in humans.

Discussion
The importance of mental foramen is undeniable when it comes to the effectiveness of nerve blocks in dentistry or post operative neurovascular successful outcomes of procedures involving the lower jaw. Mental foramen morphology is largely influenced by race and ethnicity. Variations of the foramen, in terms of number or modal position are common in different populations.

Conclusion
Thorough knowledge of the mental foramen and its commonly occurring variations can significantly reduce the incidence of post procedural paralytic and hemorrhagic complications in the mental region.

Keywords: mental foramen, mandible, anatomic variation
Awareness of Primary Health Care among the Male Medical Students of Isra University, Hyderabad

Raheel Mehran
4th year MBBS Student, Isra University, Hyderabad, Sindh, Pakistan.
Email: Jupiter-48@hotmail.com
Contact: A-38, Fruit Farm Road, Mircolony, Mirpur Khas, Sindh, Pakistan. 69000.

Background: This study design was given to me as a project during my time with the Community Medicine Department. I was given the supervision of an experienced research scholar Dr. Tufail Ahmed Bhatti. He immensely supported in this research project, with the Study design, making of performa and analysis.

Aims and Objectives: The basic aim behind this research project was to determine the awareness of Primary Health Care among the male medical students of Isra University, Hyderabad. Specifically, our purpose was to determine the awareness and to inform to the Dept. of Community Medicine.

Methodology: To determine the awareness among male medical students via this research project we chose Cross-sectional study, descriptive study methods. The site of our study was Isra University, Hyderabad. This is a privately owned Institution, whose parent organization is the Isra Islamic Foundation. It is situated in the historical city of Hyderabad. The sample size of our project was 197, which we sorted out through simple random technique. Then we went for the questionnaire form that was easily made in a sound way with internet assistance. Regarding the sample size we got our questionnaire forms filled from 136 students of the 5 educational years of Mbbs, Isra University Hyderabad; excluding the absentees and not co-operatives. Then we analyzed the data in SPSS V.17 and came to the following results.

Results:
- Primary Health Care: 51 of 136 students believe that Primary Health Care is the Essential Health Care.
- Type of Health level: 78% students believe that the type of health level being provided is primary health care.
- Provision of Health Education: Among 136, 64.3% students believe that Health Education is being provided to them.

Conclusion:
- By the end of this research project, we came to know that: 31% of first to final year Mbbs students of Isra University, Hyderabad believe that Primary Health Care is basically the Essential Health Care.
- 64.3% students were of the view that the Primary Health Care education was being provided to them.

Keywords: Primary Health Care, Isra University, Awareness.
The evaluation between Helicobacter Pylori and Hepatocellular Carcinoma

Omid Panahi
Centro Escolar University, Faculty of Dentistry, Manila, Philippines
Email: panahi.omid@gmail.com

Abstract

Objective: Helicobacter pylori infection has been thought to play a critical role in Hepatocellular carcinoma tumorigenesis and progression. Several studies have been devoted to the relationship between H. pylori infection and liver cancer risk and have generated inconclusive results. In this study we aimed to evaluate the potential association of H. pylori infection with liver cancer risk. Hepatocellular carcinoma in the third cause of cancer death worldwide. Hepatocellular carcinoma is a major health problem, accounting for more than 626000 new cases per year worldwide. Because there is no proper diagnostic method for it, more than 598000 people lose their life. This tumor often follows chronic liver inflammation and cirrhosis.

Materials and Methods: A total of 20 liver specimens from different health centers were identified, including 12 specimens of Hepatocellular carcinoma and 8 specimens of cirrhosis. In this study, we used polymerase chain reaction for determining the presence of Helicobacter pylori in liver samples.

Results: 16S rRNA of Helicobacter genus were found from 25.6% of Hepatocellular carcinoma and 14% of cirrhosis.

Conclusion: Helicobacter infection exists in liver of patients with Hepatocellular carcinoma. Association between H. pylori and Hepatocellular carcinoma needs further research.

Keywords: Helicobacter Pylori, liver, 16SrRNA
Cinnarizine versus topiramate in prophylaxis of migraine among children and adolescents

Masih Shafiee 1, Mansoureh Togha 2 MD

1 Sports Medicine Research Center, School of Medicine, Tehran University of Medical Sciences, Tehran, Iran
2 Iranian Centre of Neurological Research, Imam Khomeini Hospital, Tehran University of Medical Sciences, Tehran, Iran

Shafiei.Masih@gmail.com

Contact Details: Address: No 7, Al-e Ahmad street, Sports Medicine Research Center, Tehran, IR Iran, P.O Box: 14395-578, Tel: +98(21)88630227-8, Fax: +98(21)88003539, Cell: +98(21)09126067081

Abstract
Objective: To evaluate the efficacy and safety of cinnarizine in comparison to topiramate as preventive treatments of migraine headaches among children and adolescents.

Background: Migraine has still no FDA approved preventive treatment for patients under the age of 18.

Methods: In this randomized, double-blind, controlled trial, 40 subjects (aged 4 to 15 years), with the history of migraine were randomly equally allocated to receive cinnarizine or topiramate. The primary efficacy measure was monthly migraine frequency. Secondary efficacy measures were monthly migraine intensity and ≥ 50% Responder rate. Efficacy measures were recorded at baseline and at 4, 8 and 12 weeks of treatment.

Results: No significant difference was found regarding the monthly migraine frequency and intensity of participants between cinnarizine and topiramate group during the follow-ups (p > 0.05). Cinnarizine group showed a statistically significant reduction in the monthly migraine intensity versus topiramate in comparison between the means of monthly migraine intensity during the last 4 weeks of treatment compared with baseline values (p = 0.03).

Conclusions: No significant difference between cinnarizine and topiramate treatments was found in prevention of migraine headaches in children and adolescents.

Keywords: Migraine prophylaxis, Cinnarizine, Topiramat, Children, Adolescents
Post traumatic Stress Disorder after Myocardial Information

Syed Muhammad Ahsan Mehdi 1, Dr. Humayyun Sukrat 2, Iftikhar Nadeem 3, Masood Gondal 4
1) 5th year MBBS Punjab Medical College Faisalabad
2) Assistant Professor Epidemiology Punjab Medical College Faisalabad
3) 5th year MBBS Punjab Medical College Faisalabad
4) 5th year MBBS Punjab Medical College Faisalabad

Email: mr_mehdipk@yahoo.co.uk

Introduction: Post-traumatic stress disorder (PTSD) is a severe anxiety disorder that can develop after exposure to any psychological trauma including the myocardial infarction (MI). PTSD after MI may affect quality of life and cardiovascular outcomes. The objective of this study is to determine the frequency of PTSD after MI.

Methods: This is a cross sectional study. A convenient sample of 98 patients with a documented history of MI, visiting the outdoor departments of 4 tertiary care hospitals in Lahore (Sheikh Zaid hospital and Jinnah hospital) and Faisalabad (Allied Hospital and Faisalabad Institute of Cardiology) for follow ups, were evaluated for the development of Post-traumatic stress disorder using the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), World Health Organization Quality of Life (WHOQOL)-BREF questionnaire and demographic questionnaire. Descriptive analysis of the data was carried out using the Statistical package for social services (SPSS) software version 17.

Results: Out of 98 patients (59 males, 39 females) 8 (8.2%) patients (males 5.1%, females 12.8%) were found to develop PTSD after MI. Patients with older age (above 50 years) had a higher frequency of PTSD (21%), as compared to middle aged (between 30 and 50 years) and young aged (below 30 years) patients (5% and 0% respectively). Illiterate patients developed PTSD (13.8%) while none of the literate patient developed PTSD. Frequency of PTSD in working and non-working patients was 4.5% and 11% respectively. The frequency in poor patients was 13.2%, in middle class was 2.8% whereas no patient falling in the rich socio economic class developed PTSD. Only patients with poor quality of life developed PTSD (13.8%). Patients who experienced silent MI did not develop PTSD while those with severe MI developed PTSD (18.6%)

Conclusion: The study confirmed the development of PTSD after MI. Females were more prone to develop PTSD. The patients with old age, poor economic condition, poor quality of life, non-working status, low education and severe MI had a higher frequency of PTSD. These risk factors identified in the present study can be used to facilitate the detection of patients at risk for developing PTSD symptoms so they can later be offered psychological interventions as needed.

Keywords: PTSD= Post-traumatic stress disorder, MI= Myocardial infarction, DSM-IV= Diagnostic and statistical Manual for mental disorders fourth edition, WHO-QOL= World health organization quality of life questionnaire
Risk Factors for Postpartum Depression

Authors: Farahnaz Keshavarzi\textsuperscript{1}, Anisodowleh Nankali\textsuperscript{1*}, Taravat Fakheri\textsuperscript{1}, Vahid Farnia\textsuperscript{2}, Katayoon Yazdchi\textsuperscript{3}

\textsuperscript{1} Assistant Professor of Obstetrics & Gynecology, Obs & Gyn Department, Imam Reza Hospital, Kermanshah University of Medical Sciences (KUMS), Kermanshah, Iran

\textsuperscript{2} Assistant Professor of Psychiatry, Psychiatry Department, Farabi Hospital, Kermanshah University of Medical Sciences (KUMS), Kermanshah, Iran

\textsuperscript{3} Gynecologist, Obs & Gyn Department, Imam Reza Hospital, Kermanshah University of Medical Sciences (KUMS), Kermanshah, Iran

\* Corresponding Author: Anisodowleh Nankali
Email: anis_nankali@yahoo.com

Abstract

Introduction: Postpartum psychological stress often increases after delivery. Postpartum depression (PPD) is a common complication of childbirth and prevalence estimated at 10-20% reported in many countries.

Objective: The purpose of this study was to explore the risk factors associated with postpartum depression and control group.

Method: This analytic cross sectional study included 113 women attending public health clinic for postpartum care in Kermanshah, Iran. We evaluated the women within one to two months after childbirth. PPD symptoms were assessed using the Edinburgh Postnatal Depression Scale (EPDS). Mothers with an onset of PPD (≥9 points on EPDS) within 4 weeks after childbirth were classified as having PPD. Study population were interviewed using a structured questionnaire, which included socio-demographic details. Data was analyzed by SPSS software using chi-square, T and Regression test and P< 0.05 considered significant.

Result: A total of 113 participants, 48 women with postpartum depression and 65 normal control group were recruited into the study. The mean EPDS score for the postpartum depression and control group were 21.02 and 6.34 respectively. There were statistically significant differences between these groups in mean EPDS scores (p = 0.001) at 4-8 weeks postpartum. There was an inverse significant relationship between PPD and parity (P= 0.005), and maternal age (p=0.04), however, no significant difference was found between postpartum depression and level of education, those who were working outside of the home, unwanted pregnancy, mode of delivery, postpartum hemorrhage, gender of newborn and breastfeeding.

Conclusion: The high rate of PPD among low parity and low maternal age needs to emotional support. Hence maternal mental health assistance should be made a part of routine postpartum care.

Keywords: Postpartum, Depression, Risk factor
Abstract

Introduction: Coping is related to health outcomes such as distress, survival and cancer recurrence. Physical problems are increased with cancer diagnosis and despite of insurance support, patients and their family burden high costs of treatment.

Objective: The purpose of this study was to investigate the physical and financial unmet needs associated with coping strategies in cancer patients.

Method: 146 patients with cancer were non-randomly selected from patients admitted for cancer treatment in Imam Khomeini Institute Cancer in 2009. Two questionnaires (physical & financial unmet need, 54-item Coping questionnaires) were completed.

Result: the most frequent of subjects were women (75.5%), married (72.3%), Muslim (95.5%) and up to 36.6% subjects had cancer with grade II. Regression analysis revealed that there wasn't any association between financial unmet need and coping, physical unmet need was associated with "Distance" coping strategy (p<0.043). Chi2 analysis revealed that there was association between financial unmet need and chemotherapy (p<0.031), physical unmet need was associated with surgery (p<0.027).

Conclusion: The findings suggest that Health care professional should be aware of patient's physical and financial unmet needs during their care. Further research is recommended to identify family member of cancer patient's financial need and concerns about out-of-pocket costs.

Keywords: financial unmet need, physical unmet need, coping, cancer
The effect of personal and social factors on cancer patient's social needs
Beheshtee, M.¹, Dastan, M.¹, Safaeeifar, M.¹, Fathollahbeigy, F.¹, Karbasi Motlagh, M.¹*¹
Zamanian, H.², Darya Afzoon, M.³
¹ Student Scientific Research Center of Tehran University of Medical Science, Tehran, Iran
² Qom University of Medical Science, Qom, Iran
³ Tehran University, Tehran, Iran.
Tel.: +989124584651; fax: +982166943189. E-mail: markar1985@gmail.com m-karbasimotlagh@razi.tums.ac.ir.

Abstract

Background: Cancer patient's social needs are variable during the period of cancer disease. Some studies suggest that personal (such as sex, age, ethnicity, cancer’s stage) and social (such as care givers) factors can change patient's social needs.

Object: This study aimed to investigate the relation between personal and social and patient's social needs.

Methods: 146 cancer patients admitted to hospitals in Tehran University were selected by nonrandom sampling. Social needs and demographic questionnaires were completed by eligible patients and data were analyzed using frequency tables and regression test.

Results: A total of 75.5% of subjects who had completed the questionnaires were women, 72.3% were married, 95.5% were Muslim, and 36.6% had cancer with grade II. No relation was identified between Social needs and personal and social factors (age, sex, religious, ethnicity, marital status, educational status, cancer’s stage, type of cancer, family history of cancer and occupational status).

Conclusion: According to the results of this study, there is no significant correlation between Social needs and personal factors or social factors.

Keywords: Personal Factors, Social Factors, Social Needs, Cancer
Exhumation-Nuisance to the dead, justified?

Farhat Hussain Mirza¹, Syeda Ezz-e-Rukhshan Adil², Akhtar Amin Memon²*, Hamid Ali Paryar³

Head of Department, Forensic Medicine, Dow Medical College, Karachi.
Medical student, Dow Medical College, Karachi.
Police Surgeon, Karachi.

Corresponding author: Akhtar Amin Memon, Address: 1704/3, Federal B Area, Karachi, Pakistan.
Contact no.: +92-322-2755172, E-mail: akhtar.amin@live.com

Abstract

Objective: Exhumation stands as a very significant feature of forensic investigations. The legal excavation of dead bodies for ascertainment of the cause of death has always aided the law enforcement agencies to comprehend the anonymity of any suspicious case and further convict the criminal in cases of homicides. This study analyzes the different aspects of the exhumations which were carried out and were autopsied in Karachi during the study period.

Method: This was a cross sectional study, and included all the exhumations carried out in Karachi during a period of 7 years and 7 months from January 1st, 2004 to July 31st, 2011.

Results: A total of 101 exhumations were carried out during the study period. Out of 101 cases, 63 were males (62.4%) and 38 females (37.6%) giving a male to female ratio of about 3:2. Causes of death was ascertained in 75 cases, thus the success rate was 74.3%. Head injury by hitting with hard blunt object was the most frequent cause of deaths (17.8%), followed by asphyxia due to strangulation (15.8%).

Discussion: Exhumations must be ordered by the Judiciary in suspicious cases as it aids in determining the actual causes of deaths and leads to convictions. It also brings a great deal of satisfaction for the relatives of the deceased and halts any doubts in their minds. As shown by our study, much attention is given to the cases in urban areas by the relatives who are determined to find the cause of death even after burial procedures.

Keywords: Autopsy, Exhumation, Karachi.
Ocular and other comorbidity in HIV positive orphan in Myanmar

KayThi Myint ¹, May Thet Hnin Aye ², Soe Moe ³, Soe Kyaw ⁴

¹Dr KayThiMyint, Assistant Professor, Department of Ophthalmology, Melaka-Manipal Medical College, Email: kaythimyint.eye@gmail.com, kaythi.myint@manipal.edu.my, Contact Address: Melaka- Manipal Medical College, Jalan Batu Hampar, Bukit Baru, 75150 Melaka, Malaysia
²Dr. May Thet Hnin Aye, Consultant Ophthalmologist, Yangon Eye Hospital, Email: maythethninayae@gmail.com, Contact Address: Yangon Eye Hospital, 30 Natmauk Road, Yangon, Myanmar
³Dr Soe Moe, Associate Professor, Department of Community Medicine, email: soemoe2006.40@gmail.com, soe.moe@manipal.edu.my, Contact Address: Melaka Manipal Medical College, Jalan Bartu Hampar, Taman Bukit Baru, 75150, Melaka, Malaysia
⁴Dr Soe Kyaw, BCC consultant, Marie Stope International, Myanmar, Email: soekyawwin@gmail.com, Contact Address: 71 Thitsa street, 39(A) Block, Dagon Myothit (North), Yangon, Myanmar

Abstract

Introduction: It is estimated that 238,000 people are living with HIV in Myanmar in 2009 and estimated 17,000 people died of AIDS-related illness in the same year. The scourge of AIDS has not only orphaned many children but also brought them about infected with HIV through mother to child transmission. Although low birth weight is not attributed to HIV infection of the baby born to HIV positive mother, it contributes to growth failure in children. Failure to thrive is seen in 20-70% of infected children. As malnutrition is a contributing factor to onset of immune deficiency and opportunistic infection, it is important indicator for co morbidity and mortality of HIV infected children. Ocular manifestations are not very common in paediatric HIV unlike that of adults, it is still possible due to effect of virus itself or opportunistic infections as well as side effects of some antiviral medications.

Keeping in mind of these facts, it is worth monitoring the growth and ocular examination regularly. Being marginalized through stigma and discrimination, these vulnerable children have lack of access to basic care and preventive needs. Despite a broad awareness of HIV, the knowledge concerning ocular involvement is still low. This study fills the gap by assessing the ocular and other comorbidity together with their nutritional status.

Objectives: of this study is 1. to explore the ocular manifestations of the HIV positive orphan as well as, 2. to identify the nutritional status and other concurrent comorbidities. 3. To study relationship of nutritional status and gender to the ocular and other comorbidities.

Methodology: It is a cross-sectional study done in one orphanage home in Yangon, Myanmar. 60 children included in the study. Data collection methods are record review, interview and physical, anthropometric and ophthalmic examination. Pretested precoded profoma is used for record review and record of examination findings. WHO BMI and MAC standard are used for assessment of Nutritional status.

Results and findings: There are 60 children in the study, among them 28 are male and 32 are female. Age ranges from 2 years to 15 years. 36 children are HIV stage 1, 16 in stage 2 and 7 in stage 3 and only one with stage 4. Nutritional problem is seen in 60% of the children. Among them, 50% have under nutrition and 10% of them have problem of over weight and obesity. Otitis media
is seen in 16 children (26.7%). Tuberculosis is seen in 7 children (11%). Ocular morbidity is seen in only 3 children (5.1%). Half of the children are under or malnutrition while 5 (8.3%) found to be overweight and 1 (1.7%) found to be obese. There are no significant differences in CD4 count, provision of ART and HIV status among male and female children. Occurrence of ocular manifestation and comorbidities like TB and otitis media are seen in small in proportion of children and it is not appropriate to apply statistical test to find association of them to gender and their nutritional status.

**Study Limitations:** Previous CD4 count before ART treatment was not available so that effect of treatment on CD4 count cannot be analysed. This study is done in orphanage home so that it reflects the picture of institutional life of HIV positive orphanage children and finding may or may not be generalized to all HIV positive children.

**Conclusion:** In this orphanage, HIV positive children were well taken care and arranged for ART treatment. There is no gender difference in availability of services as well as morbidity of children. However, monitoring of nutritional status and ocular examination were not done regularly because of many constraints including funding. Finding from this study pointed out need for regular monitoring of growth and nutritional status and attention not only on under nutrition but also on over nutrition as well. It is also recommended to arrange for regular ocular examination of the children.

**Keywords:** HIV, Orphan, Ocular manifestation, ART, TB, Nutritional status
Essential Arterial Hypertension occurring in Children and Teenagers
Anthropological Correlations

Adina Baciu
“Fr. I. Rainer” Institute of Anthropology, Romanian Academy, No. 8 Eroii Sanitari Blvd, P.O. Box 35-13, 050 474, Bucharest, Romania, Phone/ Fax: (004) -021-317.50.72, e-mail: adinabbaciu@yahoo.com

Abstract

Background: Arterial hypertension (AH) manifested during childhood and teenage years has been considered, for a long period of time, as being a rare disease and almost exclusively a secondary one. Within the last 10-15 years, as the diagnosis techniques improved and the research regarding juvenile AH extended, the diagnosis criteria have been reconsidered and as a consequence, the disease has become more frequent until reaching the age of 16, compared to the past periods of time.

Aim & Objectives: The research was carried out during the year 2011, within the partnership educational project, Integration through Schools and Anthropology, No. 357/2011. The general objective stated for the anthropological study implied by this project is to examine inter- and trans-disciplinary certain aspects of the lifestyle of the children and teenagers belonging to rural Roma people communities and its impact on their health, likelihood to develop certain diseases as well as to propose prophylactic measures. Within the general objective framework, for the purpose of this paper I isolated the findings related to the incidence of AH among children and teenagers and I explored its possible relation to the community lifestyle (eating habits, improper housing, family size) and genetic factors (AH family history, precocious appearance of secondary sexual features as a sign of early adulthood).

Methods/Study Design: The medical and anthropometrical research was carried out on two groups of students from the rural environment, aged between 10 and 16 years: one control group and an experimental group. The control group was formed of 100 Romanian students, 30% boys and 70% girls. The experimental group, formed of 100 Romanian students from a Roma people rural community, 26% boys, 74% girls. The Roma people rural communities preserve a more archaic lifestyle, including culinary habits, that can influence the incidence of AH. Questionnaires comprising 63 questions were administered for the completion of data regarding their lifestyle. For the statistical comparisons we calculated the Odds Ratio (OR) using CHI Square test with Yates’ correction. Statistical analysis of variance (ANOVA) was used for the characterization of the anthropometric variables. The subjects involved in the research were not diagnosed with kidney, cardiovascular or endocrine diseases or with mental retardation.

Study Design: Prospective case-control.

Consent: The volunteers were selected after their parents had freely expressed their informed consent in written form.

Results/Findings: The incidence of AH among the participating children and teenagers in both groups is within the limits mentioned in the field literature, 4.00% for the control group and 7.00% for the experimental group. There is a positive association (OR=1.8064), statistically significant (p<0.0166) between AH incidence and the studied group. Most of the subjects from both groups have AH borderline values. All the subjects diagnosed with AH have AH family history. 84.62% of boys in the experimental group eat daily salty foods comparing to 66.66% of the boys in the control group. There is a positive association (OR=1.6666), statistically significant (p<0.0299) between AH incidence and the salt consumption There is a positive association (OR=1.95), statistically insignificant (p<0.1) between AH incidence and the number of children per family. There is a
positive association (OR=1.66), statistically significant (p<0.0299) between AH incidence and the presence of secondary sexual characteristics. There are no statistically significant differences (p>0.05) between the two groups regarding the anthropometric variables analyzed pertaining to gender.

Conclusion: According to the field scientific literature it is generally accepted that systolic and/or diastolic AH is 3-4 times more frequent among obese children and teenagers comparing to those with normal weight and 6-8 times to underweight ones (I Gherasim 1996). Nevertheless, the findings of the research presented in this paper indicate that certain particularities of the lifestyle (increased salt consumption, overcrowded and improper dwellings) and certain genetic factors (AH family history, early adulthood) may explain a higher incidence of AH even among normal-weight and underweight children and teenagers.

Keywords: arterial hypertension, children and teenagers, anthropology.
Interferences of Hearing Disorders in Teenagers with Medical Anthropology

Adina Baciu
“Fr. I. Rainer” Institute of Anthropology, Romanian Academy, No. 8 Eroii Sanitari Blvd, P.O. Box 35-13, 050 474, Bucharest, Romania, Phone/Fax: (004)-021-317.50.72, e-mail: adinabbaciu@yahoo.com

Abstract

Background: Within the context of nowadays’s lifestyle becoming gradually more complex, the theoretical and applicable research focuses on the preventive actions in the case of disorders and their consequences, which have a great importance. The contemporary approach to preventive actions tends to become a multidisciplinary approach, meant to interpret all parameters which could lead to, support or worsen hearing disorders.

Aim & Objectives:
- Comparing various anthropomedical aspects of a teenage group with hearing disorders and those of a teenage group with normal hearing;
- Establishing if there is any correlation between the birth succession, the degree of prematurity, associated diseases, weight and the types of hearing disorders;
- Suggesting recommendations in respect to the early social recovery and integration of those with hearing disorders.

Methods/ Study Design: During the year 2011, within the educational Project Anthropology and Special Schools – a Step towards Recovery, No. 356/2011, which was designed as a partnership, data regarding two groups of teenagers aged between 14 and 18 years from both the rural and the urban environment, has been recorded. The experimental group was formed of 146 students (68.49% girls and 31.51% boys), with hearing disorders – while the other group, a control group, was formed of 146 students with normal hearing. All subjects were medically, audiometrically and anthropologically examined. Questionnaires, comprising 37 questions on various behaviour and adaptation aspects, were administered. The results were interpreted with the help of statistical methods, on the basis of which the two groups of subjects were compared. Teenagers with various types and degrees of deafness were included in the experimental group.

Study Design: Cross-sectional study.

Consent: The volunteers were selected after their parents had freely expressed their informed consent in written form.

Results/Findings: Teenagers who were born with a degree 4 of prematurity (4.00% girls, 4.35% boys) are present only within the experimental group. The proportion of girls with hearing disorders, who were born with a degree 3 of prematurity (16.00%), is higher than that of girls from the control group, who were born with the same degree of prematurity (1.09%), the difference being statistically significant (p<0.05). The proportion of girls with different types of deafness, who were born with a degree 3 or 4 of prematurity (70.08%), is higher than that of boys (30.84%), the difference being statistically significant (p<0.05). Transmission deafness is encountered at a larger scale in the case of people with hearing disorders and a birth succession higher than 3, than cophosis and sensorineural deafness are, the difference being statistically significant (p<0.05). The percentage of girls with sensorineural deafness, who had previously suffered from ear infections (8.06%), is higher than that of boys (3.70%), the difference being statistically significant (p<0.05). The percentage of girls with hearing disorders, who had previously suffered from infections of the upper respiratory tract (85.40%), is higher than that of boys (34.55%), the difference being statistically significant (p<0.05). The percentage of underweight individuals with hearing disorders (32.00% girls and 17.39% boys) is higher than that of the teenagers from the control group (15.22%...
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girls, 7.40% boys), the difference being statistically significant (p<0.05). Also, 4.48% of the overweight girls with hearing disorders have been diagnosed with sensorineural deafness, 3.33% suffer from cophosis and 25.00% suffer from transmission deafness. No boy with hearing disorders is overweight, the difference being statistically significant (p<0.05).

Conclusion: The statistically significant difference (p<0.05) between the two groups, averaging that a higher percentage of individuals with hearing disorders were underweight at the moment of birth and had a greater degree of prematurity or had a bigger birth succession and often show more frequent infections than teenagers with good hearing, determines us to believe that a thorough analysis of children at birth, as well as periodical medical exams, carried out during the first years of childhood, would lead to the revelation and early implementation of recovery methods in the case of hearing disorders and implicitly to their fast social integration.

Keywords: hearing disorder, teenagers, medical anthropology.
Study on Young Doctors’ Lack of Interest to Work in Rural Nepal

Roshan Khatri
Teaching Assistant, Department of Bio-Chemistry, Patan Academy of Health Sciences, Patan Hospital, Lalitpur, Patan
Nepal, Email: roshankhatri@gmail.com, Tel: +9779851131822 +97714282095

Abstract
Background
Nepal, a recently declared Federal Republic Nation is a country with 29.331 million inhabitants. It is a South East Asian country located between two giant nations China and India. It has land area of 1,47,181 square kilometers, which includes high Himalayas in the north, mid hilly region to vast flat Terai region in the south. This extreme form of geographical variation has proved to be a boon to the country as well as a hindrance to its developmental processes.

Aims and Objectives
The purpose of this study is to aid the policy making process for formulating effective set of policies and programs to assure equal right of health for all. This study will mainly focus on discovering the reason why trained doctors do not go to serve the people of rural areas. It will also try to ascertain various incentives, motivational factors that will bring a change in this discrepancy. This study is critical for providing a bridging mechanism in the transition towards a developed nation from a developing one, contributing to rural livelihoods; promoting rural health and for a better overall nation.

The general objective of this study is to identify the reason behind why medically trained personnel do not prefer to work in the rural areas, with the notion that it is where they are most required. By medically trained personnel we refer to Doctors who have completed their Bachelor of Medicine and Bachelor of Surgery (MBBS) within last five years and are currently employed in Medical Institution in Kathmandu Valley. Institutions which have more than hundred beds inside the valley will only be taken into consideration.

We also try to give strategy options and interventions that are robust in their ability to address the challenges associated with policy making, planning for the remedy of this existing disparity of unequal distribution of Health Human Resource.

i. Analyze the recent studies on the present situation of rural health of Nepal
ii. Identify the reasons why a huge discrepancy exists in selection of working site among the majority of doctors.
iii. Identify a wide range of possible strategy options capable of influencing prevailing situation
iv. Suggesting additional thematic studies, information gathering activities, analytical work, and capacity building activities required to mitigate this situation.
v. Aid in future planning and policy making procedures.

Methods
For this study both primary and secondary data will be utilized. Primary data will be for purpose of this research, and in order to achieve the objectives. The secondary data will contribute towards the formation of background information, useful for the researcher in order to build constructively the project and the reader to comprehend more thoroughly the survey outcome.

The primary data will be collected in two ways.
First through a questionnaire survey a random sampling method will be used among hundred Doctors, who have graduated within the last five years, from at least three hospitals working in more than hundred bedded hospitals in Kathmandu valley will be selected. Second, through the in
depth interviews carried out with twenty doctors selected on basis of random sampling who are working outside Kathmandu valley. Their thorough perspective towards this situation, their ideology in regards and their personal attitude will be taken into account. Secondary data will be obtained from a wide array of qualitative and quantitative sources in the form of a desk review, including analysis of case studies, academic and applied research, and literature review. Various works done previously on the same regards will be reviewed. Scientific articles published will be referred from the sites like Google Scholar, Pub Med, Medline, HINARI, SCOPUS, EMBASE (Elsevier), ProQuest, EBSCO, DOAJ, GALE, Academic OneFile, IndexCopernicus. So, in total one hundred and twenty doctors will be the study population to represent the number of doctors working inside and outside Kathmandu Valley.

**Keywords**: Incentives, motivational factors, rural, livelihood, perspective, young doctor.
Differential Morbidity and Mortality Patterns of Pulmonary T.B

Niqad Ahamd 1, Zia-ud-Din 2, Nasir Iqbal 3, Zain-ul-Abideen 4
Peshawar Medical College, Peshawar (NWFP), Pakistan
niqad_ahmad@yahoo.com

Abstract
Objective: To assess the KAP of community towards T.B to estimate morbidity and mortality of pulmonary T.B.
Study Design: Cross sectional KAP survey.
Methods and Materials: The study was carried out in the village Mathra New Tehsil, ShabQadar (Charsadda) from 4th March 2008 to 8th April 2008. The designed questionnaires were administered to 100 persons of each family. These 100 people have 197 childrens & about 1245 relatives. The Morbidity of TB found is from 2006 to 2008.
Result: After collecting data, it was found that 73.83 % of the community people know about the T.B; (Signs, Symptoms, Effects and Treatment) and 26.17% don’t know about TB. 26.5 % had BCG vaccines (67.93 % adults and 32.07 % children).9% doesn’t know which type of vaccine they have been given. 64.5 % have not been given the BCG vaccines. (35.66% adults and 64.34% children). Morbidity of T.B found 6.92 %( individual person = 6.38 %, children = 19.15%, relative 74.47%). Mortality of T.B = 26.59%, (children of the interviewed persons = 20%, Relative= 80%). Co morbidity of other diseases = 66.66 % (diabetes 25 %, and other = 75%).
Conclusion: The Persons in Pakistan suffer from TB are about 0.156% per year. Out of which 24% of the people died per year (4).The percentage of T.B in our village was found to be 6.92% & the Mortality is 26.59% which is more because of the unhygienic condition of the village & unwell developed arranged program of the health for the awareness of the TB as well as BCG Vaccines. The morbidity found per year was 3.46% and mortality found was 13.49%.

Keywords: Pulmonary Tb, Morbidity, Mortality, Co-Morbidities.
Ovarian Serous Cystadenoma in a 29-year old Post-TAHBSO Female with Mayer-Rokitansky-Kuster-Hauser Syndrome, Heterotaxy Syndrome with Polysplenia and Hypothyroidism: a Case Report

Renato C. Ong, Jr.*, Patricio P. Palmes ², Tomasito Sy ³
West Visayas State University Medical Center, Jaro, Iloilo City Philippines 5000, Wryce_ong@yahoo.com

Abstract

Background: The incidence of MRKH is 1 in every 4,500 female live births, while Heterotaxy syndrome occurs in 4 in every 1M live births. There was one reported case of MRKH with Hypothyroidism and one case with Hypoplastic R lung. The incidence of MRKH plus Heterotaxy syndrome with polysplenia is still unknown. MKRH with ovarian tumors revealed 5 reported cases but none of these was consistent with ovarian serous cystadenocarcinoma. There is no documented association of Heterotaxy syndrome with polysplenia and ovarian serous cystadenocarcinoma.

Clinical Presentation: A 29-year old female was admitted for an appendectomy with incidental note of an unresectable retroperitoneal mass. Biopsy showed suppurative appendix and an abscess with granuloma formation. She underwent pelvic laparotomy with bilateral salpingooophorectomy at age 16 for primary amenorrhea and an absent vaginal orifice.

Laboratory Work Up: CBC showed anemia and persistent leukocytosis with absolute neutrophilia. There were low Na⁺ and K⁺ levels and remittent azotemia with hypoalbuminemia. TSH was high but T₃ was low. Karyotyping bared normal 46,XX karyotype. Chest X-ray revealed narrowed right intercostal spaces; hyperlucent left lung with widened intercostal spaces; shifting of the trachea and mediastinum to the right; and elevated right hemidiaphragm. Chest and abdominal CT scan demonstrated structural alterations consistent with Heterotaxy syndrome; a lobulated, solid mass with areas of hypodensities and punctuate calcifications within the pelvic cavity. 2D-Echocardiography showed a dextro-positioned heart. Hormone panel was consistent with menopausal levels. Immunohistochemistry studies showed inflammatory myofibroblastic tumor. Autopsy revealed ovarian serous cystadenocarcinoma.

Diagnoses: Ovarian Serous Cystadenocarcinoma; Mayer-Rokitansky-Kuster-Hauser syndrome, Atypical; Heterotaxy syndrome with Polysplenia; Hypothyroidism; Chronic kidney disease Stage 4 due to Obstructive nephropathy; Undernutrition; S/P Bilateral salpingooophorectomy, Closure of Inguinal Hernia (1997); S/P Appendectomy, Biopsy of Retroperitoneal tumor, Loop colostomy, Enterocutaneous fistula creation (March 2010).

Treatment Outcome: Anemia was corrected, and intravenous antibiotics were started. Patient was discharged improved, however, eventually succumbed after 5 months.

Keywords: Ovarian Serous Cystadenoma, Mayer-Rokitansky-Kuster-Hauser Syndrome, Heterotaxy syndrome
Angiofollicular Lymph Node Hyperplasia (Multicentric Castleman’s Disease) Hyaline Vascular Type in an HIV-Negative, 27 Year old Female: A Case Report

James C. Catoto, MD *1; Patricio Palmes, MD 2; Felice Garingalao-Molina, MD 3
Department of Internal Medicine, West Visayas State University Medical Center, Iloilo City, Philippines

Abstract

Background: Castleman’s disease, an unusual condition of unknown cause consisting of a massive proliferation of lymphoid tissue, remains a clinicopathologic diagnosis. This rare condition precludes comprehensive studies leading to an incomplete understanding of its pathophysiology and treatment.

Objective: This aims to present a case with multiple lymphadenopathies and systemic manifestations; and attempts to provide new insights into its clinical features, pathogenesis, diagnosis, and treatment.

Clinical Presentation: A 27-year-old female, single, was admitted because of four months fever; accompanied by pallor, weight loss, and other constitutional signs/symptoms. On physical examination, multiple, matted, non-tender lymphadenopathies were noted in the cervical and axillary areas.

Diagnostics: Patient underwent work up as a case of fever of unknown origin (FUO) and anemia. Blood culture, cranial CT, 2-D Echocardiographic and Doppler studies, ANA, whole abdominal and transvaginal ultrasound, and HIV test were negative. Peripheral blood smear showed anemia with leukocytosis consistent with an infectious process and iron deficiency.

Diagnosis: Cervical lymph node biopsy is consistent with Angiofollicular Lymph Node Hyperplasia (Castleman’s Disease), hyaline vascular type. Immunohistochemistry staining revealed: CD20 positive cytoplasmic expression in lymphoid cells within follicular areas and expanded mantle zone; CD20 positive cytoplasmic membrane expression in non-neoplastic small lymphocytes within interfollicular areas.

Treatment and Outcome: Patient was given prednisone (1mg/kg body weight) with marked improvement in the clinical manifestations and well being observed after two to three days. She was discharged significantly improved.

Conclusion: This case report underlines the importance of definitive histological diagnosis in patients with lymphadenopathic presentation associated with systemic symptoms.

Keywords: Castleman’s Disease, Angiofollicular Lymph Node Hyperplasia, HIV
Antioxidants have no role in survival of rats after acute intoxication with paraoxon

Syed M Nurulain\textsuperscript{1}, Huba Kalasz\textsuperscript{2}, Tekes Kornelia\textsuperscript{2}, Abdu Adem\textsuperscript{1}, Georg petroianu\textsuperscript{3}

\textsuperscript{1}UAE University, AlAin, UAE, P.O.Box 17666, AlAin, UAE, \\
\textsuperscript{2}Semmelweis University, 1089 Budapest, Nagyvárad tér 4, Hungary, \\
\textsuperscript{3}Florida International University, Miami, Florida, USA.

Corresponding author: email- nurulain@uaeu.ac.ae

Abstract

Introduction: There is overwhelming reports that oxidative stress is produced by the organophosphorus poisoning (OP) whether chronic or acute and antioxidants may be used as adjunct to standard therapy for the treatment. However, only one paper can be retrieved from the literature search which demonstrated the improvement in survival after using N-acetyl cysteine (NAC) as antioxidant and fenthion, a moderate toxic OP against mice. The toxicity profile of each OP compound is unique and behaves differently. In the present study extremely toxic OP poison Paraoxon was investigated against rats by using NAC and glutathione reduced (GSH) as antioxidant.

Objective: Investigate the efficacy of two antioxidants NAC and GSH against acute organophosphorus poisoning by paraoxon in rat model.

Method: The average body weights of the animals were ≈250g. NAC dose was selected according to the literature which proved efficacy against mice (225 mg/ kg average body weight). The dose for GSH was 750mg/kg body weight and was based on literature. The acute cholinergic crises were produced by 2x of LD70 of paraoxon. All the compounds were injected i.p. at different anatomical sites. In post treatment, all the three injections were delivered within one minute. In pretreatment groups, NAC was injected 30 minutes before POX+PAM and GSH was treated 90 minutes before POX+PAM injections.

Results: Both tested antioxidants were neither protective in pretreatment nor they gave any protection in post treatment. All the experimental animals injected with antioxidants died within 30 minutes of drugs application in comparison to 93% mortality in POX only group (G1) and 87% mortality in POX+2-PAM groups. This percentage of mortality was retained by 48 hours.

Conclusion: In summary, our results suggest that antioxidants have no role in the survival of rats in acute toxicity of paraoxon and hence adjunct use to standard therapy for acute OP poisoning cannot be established. Because of the different toxic dynamics of diversified OP compounds, conclusion should be drawn carefully for any outcome of research on OP poisoning. Further work on other species of animals may be warranted.

Keywords: Antioxidant; Organophosphorus anticholinesterase; survival study; oxidative stress; irreversible inhibitor; organophosphorus compound (OP).
Inducible clindamycin resistant *Staphylococcus aureus* in Middle East: A systematic review

Maryam Shokri *, Yasin Setayesh 1, 2, Emran Askari 1, 2, Mahboobeh Naderi Nasab 1, 2

1 Mashhad Medical Microbiology Research Group, Mashhad University of Medical Sciences, Iran
2 Student Research Assembly of MUMS, Mashhad University of Medical Sciences, Iran
3 Microbiology Lab., Central Laboratory, Imam Reza Hospital, Mashhad, Iran

Email Address: Shookrim891@mums.ac.ir
Tel: +98-09155227417

Abstract

**Background:** *Staphylococcus aureus* is an important human pathogen which causes high morbidity and mortality worldwide. One of the drugs used for treatment of staphylococcal infections (particularly infections of skin and soft tissue), is clindamycin. Resistance to clindamycin is either inducible or constitutive. Usual methods of antibiogram cannot detect inducible resistance and D5-test is required for detection of this phenotype.

**Aim & Objectives:** The purpose of this systematic review was to determine the relative frequency of this resistance phenotype in the Middle East.

**Methods:** All articles/abstracts with the words "*Staphylococcus aureus*", "inducible resistance" (or words meaning the same) and "name of each Middle East country" were searched in PubMed, Scirus, Google Scholar, Scientific Information Database (SID) and Iranmedex. We also searched the abstracts of available congresses (including 4 previous Iranian clinical microbiology congresses).

**Results:** In total, 37 articles/abstracts related to the topic of the study were found of which 34 were finally included in the analysis. The reports were from Iran (n=2328), Turkey (n=3127), Libya (n=290), Saudi Arabia (n=804) and Pakistan (n=2432). Out of 8981 *S. aureus* strains, 863 isolates (9.60%) had D5-phenotype. There was a high heterogeneity for D5-phenotype relative frequency between studies (ranging from 1.16%-55.62%). Based on the sensitivity pattern of strains, 40.94% of isolates were resistant to methicillin and there was a significant difference between methicillin-resistant and -susceptible strains for being D5-test positive (15.4% vs. 6.4%, P<0.05).

**Conclusion:** In conclusion the rate of inducible clindamycin resistance in Iran (i.e. 7.08%) is lower than neighbor counties in the Middle East. Beside these findings, articles reviewed indicate the need of D5-test in order to identify inducible clindamycin resistance.

**Keyword:** *Staphylococcus aureus* - Middle East - Inducible Clindamycin resistant- Systematic review
The effect of resistance training on ghrelin serum and some of the selected hormone changes among healthy young females

Masoumeh Azizi
Department of Sport Science. Islamic Azad University, Abadan Branch. Abadan. Iran
Email: science.sport@yahoo.com

Abstract

Background: Ghrelin is a peptide hormone secreted from the stomach with both endocrine and paracrine effects. Ghrelin and its mRNA as well as growth hormone-(GH) secretagogue receptor mRNA are expressed in the pancreas and islet cells and regulate insulin release. It has been reported that Ghrelin serum may stimulate food intake, and even increase weight gain and body composition but results are still controversial.

Purpose: The aim of this study was to examine the effect of 8 weeks resistance training on plasma ghrelin concentration and some of the selected hormone changes among healthy young females.

Material and Method: 24 inactive female students, with a mean age of 27.56±0.48 yrs, height 162.66± 5.05 cm, weight 62.91±0.34, and a body mass index of 23.68±0.84 kg/m² participated in the study in two trials [control-(n=12) and exercise-(n=12)] in a counterbalanced, randomized design. The protocol included resistance training with 40% -60% 1RM, 3 day/week for 8 weeks. Blood samples for measuring of plasma Ghrelin, Insulin, Cortisol, Growth hormone concentrations from all subjects were collected 24 hours before starting the program and after the last session of the program. Differences between post-test and pre-test were evaluated using a Student′s t-test for paired samples. A P-value < 0.05 was considered to be statistically significant.

Results: Student's t-test revealed that no significant differences were observed in levels of plasma total Ghrelin-(P=0.78) and insulin-(P= 0.58) in the experimental group when compared to the control group but a significant changes was seen in Cortisol (P=0.024), and Growth hormone (P= 0.043) concentrations in the experimental group when compared to the control group.

Conclusion: Data indicate that higher ghrelin levels could be attributed to metabolic changes. Our findings indicate that plasma ghrelin and insulin increased but it was not significant. Since it clear that activity duration is an important parameter in the increase in ghrelin levels in response to exercise. Hence, further studies are required to investigate whether this protocol could have the same effects in other training programs or not.

Keywords: Ghrelin, Insulin, Cortisol, Growth hormone, Aerobic exercise, Resistance training.
The comparison effect of aerobic and resistance training on regional and abdominal fat reduction and some of the heart risk factors among 30 to 45 years old healthy females

Masoumeh Azizi¹*, Reza Baledi¹
¹*Department of Sport Science. Abadan Branch, Islamic Azad University. Abadan. Iran.
Email: science.sport@yahoo.com

Abstract

Background: Data have firmly established that abdominal obesity and especially increased levels of visceral fat are more highly associated with metabolic and cardiovascular diseases risk. Besides, exercise training is known as a best means to reduce the risks of such diseases.

Purpose: The aim of this study was to compare the effect of aerobic and resistance training on regional fat reduction, abdominal and some of the heart risk factors among 30 to 45 years old healthy females.

Methods: 20 inactive healthy female, with a mean age of 37.56±0.48 yrs, height 164.66± 1.05 cm, and a body mass index of 26.68±0.84 (kg/m²), participated in the study in two trials [aerobic training-(n=10) and resistance training-(n=10)] in a counterbalanced, randomized design. The protocol included resistance training with 40% -60% 1RM and aerobic training program with 65-85% of individual maximum heart rate, 3 day/week for 8 weeks. Blood samples for measuring of lipoproteins concentrations plus abdominal, sacroiliac and thigh fat were measured by caliper, BMI and peripheral of abdomen from all subjects 24 hours before starting the program and after the last session of the program. Differences between post- test and pre- test were evaluated using a Student's t-test for paired samples. A P-value < 0.05 was considered to be statistically significant.

Results: Data analysis revealed significant differences in levels of plasma lipoproteins concentrations and a significant decrease in abdominal, sacroiliac and thigh fat of both groups when following exercise training but these changes were not dramatic when two groups were compared.

Conclusion: Although physical activity is associated with reduction in abdominal and visceral fat, there is insufficient evidence to determine a dose-response relationship. Hence, further studies need to be done to understand how much physical activity would be efficacious for the management of obesity.

Keywords: Aerobic training, Resistance training, Regional fat, total body fat, lipoproteins.
Serum leptin and ghrelin changes-induced aerobic training in healthy young females

Masoumeh Azizi
Department of Sport Science. Islamic Azad University, Abadan Branch. Abadan. Iran
Email: science.sport@yahoo.com

Abstract

**Background**: Ghrelin is a peptide hormone secreted from the endocrine cells of stomach, affecting feeding behavior, appetite, energy consumption, weight, and body composition which may thus be an essential hormone for maintaining energy hemostasis. Leptin, an antagonist to ghrelin, is another hormone which also plays a key role in metabolism. Much evidence indicates that aerobic exercise training is a key component of exercise recommendations for weight control. Yet, results on the impact of this exercise on ghrelin and Leptin levels are controversial, and are from studies performed among athletes.

**Purpose**: The aim of this study was to examine of the effect of 8 weeks aerobic training on Serum leptin and ghrelin changes-induced aerobic training in healthy young females.

**Material and Method**: 24 inactive female students, with a mean age of 27.56±0.48 yrs, height 162.66± 5.05 cm, and a body mass index of 32.68±0.84 kg/m² participated in the study in two trials [control-(n=12) and exercise-(n=12)] in a counterbalanced, randomized design. Serum levels of leptin and ghrelin via Blood samples were taken 48 h before starting the aerobic training program. Then, experimental group performed the aerobic training program included aerobic training with 65-85% of individual maximum heart rate for 3 session per week, 60 minute per session and 8 consecutive weeks. Differences between post test and pre test were evaluated using a Student's t-test for paired samples. A P-value < 0.05 was considered to be statistically significant.

**Results**: Student's t-test revealed a significant differences in levels of plasma total ghrelin (P=0.08) and a significant decrease also in plasma levels of leptin in the experimental group when compared to the control group.

**Conclusion**: Our study showed that regular and light aerobic exercise could decrease leptin levels and increase ghrelin concentration of healthy females. But further studies should be done to evaluate the effect of different modes, intensities and durations of exercise training on ghrelin and leptin and their association with post-exercise hunger, meal initiation and food intake.

**Keywords**: Ghrelin, Leptin, Aerobic exercise, Healthy women.
Association of passive-smoking with metabolic components among people with type2-diabetes

Ambreen Pardhan*1; Ali Khan Khuwaja2; Iqbal Azam2.
1 Dow University of Health Sciences, Karachi, Pakistan. email: ambreen.pardhan@yahoo.com. Contact: 92-343-2620889
2 Aga Khan University, Karachi, Pakistan

Abstract

Background: The co-existence of risk factors further worsens the health outcomes as compared to their individual effect. Diabetes mellitus and passive smoking are independent risk factors for poor metabolic outcomes. The metabolic outcomes can be further worsened if diabetes mellitus and passive smoking co-exist.

Aim & Objectives: The study aimed to assess the association of passive smoking exposure with individual metabolic components among people with diabetes.

Methods: A multi-centered cross-sectional study was conducted in four private and public sector out-patient clinics in Karachi, Pakistan. In all, 889 adults with type-2 diabetes were included in the study. Diabetes patients having exposure to second-hand smoke for at least 30 minutes a day for at least 5 days a week since last 6 months and more were defined passive smokers. Patients’ medical records were used to verify the values of metabolic components. Mean and standard deviation were calculated using descriptive analysis. Multinomial logistic regression was done to find the association of passive smoking with metabolic components.

Results: Overall mean body mass index, fasting blood glucose, fasting triglycerides, systolic blood pressure and diastolic blood pressure were 27.67±5.12, 203.09±79.95 mg/dl, 207.32±83.70 mg/dl, 134.54±18.02mmHg and 83.93±11.31mmHg respectively. Mean values of metabolic components were higher among patients exposed to passive smoking compared to non-exposed patients: body mass index (28.70 ±5.32 vs. 26.83±4.80), fasting blood glucose(219.20 ± 82.91 vs. 189.97 ± 75.03), fasting triglycerides(225.48 ± 88.58 vs. 192.53±76.47), systolic blood pressure (140.84±19.85 vs. 129.41±14.50) and diastolic blood pressure (86.62±11.44 vs. 81.74±10.73). In univariate analysis passive smoking was associated with all the metabolic components (p<0.001). Multivariable analysis showed passive smoking to be independently associated with triglycerides (AOR=1.005, 95% CI=1.003-1.007) and systolic blood pressure (AOR=1.041, 95% CI=1.030-1.007).

Study Limitations: The study has certain limitations to be noted. First, being a cross-sectional survey, we could not assess the temporal relationship. Second, all the study sites were located in city; hence these results should be generalized for rural patients with caution. Assessment of exposure to passive smoking was based on questionnaire which was not statistically validated.

Conclusion: Passive smoking associated with poor metabolic outcomes among diabetes patients is a major health problem. Diabetic-passive smokers need proper counseling and comprehensive care by the clinicians.

Keywords: Passive smoking, metabolic components, type2 diabetes
Proportion and Associated Factors of Psychoactive-Drug Use among Young-Male Adults

Ambreen Pardhan*1; Ali Khan Khuwaja2

1 Dow University of Health Sciences, Karachi, Pakistan. email: ambreen_pardhan@yahoo.com
Contact: 92-343-2620889,
2 Aga Khan University, Karachi, Pakistan

Abstract

Background: Worldwide, young people are considered susceptible to indiscriminate use of psychoactive drugs due to characteristic immaturity, curiosity, peer-pressure, self-identification and risk-taking attitude. However, in majority of the developing countries the gravity of the situation is further augmented by traumatizing events, over-the-counter availability and poor regulatory control system which set young people at even greater risk to psychoactive drug abuse.

Aims & Objectives: This is the first study from Pakistan that aimed to assess the use of psychoactive drugs among young-male adults, its related characteristics and the associated factors.

Methods: A cross-sectional study was conducted in six primary-care clinics of a tertiary-care hospital in Karachi. In all, 489 young-male adults (18-30 years) were recruited after obtaining consent. A pre-tested, pre-coded, structured questionnaire was used to extract information regarding the use of psychoactive drugs, its related characteristics and the associated factors. Descriptive analysis was performed and logistic regression was carried out to determine factors associated with the use of psychoactive drugs.

Results: The overall prevalence of psychoactive drug use was 12.3% whereas only 2.5% were diagnosed for any psychiatric illness. Among the psychoactive drug users 63.6% used anxiolytics and sedatives while 36.4% used anti-depressants. Around 46.7% of the psychoactive drug users were taking it for more than 6 months, 100% used it to relax and sleep while 40% used for hang on. In all 66.7% could afford it while for 60% psychoactive drugs were easily available. By univariate analysis, factors associated with the use of psychoactive drugs were: nuclear family-system (OR=2.97, 95% CI: 1.71-5.17), having chewing habit (OR=4.31, 95% CI: 2.33-7.98), being smoker (OR=3.61, 95% CI: 2.07-6.29), having family member(s) using psychoactive drugs (OR=4.00, 95% CI: 2.29-6.99) and education for <12 years (OR=2.05, 95% CI: 1.12-3.74).

Limitations: There are some limitations of this study which need to be considered before generalization. First, the investigation of the study merely relied on self-reporting by the study participants and counter-check of the prescription slips was not carried out. This could lead to under-reporting by the study participants due to the social stigma that is attached to psychological illness and its treatment. Secondly, the study was conducted in outpatient clinics of a private sector tertiary-care hospital located in Karachi; the largest city and economic hub of Pakistan; hence the results may not be applicable to the population at large.

Conclusion: Psychoactive drug use among young-male adults is a matter of concern and can be suppressed through interventional policies.

Keywords: Psychoactive drugs, young-male adults.
Prevalence of cardiovascular risk factors among patients undergoing elective coronary artery bypass surgery

Shumaila furnaz, Shazia perveen, Hasanat sharif

*shumaila.furnaz@aku.edu*

**Abstract**

**Background:** Globally 80% cardiovascular disease deaths occurred in low and middle income countries with almost equal proportion in both gender. Evidence shows that people in low and middle income countries are more exposed to cardiovascular risk factors while less exposed to preventivemeasures. It may lead to long course of management by either/both medical and surgical techniques including coronary artery bypass surgery, increasing the economic burden. In order to find avenue for prevention, we aimed to measure the prevalence of cardiovascular risk factors among patients undergoing elective CABG in Karachi, Pakistan.

**Methods and Results:** Information was collected through structured questionnaire and entered into Microsoft Access software. On the basis of research hypotheses, specific data chunk was extracted and analyzed in SPSS 19.

In this retrospective chart review, 2073 patient undergoing elective CABG between Jan 2006 to June 2011 were included. Mean age of the patients was 54.85±9.7 years. Out of all, 14.7% patients were females. Family history was present in 53%, 47.7% were smokers. Conventional risk factors of overweight was 47.10%, obese was 14.7%, diabetes was 47.7%, hypertension was 69.50%, dyslipidemia was 50.20%, renal failure was 9.2% and prior MI was 46.7%. Outcomes include operative mortality of 0.3% while 14.8%, renal failure, 7% arrhythmias, 2.3% reoperation and 3.1% prolonged ventilation as postoperative complications.

**Conclusion:** There is a high prevalence among patients undergoing elective CABG of coronary risk factors including dyslipidemia, hypertension, diabetes and smoking.
Estrogen and Progesterone receptor expression in vulvar Condyloma acuminata

Taravat Fakheri1 - Mandana Afsharian2 - Ehsan Malekianzadeh3* - Sedigheh Khazaei4 - Babak Izadi5 - Malek Kanani6

1 Assistant professor of Obs & Gyn department, Maternity Research Center of Kermanshah University of Medical Sciences, Kermanshah, Iran, Email: tfakheri@kums.ac.ir
2 Associated professor of infectious disease-Liver Diseases and Hepatitis Research Center, Imam Reza Hospital, Kermanshah University of Medical Sciences, Kermanshah, Iran. Email: Mandana_Afsharian@yahoo.com
3 Molecular Pathology Research Center, Imam Reza University Hospital, Kermanshah University of Medical Sciences, Kermanshah, Iran Email: E.malekianzadeh@yahoo.com, Tel: +989191268661
4 Molecular Pathology Research Center, Imam Reza University Hospital, Kermanshah University of Medical Sciences, Kermanshah, Iran. Email: skhazaei2003@yahoo.com
5 Assistant professor of pathology, Molecular Pathology Research Center, Imam Reza University Hospital, Kermanshah University of Medical Sciences, Kermanshah, Iran, Email: BIzadi@Hotmail.com
6 Pathologist, Ahvaz Jundishapur university of Medical Sciences. Email: Malek_Kan@yahoo.com

Abstract

Background & objectives: Human papilloma virus is one of the most common sexually transmitted diseases which have different clinical appearances such as Condyloma acuminate (CA). Its prevalence is more common in women with preponderance in pregnancy which can be attributed to especial hormones such as estrogen and progesterone. The aim of this study was to evaluate the estrogen and progesterone receptor expression in CA lesions of vulva.

Material and Methods: Patients referred to outpatient clinic of Emam Reza hospital suspected of having CA lesions from September 2009- March 2011 were evaluated. Biopsy specimens from CA lesions were taken from 39 patient. Tissue samples was collected and after pathologist confirmation, immunostaining was done on cryostat sections by the peroxidase –antiperoxidase method to measure progesterone and estrogen receptors.

Results: From 37 suspected specimens 25 samples which were confirmed by pathologist To be condyloma acuminate evaluated by IHC; PR was positive in 77.8% of all contaminated samples and 15.4% in normal tissue (p=.000). ER was positive in 33.3% and 25% in contaminated and normal samples respectively.

Conclusion: According to the results of this study there is a significant difference in PR receptor expression in CA of vulva.

Keywords: Condyloma acuminate, estrogen receptor, progesterone receptor, Immunohistochemistry, Vulva
Comparison of the Dietary Factors between Diabetes and Non-Diabetes in Employee Population

Shahab Rezaeian\textsuperscript{1*}, Jamal Ahmadzadeh\textsuperscript{1}
\textsuperscript{1} Department of Epidemiology & Biostatistics, School of Public Health, Hamadan University of Medical Sciences, Hamadan, Iran
* Corresponding author; E-mail: shahab_fs@yahoo.com

Abstract

Objective: The purpose of this study was to obtain baseline data on dietary management of employee diabetes. We estimated the prevalence of self-reported diabetes and foods habits.

Methods: A cross-sectional study was conducted in 2011 using questionnaires distribution in Sarvabad city, located in the west of Iran. The subjects included 455 employees aged 22-54. The statistical analyses were performed using by STATA 11 package program and significant difference was evaluated by t-test and X2-test. A P-value < 0.05 was considered to be statistically significant.

Results: Seventy-nine percent of the participants responded to the baseline questionnaire; of whom 25% were female with mean age of 34.3 years [95% CI: 33.6, 35.0]. 78.5% of the respondents were married. The prevalence rate of diabetes in this employee population was 5.9% (male 3.7% vs. female 12.5%, P < 0.001).

Significant differences were found in the mean consumption of dairy products (1 vs. 0.54, respectively, P < 0.001), fruits (1 vs. 0.8, respectively, P = 0.008) and cereal (1 vs. 0.65, respectively, P < 0.001) in diabetes compared to the non-diabetes. The frequency of consumption of liquid oil and fast foods in non-diabetes and diabetes was 0.90, 0.52 (P < 0.001) and 0.55, 0.37(P = 0.03), respectively.

Fast foods and liquid oil consumption in non–diabetes were significantly higher than diabetes. No differences were found in vegetable and salt consumption. Frequency of food consumption by diabetes and non-diabetes groups is summarized as follows.

Conclusion: Overall results show that diabetes prevalence among staff is high, therefore, nutrient intake of the staff needs to be improved and a well-balanced diet should be emphasized.

Keywords: Diabetes, Employee, Dietary Factors, Iran
Hormonal status at workers on long-term sea fishery in high latitudes
Yvenaly Yuriev, Valery Lupachev, Roman Koubassov
Russia, Arkhangelsk
Northern state medical university, Yuvenaly Yuriev, e-mail:yuriev1@yandex.ru

Abstract
At workers on 5-month sea fishery in high latitudes some serum hormones were decreased in all period (T4, testosterone, LH) but another – increased (TSH). A means of T3, cortisol, insulin, FSH, estradiol and progesterone changes insignificantly

Keywords: sea fishery, serum hormones, high latitudes, stress, adaptation.
Abstract

**Background Aim**: Early diagnose and management of GDM is very important, it can improve the maternal, neonatal outcome. There is some evidence that high maternal Hemoglobin concentration can be associated with GDM.

**Aim & Objective**: Our purpose in this study is to evaluate the relation between Hemoglobin concentration with GDM.

**Methods**: In this Cross-sectional study, 100 women (50 GDM and 50 non-GDM) were selected randomly. Information such as age, weight, BMI, gravity, parity, Hb, and FBS at the first visit, GCT at 24-28 weeks, and neonatal weight had been registered.

**Results**: There was a meaningful difference between two groups from the point of parity, job, and education. But age, weight, gravity, BMI had meaningful differences. The mean of neonatal weight was not different in both groups.

**Conclusions**: According to our study, there is no significant relation between mothers Hemoglobin concentration during the first trimester and GDM.

**Keywords**: Maternal Hemoglobin, pregnancy outcome, gestational diabetes.
Characteristics of disadaptive conditions in people of extreme professions

Margarita Yu. Yurieva, Yuriy E. Barachevskiy
Russia, Arkhangelsk, Northern state medical university
Margarita Yu. Yurieva, e-mail: m_yurieva@mail.ru

Abstract
Functional possibilities of the organism, biological age and disadaptive conditions are studied. There were investigated 15 lifeguards, including divers, of Archangelsk using anthropometric and physiological characteristics. Disadaptive conditions and biological age were determined according to computer program “Screen med” and some others methods of biological age testing. Correlation analysis determined relationship between health level and negative factors of profession and lifestyle. Thus, improvement of lifeguards’ health level, exclusion of possible harmful factors is necessary for both individual health and increase of professional efficiency.

Keywords: lifeguards, disadaptation, psycho-emotional stress, biological age, physical health level
Incidence rate of hospital acquired infections in cardiac, open heart ICU, vascular and open heart surgery wards of Imam Reza and Quaem hospitals, Mashhad, 2010-11

Farzaneh Norouzi1,2,3, Mahboubeh Naderinasab4, Kiarash Ghazvini4,5 Najmeh Seifi 1,2, Emran Askari1,2, Irandokht Mostafavi5, Mohsen Rezaeipour1,2, Mitra Laal Dehghani5

1 Mashhad Medical Microbiology Research Group, Mashhad University of Medical Sciences
2 Member of Mashhad Student Research Committee, Mashhad University of Medical Sciences
3 Member of Mashhad vascular and endovascular Surgery research center
4 Department of Microbiology and Virology, Mashhad University of Medical Sciences
5 Infection Control Committee, Imam Reza/Quaem Hospital, Mashhad

Seifin881@mums.ac.ir

Medical faculty, Mashhad university of medical sciences, Mashhad, Iran

Abstract

Background: Hospital-acquired infections (HAIs) are considered as a serious problem in cardiovascular wards worldwide. HAIs result in excess length of stay, mortality and healthcare costs. In developing countries, lack of staff and resources are considered as a major problem for not well-established prevalence of HAIs.

Aim and Objectives: The purpose of this study is to report the incidence of HAIs in cardiac, open heart ICU, vascular and open heart surgery wards of Imam Reza and Quaem Hospitals of Mashhad during 2010-11.

Materials and Methods: In this descriptive cross-sectional study, all patients hospitalized from 21 March 2010 to 15 March 2011 in cardiovascular units and open heart ICU of Imam Reza and Quaem hospitals were included. Data of age, sex and type of microbial infections were collected from the records of patients with nosocomial infections and were analyzed by SPSS 16.0.

Results: Of 3,298 patients admitted in Qaem hospital, the incidence rate of HAIs in open heart surgery ward was 19 cases per 1,000 patient-days. No infection was detected in cardiac unit and open heart ICU wards. The highest incidence of bacterial isolates per 1,000 patient-days was for enterococci (3) and coagulase-negative Staphylococci (2). Among 7,549 patients admitted in the mentioned wards of Imam Reza hospital, the incidence rate of HAIs was 6.65 cases per 1,000 patient-days. The highest incidence of bacterial isolates per 1,000 patient-days was Klebsiella spp. (1.59), coagulase-negative Staphylococci and Acinetobacter strains (0.39) and also the incidence rate of death was 32% among 50 patients with HIA. The incidence of HAI was significantly correlated with average of hospitalization period (r=1.00) in both hospitals. Surgery and venous catheter were the invasive procedures used in all patients with HAI in both hospitals.

Conclusion: Our study shows lower incidence of HAIs in Imam Reza hospital. Klebsiella spp. are the main cause of nosocomial infections in mentioned wards which is consistent with some previous studies. Improved infection control techniques and sufficient number of nurses may reduce the frequency of HAIs in our wards.

Keywords: Hospital-acquired Infections, Klebsiella, Coagulase-negative Staphylococci, Acinetobacter, cardiovascular surgery
Crosstalk between PPARγ and ERK1/2 MAPK dependant signaling pathway mediates hepatic regulation of Δ6- and Δ9-desaturase genes

Negar Saliani *, Masoud Darabi2, Bahman Yousefi2, Tahereh Naji sied hosseinzadeh1, Mehrdad Hashemi3, Behzad Baradaran4, Mahmoud Shekari3

1 Department of Biology, Pharmaceutical Sciences Branch, Islamic Azad University, Tehran, Iran
2 Department of Biochemistry and Clinical Laboratories, School of Medicine, Tabriz University of Medical Sciences, Tabriz, Iran,
3 Department of Genetics, Tehran Medical Branch, Islamic Azad University, Tehran, Iran
4 Department of Immunology, School of Medicine, Tabriz University of Medical Sciences, Tabriz, Iran
5 Department of Genetics, School of Medicine, Tabriz University of Medical Sciences, Tabriz, Iran
Corresponding Author: Masoud Darabi, Department of Biochemistry and Clinical Laboratories, School of Medicine, Tabriz University of Medical Sciences, Tabriz, Iran. Tel/fax: +98 (411) 336 46 66. Email: darabim@tbzmed.ac.ir

Abstract

Introduction: Acyl-coenzyme A desaturases play a pivotal role in multiple biological functions such as cell membrane fluidity, signal transduction, differentiation, brain development, cognition and inflammatory responses. Thereby, any variation of desaturases levels contributes to verity of diseases including cancers, diabetes, obesity and cardiovascular disorders.

Aim & Objectives: The aim of the present study was to evaluate the role of PPARγ and ERK signaling pathway and their crosstalk in Δ6- and Δ9-desaturase gene expression regulation.

Methods/Study Design: HepG2 cells in RPMI-1640 medium culture were treated with ERK1/2 pathway inhibitor, PD98059 and PPARγ agonist, Pioglitazone. Total RNA was isolated and reverse transcribed from treated cells. Changes in gene expression for Δ6- and Δ9-desaturase were then determined using RT-PCR.

Results/Findings: The expression of both Δ6- (P=0.03) and Δ9- (P=0.01) desaturase increased following PD98059 treatment, with a higher impact on Δ9-desaturase. Although pioglitazone increased the level of Δ6-desaturase (P=0.006), there were no significant changes in Δ9-desaturase (P=0.47). Incubation of pioglitazone together with PD-98059 also significantly increased the expression of both Δ6- (P=0.02) and Δ9-desaturase (P=0.04).

Conclusion: PPARγ and MAPK signaling pathway affect on the Δ6- and Δ9-desaturase genes expression of hepatic HepG2 cells. The effect of MAPK signaling pathway Δ9-desaturase genes expression on Δ6-desaturase was higher than on Δ9-desaturase. Furthermore, a possible cross-talk between PPARγ and MAPK signaling pathway may differentially affects on Δ6- and Δ9-desaturase genes expression.

Key words: PD-98059, pioglitazone, Δ6-desaturase, Δ9-desaturase, MAPK signaling, PPARγ
Study on bacteria and their antibiotic resistance associated with white coats of two General Hospitals in Mashhad

Zahra Moravvej1,2, Najmeh Seifi*,1,2, Mahboubeh Naderinasab3, Sadra Habibi rad1,2, Soroosh Dehghani dashtabi1,2, Yasaman Fakhar1,2, Shahram Rahimi1,2
1 Mashhad Medical Microbiology Group, Mashhad University of Medical Sciences
2 Member of Mashhad Student Research Committee, Mashhad University of Medical Sciences
3 Microbiology Lab., Central Laboratory, Imam Reza Hospital, Mashhad
Seifin881@mums.ac.ir
Medical faculty, Mashhad university of medical sciences, Mashhad, Iran

Abstract

Introduction and Objectives: Hospital acquired infections are one of the principle causes of diseases and mortality. Reports have indicated that healthcare worker’s white coats are dominant source of nosocomial infection transmission. The present study investigated the bacterial contamination and antibiotic resistance of healthcare worker’s white coats in Imam Reza and Ghaem Hospitals.

Materials and Methods: Samples were taken from the cuffs, pocket mouths and abdominal region of white coats in different wards. Following culture in standard media, the bacteria were identified and their antibiotic resistance was evaluated according to Kirby–Bauer method.

Results: 300 healthcare workers participated in the study of which 57, 23 and 19% were nurses, medical students and physicians, respectively. All white coats were contaminated and bacterial load was approximately similar in samplings of three regions. More than 10 species were isolated. Lower rates of bacterial contamination were observed on white coats laundered more recently and those of one-shift-personnel. Gram-positive Bacillus (36.9%) was the most common isolate followed by coagulase-positive Staphylococcus (27.2%), coagulase-negative Staphylococcus (25.3%) and Streptococcus (2.5%). Staphylococcus isolates were more resistant to penicillin, ceftazidime, cefixime than other antibiotics. Gentamicin and vancomycin proved the most effective antibiotics.

Conclusion: Considering the transmission of micro-organisms via healthcare worker’s white coats, suitable handling of white coats and biosafety protocols are advised to minimize cross-contamination and improve patient safety.

Keywords: infections, microbiology, bacterial contamination
Role of the ABO and Rh blood group phenotypes on infections due to *Staphylococcus aureus*

Vahide Zakeri¹, ², Njmeh Seifi *¹, ², Emran Askari¹, ², Arash Arianpoor¹, ², Mahboubeh Naderinasab³

¹ Mashhad Medical Microbiology Research Group, Mashhad University of Medical Sciences
² Student Research Committee, Mashhad University of Medical Sciences
³ Microbiology Lab., Central Laboratory, Imam Reza Hospital, Mashhad

Seifin881@mums.ac.ir

Medical faculty, Mashhad university of medical sciences, Mashhad, Iran

Abstract

**Introduction and Objectives:** *Staphylococcus aureus* is a major cause of nosocomial infections in the world. This well-equipped bacterium can cause infection nearly in all parts of the body. Because of its rapid distribution and fast proliferation, it can cause different kinds of diseases ranging from mild skin infections to endocarditis and bacteremia. The purpose of this study is to analyze the distribution of ABO and Rh groups in patients with *Staphylococcus aureus* bacteremia (SAB).

**Methods:** In this cross-sectional inquiry we studied 313 records of patients who were hospitalized in Imam Reza Hospital of Mashhad during the past year and had infection with *S. aureus*. The blood group of patients with SAB was verified from the blood bank. We used Hospital Information System for finding our information.

**Results:** Out of 313 records, 157 cases had SAB. Out of these, blood group data was available only for 76 cases (41 men and 35 women). Blood group of 31.6% (n=24) of cases were recognized as A, 21.1% (n=16) as B, 10.5% (n=8) as AB and 36.8% (n=28) as O. 73(96.1%) cases were Rh⁺ and 3 (3.9%) cases were Rh⁻.

**Conclusion:** Contrary to other studies which suggested that the blood group antigens (terminal carbohydrates) represent kind of receptors recognized by *S. aureus*, our results show that patients with O phenotype may be slightly more prone to SAB than those of other types. In addition we found that Rh⁻ phenotype is apparently more sensible to this infection.

**Keywords:** *Staphylococcus aureus*, blood group, SAB
Abstract

Background: It’s commonly said “When you break your back you actually break your family”. In the present age spinal cord injuries are very common. Nearly 250,000 Americans are spinal cord injured which includes 52% paraplegics and 47% quadriplegics. Most common causes include road traffic accidents, violence, falls, and sports related etc.

Objectives: To determine the Causes of spinal cord injuries, Levels of spinal cord injuries, Age and Gender distribution, Mean age of patients, Patient satisfaction among patients admitted in the paraplegic center Peshawar

Method: Cross sectional (record based) study was carried out in Paraplegic Centre Peshawar. Sample size was 70. Convenient sampling was applied. Duration of study was from Nov 2010-May 2011. Bed side records of patients and questionnaire based interviews were done and analyzed in Microsoft Excel.

Results: We collected the data from the bed side records of the patients (handicapped) in order to determine the type cause and level of spinal cord injuries both for male and female patients. Out of 81 patients 65 were male and 16 were female. The facts were F.F.H (fall from height) (33%) contributed highest in the list of the causes followed by F.A.I (fire arm injury) (27%) AND R.T.A (Road Traffic Accidents) (24%). Cervical injuries were (15%), thoracic injuries were (78%) and lumbar injuries were (7%). Mean age of patients was 32±8. Among 81 patients 70 questionnaire based (PSQ 3 modified plus translated into Pashto) interviews from the patients were done. We analyzed and came up to the opinion that patients admitted they were quite satisfied with the medical treatment provided to them.

Conclusion: We concluded that patients were quite satisfied for the medical care including the facilities, adequate time to the patients, and proper attention by the HEAD, physiotherapists, and paramedic staff. Spinal cord injuries are very high and need proper awareness, and preventive measures to reduce the incidence and prevalence of spinal cord injuries.

Keywords: Traumatic Spinal cord injuries, Causes & levels, Patient satisfaction, Paraplegic Centre Peshawar.
Sense of coherence and its connections with BMI and weight-related beliefs and attitudes

Corina-Aurelia Zugravu
University of Medicine and Pharmacy “Carol Davila”, Bucharest, str. Ion Berindei 11, bl.1-2, sc. B, ap 58, Romania; Mail: dr_corinazugravu@yahoo.com; +40723594648

Abstract:

Background: Several previous researches have tried to connect the sense of coherence (SOC), as stress coping resources measurement, with the nutritional status and food choices of a person. They gave mixed results regarding the relation SOC/BMI, but showed the real potential of SOC in the filed of healthy nutrition promotion.

Aim and Objectives: The aim of this paper was to evaluate the sense of coherence (SOC) score in Romania and to investigate its eventual connections with the weight status evaluated by the body mass index, and other related attitudes and believes.

Methods: a cross sectional study investigating by means of correlation tests and regression the links of the sense of coherence score with demographical characteristics, BMI, weight variation, weight perception, self evaluated health and other items related with weight and diet control. The participants were a random selected sample of 970 Romanians.

Results: The SOC score is correlated significantly with gender, socio-economical status, self perceived health, the preoccupation for having a normal weight, the perception of the relation health-normal weight and with the perceived difficulty in maintaining a constant weight. The regression shows that the body mass index is a positive determinant of the SOC score (B =0.051).

Conclusions: The SOC score has close relations with healthy conceptions regarding body weight and healthy eating, but also shows a surprising connection with BMI, higher weights leading to small SOC rises. SOC confirms its health promotion utility in the nutrition field.

Keywords: sense of coherence, body mass index, health promotion, eastern europe
Occupational Exposure Determination Silica Dust in an Iron-Stone Ore and

Abdollah Gholami\textsuperscript{1}, Mohammad Javad Fani\textsuperscript{1}, Nasrin Sadeghi\textsuperscript{1*}

\textsuperscript{1} Faculty of Health, Gonabad University of Medical Sciences, Gonabad, IR Iran.

* Corresponding Author: Faculty of Health, Gonabad University of Medical Sciences, Gonabad, IR Iran.

Email: na.sadeghi@gmail.com, Tel: +98-533-7225027, Fax: +98-533-7223814

Abstract

Introduction: Dust is one of the significant factors which cause occupational respiratory diseases among workers.

Objective: The main purpose of this study was to determine the dust concentration, its silica percentage and comparison with standard.

Method: This cross-sectional study was carried out at one of iron-stone ores in Southern Khorasan province. Air dust sampling was done using the NIOSH 7500 method and personal sampling pump with the cyclone in 52 stations in different situations of the mine. Total and respirable dust was determined by gravimetrical method. 5 bulk samples were taken for the determination of silica. Bulk samples determined with X-ray method and compared with standard.

Result: Highest respirable dust concentration was measured in the extraction section (10.6 mg/m\textsuperscript{3}) and the lowest in the administration (4.02 mg/m\textsuperscript{3}). Also, highest total dust concentration was measured in the crusher section (94.3 mg/m\textsuperscript{3}) and the lowest in the administration (16.6 mg/m\textsuperscript{3}). Average percentage of silica in the mine was 15.5%. Either measured respirable and total dust concentration was several times higher than standard concentration.

Conclusion: Percentage of total and respirable dust in all parts of the mine according to the silica percentage was higher than the standard limit. Therefore, it’s required to reduce or eliminate workers exposure to silica by using engineering controls, administrative and personal protective measures.

Keywords: Iron-Stone Ore, Total and Respirable Dust, Silica
What factors affect the state of dentition in children aged 36-48 months old?

Joanna Baginska *, Ewa Rodakowska 1

1Department of Conservative Dentistry, Medical University of Bialystok, Poland

Correspondence to: Joanna Baginska, Department of Conservative Dentistry, ul. M. Sklodowskiej-Curie 24 A, 15-276 Bialystok, Poland. Phone 48 85 748 57 60. e-mail: jbaginska@wp.pl

Abstract

Children under 3 years of age are especially prone to tooth decay, which is associated with morphological immaturity of teeth shortly after their eruption and both less mineralized enamel and thinner dentin in deciduous teeth. Dental caries risk factors include different than in adults diet, especially bottle feeding during sleep, and the late start of oral hygiene.

Aim: The aim of this study was to analyze the influence of risk factors of dental caries in the period from the birth to completed 2 years of age on dental health of children aged 36-48 months living in the north-eastern part of Poland.

Material and methods: The study group included 255 children aged 36-48 months, an average of 43 months, from randomly selected kindergartens in north-eastern Poland. Caries intensity of deciduous teeth was assessed with dmf index and on the basis of that index the population was divided into 3 groups: caries free (dmf = 0), with low caries intensity (dmf from 1 to 3) and severe caries (dmf above 3). Based on a survey of mothers we received additional information about feeding practice and hygiene habits in children from birth to 2 years of age. Obtained data were statistically analyzed using the chi-square test with the statistical significance level of p<0.05.

Results: The mean value of dmf for the entire population was 4.05 ± 3.83, including the component d 3.76 ± 3.79, and the component f 0.29 ± 0.85. High correlation was found (p<0.0001) between caries prevalence and age of the child, whose parents started their oral hygiene. Going to sleep with the bottle (p<0.001) influenced the severity of dental caries, but not the duration of breastfeeding.

Conclusions: Dental health of children aged 36 - 48 months from the north-eastern Polish was unsatisfactory. Reasons for the above situation were in not proper eating habits and poor hygiene in early childhood. Raising public awareness campaigns is required to inform prospective parents about the ways to prevent dental caries in their offspring. Education how to take care of oral hygiene of newborns and infants should be incorporated into the responsibilities of paediatricians and midwives.

Keywords: Early childhood caries, risk factors, children
An assessment of the value of post appendicectomy colonoscopy in those over the age of 50 years

R Fernandes, M Dunstan

Corresponding author: R Fernandes. Dept of Surgery, Queen Elizabeth Queen Mother Hospital Margate, rfernandes@doctors.org.uk

Abstract

Objectives: Appendicitis is a common surgical condition, however is rare in extremes of age. The presentation of appendicitis in the elderly population could represent caecal pathology as a precipitant. Sinha et al (2004) recommend post appendicectomy colonoscopy in those aged 50 or over to exclude caecal pathology. The rationale for this age is that colonic malignancy is more prevalent above this threshold whereas appendicitis is less much less common amongst this age group. Our aim was to explore the incidence of how many colonoscopies were requested in this subgroup in our district general hospital and the prevalence of pathology.

Background Data

Several studies have reported a link between right sided colonic malignancy and appendicitis. The incidence of acute appendicitis as the presenting symptom of caecal and ascending colon cancer has been reported to be between 3 and 15%.

Methods: A 5 year retrospective study was conducted involving data for all cases of appendicitis in those aged 50 years or over in our district general hospital treated by an appendicectomy. The study period was August 2006-August 2011. Endoscopy software was used to ascertain whether a colonoscopy was requested post procedure and histological results were also correlated.

Results: 207 patients aged 50 years or over were taken to theatre with a presumed diagnosis of appendicitis during our study period. 32 (15%) had a colonoscopy performed after the procedure. 154 (74%) had proven histological appendicitis. 15 (7%) had histological evidence of malignancy or dysplasia on specimens taken at the time of the operation. 16 (7%) had histological benign pathology. The remaining had a normal appendix and no other pathology.

Conclusions: Our results show that a high index of suspicion is needed when appendicitis is diagnosed in this patient subgroup and colonoscopy is warranted thereafter.

Keywords: appendicitis, surgery, colon cancer
Laparoscopic Resection of Jejunal Diverticulae: A Case Report and Review of the Literature

L Toquero MBChB MRCS *1, Mr R Fernandes CT2 2, N Kyi, FY2 3, F Sagias 4, S Doughan 5

1 Specialist Registrar, Department of General Surgery, Queen Elizabeth Hospital, Woolwich
2 Department of General Surgery, Queen Elizabeth Queen Mother Hospital, Margate.
3 Department of General Surgery, Queen Elizabeth Hospital, Woolwich.
4 Specialist Registrar, Queen Elizabeth Queen Mother Hospital, Margate.
5 Consultant Colorectal Surgeon, Queen Elizabeth Queen Mother Hospital, Margate.

Corresponding Author: Mr. L. Toquero. Contact Details: 00447956684005, ltoquero@hotmail.com

Abstract

We present the first documented case of a laparoscopically resected jejunal diverticulum. A 53 year old gentleman initially presented with right sided abdominal pain along with raised inflammatory markers. A Computed Tomography revealed multiple diverticulae evident in the proximal jejunum, one of which was inflamed. The patient was managed conservatively, and subsequently underwent an elective laparoscopic-assisted resection of jejunal diverticulum with no complications.

Keywords: jejunal diverticulum, tomography, surgery
Evaluation of conventional staining techniques applied for screening of breast cancer among women with breast palpable lumps

Fathia Eltayeb Moh Badawi
Lecturer in Alzaem Alazhari University, Collage of medical laboratory sciences, Sudan
Email: Fathia111@hotmail.com, fathiabadawi@yahoo.com. Tel : 0912291252 -- Tel: 0126916830

Abstract
This is a descriptive study conducting in Khartoum state during the period from Augusts 2001 to July 2003< to assess the role of Fine Needle Aspiration Cytology (FNAC) in diagnosis and screening of breast cancer.
Fifty women with breast palpable lumps were investigated in this study. All these objective were 18 years of age or older. FNA materials as well as biopsies were taken from each patient. Three smears were made from each aspirated material. The smears were stained using Papanicolaou-staining technique, Giemsa-staining technique and May Grundwald-staining techniques
Cytological smears were evaluated using two investigation systems (tradition and grading). Only 5 (10%) smears were found to be positive by traditional FNAC compared to 21 (42%) positive by histopathology. Nevertheless, 4 of 5 positive by FNAC were correspondingly positive by histopathology. Concerning the grading system, atypia was ascertained in 23 (46%) cases among them 16 (32%) were found to be positive by histopathology. The staining achieved by Pap’s stain was found to be the best, which provided a fair staining of nuclei and cytoplasm.

Keywords: breast cancer, Sudan, of Fine Needle Aspiration Cytology
Investigating the Perception of Health Care System in Japan by International Visitors

Mariko Nishikawa, Kiyoka Akutagawa
Nursing Department, Hiroshima International University, Japan
Contact E-mail: mn378@nyu.edu. Contact phone: (81) 823-73-8375, Address: 5-1-1, Hirokoshingai, Kure city, Hiroshima, Japan 737-0112

Abstract

Background: Over nine million short and long term international visitors came to Japan in 2008 as the result of a highly successful tourist promotion campaign. The government of Japan hopes to attract 25 million foreign tourists from the present until the year of 2020. Another aspect of this is the potentially greater demand on health facilities by international workers and visitors to the country. At present there is very little knowledge among international visitors of the health system in Japan.

Aims and Objectives: Our study investigated the perception of the health-care system and medical facilities in the country among foreign tourists and workers. The objective of this study is to provide clear guidelines for accessing and providing healthcare in Japan, to both international visitors as well as health-care providers in Japan.

Methodology: Respondents were requested to fill a two-page questionnaire in one of six languages; namely, English, French, Spanish, German, Chinese or Korean. The questions to international visitors dealt with their satisfaction, accessibility and trust of the Japanese health-care system and facilities. Data were obtained from approximately, 1,343 foreign tourists who visit Japan. Most of the data were collected over a six-month period from 2009 to 2010 at Tokyo Narita International Airport, Hiroshima International Airport and the main Tourist Information Center in Hiroshima. We analyzed the data using language-analysis software, and statistical software.

Results: Results of the survey revealed that although the majority of international visitors had confidence in the modern Japanese health care facilities, they were most likely to be concerned about language, the cost of medical expenses, and informed consent in Japan.

Conclusions: Most importantly, the results indicated that in order to provide comprehensive care to international visitors, communication in the health system was most important.

Keywords: Health care system, International visitors, Japan
Trend of HIV Infection Nigeria: Secondary Analysis of Data

Ijarotimi Ibidolapo T.¹ and Ijarotimi Olusegun²
¹ Department of Community Medicine, University College Hospital, Ibadan. Oyo state. Nigeria
² Department of Internal Medicine, Obafemi Awolowo Teaching Hospital, Ile-Ife, Osun State Nigeria.

Corresponding Author: Ijarotimi Ibidolapo T.(MB;BS)Department of Community Medicine, University College Hospital, Ibadan. Oyo state. Nigeria. E mail: ifedoll@yahoo.com

Abstract

Backgrounds: HIV/ AIDS continue to be one of the main causes of death worldwide and particularly in developing countries like Nigeria despite different prevention and control measures put in place. Consistent correct use of condoms still remains the most viable and affordable prevention strategy. However condoms use remains low in Nigeria.

Objectives: The objective of this study was to assess the prevalence of HIV in Nigeria, its trend over the past 20 years and the prevalence of condom use.

Methods: Retrospective data of Nigeria from year 1990 to 2009 from the World Health Organization data repository was assessed and secondarily analyzed.

Results: Since the onset of monitoring HIV/AIDS prevalence in Nigeria in 1990, the prevalence of HIV/AIDS among adults aged 15-49 increased from 1.3% to plateau at 4.0% in1995 before starting to drop in 2000 to 3.6 in 2006 and remained so till 2009. Prevalence of condom use by adults (15-49) during higher risk sex act in 2008 was 23% and 33% in females and males respectively.

Limitations: The study was limited by lack of prevalence data for condom use over the past years except for 2008.

Conclusion: Despite the large amount of money and effort expended on HIV/AIDS control and prevention in Nigeria, including creating awareness of condom use, HIV/AIDS prevalence continues to rise and the prevalence of condom use among adults still remain dismally low.

Keywords: HIV Aids, prevention, condom use, Nigeria
Abstract

Background: People in small specialized residential care facilities (i.e., less than 25 beds) tend to be nutritionally vulnerable and a need exists for a simplified screening tool to identify those requiring dietitian services.

Aim/Objectives: The purpose of this study was to develop and test a simple nutrition screening tool for use in specialized residential care (NST-SRC). The NST-SRC is intended for individuals 2 years of age and older, with medical, mental health, developmental or substance use issues.

Methods/Study Design: The NST-SRC tool was developed based on structured literature reviews, standards of practice, and facility licensing guidelines. Twelve dietitians with experience in working with individuals in specialized residential care facilities pre-tested the NST-SRC and assessed validity. The NST-SRC’s included three areas of focus: adequacy of food intake, anthropometrics, and nutrition-related concerns (e.g., medical conditions, medications, lab values). The NST-SRC was tested with a purposive sample (i.e., 6 specialized care facilities with 40 persons in care) to provide for diversity of use with different staff persons and persons in care. Ten care providers, including facility managers (n=2), nurses (n=4), and support workers (n=4), independently screened persons in their care using the NST-SRC. Each participant’s nutrition status for each of the areas of focus was assessed independently by an expert panel of 3 dietitians. Comparison of the consensus opinion of dietitians with care providers who did the screening provided an indication of validity. Reliability was assessed using indices of agreement.

Results/Findings: The NST-SRC was completed on 20 people with developmental disabilities, 7 with mental health issues, 10 elderly people and 3 children. There was good agreement between the majority opinions of the dietitians and care providers that completed the forms for nutrition adequacy (r=0.69), moderate agreement in assessment of nutrition-related concerns (r=0.52), but only fair agreement in the assessment of anthropometrics (r=0.21), particularly for children.

Study Limitations: The small sample that included few children (due to a limited number of facilities providing care to this age group) affects the generalizability of the results. Intra-rater reliability and inter-rater reliability were not assessed.

Conclusion: These findings suggest that the NST-SRC may be helpful in the identification of persons in specialized care facilities requiring dietitian services, particularly in the areas of nutrition adequacy and nutrition-related problems. Further work is needed in the area of assessment of anthropometrics, as well as intra-rater and inter-rater reliability.

Keywords: Nutrition, elderly, mental health, developmental disabilities, residential care
Non-prescription practices of abusable drugs in Lahore, Pakistan

Muzammal Hussain¹, Aqeel Javeed ²

¹M-Phil student, Department of Pharmacology and Toxicology, University of Veterinary and Animal Sciences, Lahore, Pakistan
²Assistant Professor, Department of Pharmacology and Toxicology, University of Veterinary and Animal Sciences, Lahore, Pakistan

Corresponding Author: Department of Pharmacology & Toxicology, University of Veterinary and Animal Sciences, Abdul Qadir Jilani Road, Lahore, 54600, Pakistan. Tel.: +92 42 9211449
E-mail addresses: aqeel.javeed@uvas.edu.pk (A.Javeed). Muzammal_200@yahoo.com (M.Hussain)

Abstract

Background: The inappropriate or unsupervised use of many psychiatric medications with sedative, anxiolytic, analgesic, or stimulant properties have the potential to be misused. This inappropriate use of such medications may lead to a number of serious adverse outcomes.

Aims and Objectives: To study the prevalence and attitude toward non-prescription use, and dependence on abusable drugs in the urban population
To assess the feasibility of performing pharmacoepidemiologic research studies in community pharmacies of Pakistan

Methods: A cross-sectional community pharmacy-based study was conducted during a 2-month period (from February 2011 to March 2011). The patients/people, who visited our solicited pharmacies without prescription to purchase sedative/hypnotics, opioid analgesics, prescription steroids, and stimulant drugs, were asked to participate voluntarily. Community pharmacists were mandatorily asked to use a face-to-face model structured questionnaire that was designed to determine the attitude toward, and patterns of, drug use while the dependence was interpreted by adapting some questions from Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV).

Results: A total of 315 people (84.76% males, 15.23% females), visiting 8 of our solicited community pharmacies, participated in the study. The prevalence of non-prescription users of benzodiazepines was at the top (69.52%) followed by opioid analgesics (15.2%) and prescription steroids (12.06%). About 57.46% of the respondents had the prior experience of prescription use at some point in their life, and only 26% had ever received unsolicited advice regarding long-term addiction potential/prescription demand for these drugs. In the benzodiazepine group, 18.26% met the criteria of dependence followed by 8.33% in opioids and 7.89% in prescription steroids. 49.2% of the patients showed the future intentions to keep on using drugs without consulting the medical practitioner. Illness not consider serious for consultation (23.80%), and lack of time (21.26%) were the main reasons for not consulting the doctor.

Conclusion: This pilot study showed high use of abusable drugs without prescription in Lahore, Pakistan. Public-level educational programs need to be organized in order to alert the population of the untoward side effects, as well as the dependence/addiction potential of such drugs. Secondly, easy availability of these drugs and access to re-fills without prescription demands serious consideration from health policy makers. On the basis of patient/customer participation rates obtained in this study, community pharmacy-based pharmacoepidemiologic studies can be feasible to conduct in Pakistan. Therefore, greater number of pharmacies has now been involved to discover the extent of the problem concerning misuse, non-medical use, abuse or dependence in the context of non-prescription practices.

Keywords: non-prescription use, abusable drugs, dependence, community pharmacy.
Self-medication with psychotropic drugs by senior medical students to cope exam stress

Muzammal Hussain¹, Aqeel Javeed²

¹M-Phil student, Department of Pharmacology and Toxicology, University of Veterinary and Animal Sciences, Lahore, Pakistan
²Assistant Professor, Department of Pharmacology and Toxicology, University of Veterinary and Animal Sciences, Lahore, Pakistan

Correspondence: Department of Pharmacology & Toxicology, University of Veterinary and Animal Sciences, Abdul Qadir Jilani Road, Lahore, 54600, Pakistan.Tel.: +92 42 9211449.
E-mail addresses: aqeel.javeed@uvas.edu.pk (A.Javeed), Muzammal_200@yahoo.com (M.Hussain)

Abstract

Background: Exam stress is the emotional depressive reaction that has been reported more prevalent in medical students because of different factors, including academic performance, inability to cope, helplessness, increased psychological pressure, mental tension and extensive course load. All this can lead to drug-seeking behavior in medical students as a coping strategy for intense sadness, depression and/or to enhance performance.

Aim: To assess the prevalence of, and attitude toward, pre-exam self-medication with psychotropic drugs to cope exam stress/anxiety amongst the final professional medical students

Methodology/study design: A cross-sectional survey was conducted during pre-examination days (final month of the academic year ensuing examination period) by using an anonymous, self-administered questionnaire to 250 students enrolled in final professional M.B.B.S at Allama Iqbal Medical College, Lahore. The students were asked to self-report the questionnaire voluntarily by taking it home/hostel, and returning next day.

Results: In total, 158 questionnaires were received back (63% response rate). Twenty-nine (18.3%) of the respondents indicated that they had used a total of 14 psychotropic drugs: 26 used the anxiolytics (benzodiazepines by 23 and zolpidem by 3); 3 used stimulants; 4 used beta-blockers, and 3 used anti-depressants. The prevalence of use was highest amongst the hostellers (89.6%). Fourteen students reported that they use only occasionally during pre-exam/exam days as a coping strategy for exam stress/enhance performance, while 5 were the more frequent users. Fifteen students have been practicing it since 3rd year of medical education, and the same number did not consider it a serious issue to consult the medical practitioner. Assumed knowledge (13 cases) and class-fellow/senior students (11 cases) were the main sources of information. Nineteen students showed intention to keep on practicing as such in future. Community/retail pharmacy were the main sources of supply (22 cases), although twenty students reported to face problem purchasing without prescription.

Limitations: This is a preliminary study concerning prevalence and attitude toward self-medication with psychotropic drugs with respect to exam stress amongst medical students. Although direct figures were obtained on actual patterns of self-medication, our sample may not be representative of the population; for example, conducted only in one medical college from Punjab, which is the largest province of Pakistan having more than 10 medical colleges in public sector only.

Conclusion: The results obtained in this study indicate valuable information on the problematic use of psychotropic drugs in medical students. Work is now going on to explore the implications of these results by involving a greater number of medical colleges.

Keywords: exam stress, psychotropic drugs, self-medication, medical students.
The Relation between Musculoskeletal Disorders and Anthropometric Indices in Public Vehicle Drivers

Nasrin Sadeghi1, Ehsanollah Habibi2, Seyed Ali Sajjadi1*
1 Faculty of Health, Gonabad University of Medical Sciences, Gonabad, IR Iran.
2 Faculty of Health, Isfahan University of Medical Sciences, Isfahan, IR Iran.
Corresponding Author: Faculty of Health, Gonabad University of Medical Sciences, Gonabad, IR Iran. Email: sa_1344@hotmail.com, Tel: +98-533-7225027, Fax: +98-533-7223814

Abstract

Introduction: Musculoskeletal disorders (MSDs) are very common amongst drivers. According to the previous studies, MSDs and back pain are two main causes of car accidents.

Objective: This study investigated the relationship between body dimensions of drivers and the form of this type of disorders.

Method: The sample included 95 bus drivers selected randomly. As instructed, the drivers described the levels of discomfort in different parts of their bodies, based on the BDC chart. In the meantime the dimensions of their bodies' were measured. Then, using the Spearman test, the associations between anthropometric dimensions and MSDs were investigated.

Result: The results showed that MSDs are related to the height, weight and age of drivers. In other words, the more weight and age, the more probability of MSDs; while the height of drivers showed the reverse association.

Conclusion: In conclusion, when recruiting, the younger, taller and healthy people should be selected to minimize the MSDs; and therefore, car crashes and accidents.

Keywords: Anthropometric Indices, Musculoskeletal Disorders, Drivers
Family psychological markers in a systemic and anthropological approach

Cornelia Rada¹, Suzana Turcu¹*  
¹Institute of Anthropology, Romanian Academy, Bucharest, Romania,  
cornelirada@yahoo.com; suzana78m@yahoo.com*

Abstract

Introduction: Interpersonal relationships with parents have a vital role in individual development and influence the type of relationships that will be establish later throughout life with other people. Dysfunctional family dynamics generated by inappropriate rules and ties, results in poor and unfulfilling relationships of the future adult.

Objective: Documenting the psycho-affective climate from the natural familial environment and its influence on subjects’ relating patterns.

Method: On 385 urban subjects, between 18-69 years, homogeneously distributed by age and sex, was applied a questionnaire with 78 items, of which 10 focused family environment perception. Standardized interviews were organized to measure cohesion, flexibility and communication. A standardized questionnaire scaling emotional intelligence was also used.

Results: Regardless age and sex, over ¾ of our subjects claim that they manage to have harmonious relationships with people of the same age and similar concerns, with school and/or work colleagues. Disagreements with school/work colleagues, regardless sex, were reported mostly by younger people, especially women. Relationships with parents of superior quality generated best relating patterns (p<0.05).

Conclusion: A balanced conjugal family environment is a good predictor of the extra-familial relating skills.

Keywords: familial environment, relating patterns, educational model, parental support, Circumplex Model.
Prevalence of Antenatal Depression and Gender Preference

Shruti .Shripad.Hegde¹; Sandeep K R²; Keshav Pai³

¹MBBS, Kasturba Medical College Hospital, Mangalore, INDIA.
²MBBS, Tutor, Community Medicine. Kasturba Medical College, Mangalore, INDIA.
³MBBS, MD. Associate Professor of Psychiatry, Kasturba Medical and College Hospital, INDIA.

Corresponding Author: Dr.Shruti.S.Hegde, A-506,RNS Shanti Nivas, Tumkur Road, Post Yeshwanthpur, Bangalore-560022, Karnataka, INDIA. Email: raregem15@gmail.com. Phone: +917411180094

Abstract

Background: There has far been very less empirical research on the occurrence of antenatal depressive morbidity among Indian women. Epidemiological studies in western societies generally show that depressive episodes occur in 10–20% of pregnant women. An almost universal observation, independent of country or culture, is the two fold greater prevalence of major depressive disorder in women than in men, and its first onset often occurs during childbearing years. Longitudinal studies have demonstrated that antenatal depression is one of the most powerful predictors of postnatal depression. There is also a growing literature which shows that antenatal psychological distress can adversely affect maternal and fetal well being. Hence the present study was undertaken to identify The Prevalence of Antenatal Depression and Associated Risk Factors.

Materials and Methods: The present cross-sectional questionnaire based study was carried out in Lady Goschen Hospital (LGH), Mangalore, India. A total of 253 pregnant women attending the routine antenatal clinic and women admitted in antenatal wards during the study period formed the subjects. After obtaining the oral consent, the socio-demographic data was collected initially from the subjects. Then each of them were provided with the Kannada/English version of the EPDS and allowed to complete guiding them wherever they had queries. EPDS score greater than or equal to 10 but <13 was taken as possible depression and the score >13 as depressive illness. The Data collected was analyzed using SPSS version 16 and p<0.05 was taken as significant.

Results: The prevalence of possible depression is 31.22% and depressive illness 36.75%. Male gender preference, unemployment, poor relation with the husband, term pregnancy, previous history of depression and lack of recreation were independently associated with antenatal depression, whilst support from family and husband, planned pregnancy and being employed were associated with a reduced likelihood of depression.

Conclusion: Rates of antenatal depression were found to be high with some associated risk factors. Male gender preference was found to be positively associated with antenatal depression.

Implications: Given the high prevalence, screening of women for antenatal depression may be indicated to allow adequate treatment.

Keywords: Antenatal, Depression, Gender preference.
Changes in Air Quality due to Closure of a Major Industry

Seyed Ali Sajjadi¹*, Howard A. Bridgman², Nasrin Sadeghi³

¹ Dept. of Environmental Health Engineering, Gonabad University of Medical Sciences, Gonabad, IR Iran.
² School of Environmental and Life Sciences, University of Newcastle, NSW 2308, Australia
³ Dept. of Occupational Health, Gonabad University of Medical Sciences, Gonabad, IR Iran.

Corresponding Author: Faculty of Health, Gonabad University of Medical Sciences, Gonabad, IR Iran. Email: sa_1344@hotmail.com, Tel: +98-533-7225027, Fax: +98-533-7223814

Abstract

Introduction: This paper describes the impacts of the closure of a major industry on air quality in the Lower Hunter Region. BHP Rod and Bar was recognized as the most important source of particulate matter (PM₁₀, bsp), nitrogen dioxide (NO₂), and sulphur dioxide (SO₂) in Newcastle before it closed in October 1999.

Objective: This study investigated the impacts of the closure of a major industry, a steel works in Newcastle, on air quality in the Lower Hunter Region, New South Wales.

Method: A combined three-station data set for these pollutants for 3.5 years before and after closure allowed a comparison of daily and data set averages, using both the measured data, and a Mixed Model to calculate significant changes in the time series by month.

Result: PM₁₀ increased after BHP closure by 13.2%, an unexpected result, but the post closure data set was influenced by summer bushfires. bsp decreased by 10.2%, reflecting the reduction is emissions due to industrial burning processes. This result was verified by a separate PM₂.₅ data set which showed significant reductions in elemental carbon and soil source components. SO₂ concentrations dropped by 40.2% after closure, a change which verified the importance of BHP as a source. Despite the industry being a major source of NO₂, there was no significant change of this pollutant after closure, suggesting dominance of other sources.

Conclusion: Air pollution in the region is caused by different sources. Further research into the role of meteorology and quantifying changes in the range of sources is recommended.

Keywords: Industry, particulate matter, NOx, SO₂, Lower Hunter, BHP
A survey of medical students attending an international student conference

Jonathan Mamo MD MSc, Chantal Fenech MD
Peterborough City Hospital, Peterborough, United Kingdom
Contact: (44) 7824756792, E-Mail: jonathan.mamo@yahoo.com

Abstract

Objectives: To explore the lifestyle choices of international medical students attending a student conference.

Study Design: Questionnaire-based census study.

Methods: A pre-tested structured questionnaire was given to the 481 delegates attending an international medical student conference in 2009 in Macedonia. The respondents were asked questions on their demographics, physical activity, smoking habits, alcohol consumption, sexual activity and nutritional intake. The results obtained from statistical analysis using SPSS version 16 were used to outline the socio-demographic variables under survey.

Results: An overall response rate of 60.9% (n=293) was achieved. The sample population had a mean age of 22.45, 44% (128) of the respondents were male and 56% (165) were female. 89% were undergraduate students and 62% were from Europe. 78.8% reported practicing physical activity at least once a week, with 4.5% reporting no physical activity at all. Of those who reported practicing physical activity, half carry out more than one hour of activity daily. 22.2% (n=65) smoke on a regular basis, of which 88.7% smoked cigarettes and 11.3% reported smoking marijuana over the previous 12 months. The Eastern Mediterranean Region reported the highest percentage of smoking (31.6%), followed by Europe (23.1%). 84.6% of the respondents reported regular consumption of alcohol. The majority of respondents (97%) reported consuming vegetables and fruit at least on a weekly basis. 37% reported consuming fast food at least once a week. 76.9% of the subjects reported having been sexually active. Of the sexually active population; 82.4% reported always using contraception, with the condom and the pill being the more popular methods.

Conclusions: Medical students are in constant contact with health promotion and this should reflect in their own personal lifestyle choices. A very low percentage was observed to smoke on a regular basis, a high percentage carry out physical activity regularly and the majority include healthy food in their diet. The same population did however report a high percentage of alcohol and fast food consumption. The latter may be due to lifestyle choices made somewhat inevitable by their educational schedule, many of whom live away from home.

Keywords: medical students; lifestyle; health
A placebo-controlled trial of bupropion for improving the positive and negative symptoms of schizophrenia

Omid.Rezaee 1, SaeedeMasafi M.A 2, Mohamadreza.Khodaie Ardakani3, Farshad.Akbarpour4

1. Department of Psychiatry, University of Social Welfare & Rehabilitation Science, Tehran, Iran.
2. Department of Psychology, Science and Research Branch, Islamic Azad University, Tehran, Iran. (corespond), e-mail: s_masafi@yahoo.com
3. Department of Psychiatry, University of Social Welfare & Rehabilitation Science, Tehran, Iran.
4. Psychiatric

Abstract
Background: Recently, researches have expressed renewed interest in therapeutic effects of bupropion on the positive and negative symptoms in schizophrenics.

Aim & Objective: In current study, was designed a 12-week double-blind, parallel-groups to examine the comparative efficacy of bupropion compared to placebo for improving the positive and negative symptoms of schizophrenia.

Methods/Study Design: Eligible participants were 40 patients who met DSM-IV criteria for schizophrenia and were randomly assigned to the standard therapeutic dose of bupropion (150 mg/day for the first 3 days, followed by 300 mg/day) administered orally for a total of 8 weeks (n=20) or an identical appearing placebo tablet added to their usual medication regimen (n=20). The study endpoints were the scales of positive and negative symptoms of schizophrenia by the two scales for the assessment of positive symptoms (SAPS) and negative symptoms (SANS).

Results/Finding: After the completion of treatment schedules, both groups demonstrated similar significant improvements in all positive symptoms, adjusted for baseline variables. However, it appeared that the avolition-apathy score of negative symptoms was reduced more in the group treated with bupropion compared to the placebo group.

Conclusion: Bupropion has potential efficacy for avolition-apathy as main negative symptoms in schizophrenics who were able to tolerate bupropion and complete 12-week bupropion treatment regimen. However, no change in positive symptoms may be essentially appeared.

Keywords: placebo, bupropion, positive symptoms negative symptoms, schizophrenia
Synthesis of dibenzalacetone derivatives and evaluation of their antimycobacterial property

Vida Sedighi, Parisa Azerang, Soroush Sardari*
Drug Design and Bioinformatics Unit, Medical Biotechnology Department, Biotechnology Research Center, Pasteur Institute, Tehran, Iran, 13164
Email: ssardari@hotmail.com; sardari@pasteur.ac.ir

Abstract
A number of articles have already been published on the application of chalcone as a bioactive compound. In a recent survey it is reported that chalcones and flavanoids possess antimycobacterial activity and they are known to be effective against *Mycobacterium tuberculosis* H37Rv. In addition, it is predicted that the chalcon structure can lead to rapid and continued progress in development of the new antimycobacterial agents and the discovery of new drug targets. Because the asymmetrical structure of chalcones, this compounds have synthesized symmetrical structure.

In this study, synthesis and evaluation of in vitro antimycobacterial activity against *Mycobacterium bovis* (BCG) of dibenzylideneacetones derivatives have been reported. Dibenzylideneacetones derivatives were synthesized with aldol reaction.

The compounds were purified by re-crystallization from acetic acid. The reaction was carried out at room temperature. The success of aldol reaction was assessed by $^1$H_NMR.

The products giving high yields of desired adducts at ambient conditions and the activity expressed as the minimum inhibitory concentration (MIC) in $\mu$g/mL. The in vitro activity of Dibenzylideneacetones derivatives showed 30 to 80 $\mu$mol range.

Keywords: dibenzalacetone, antiantimycobacterial, aldol reaction.
Nonsteroidal Anti-inflammatory Drugs (NSAIDs) decrease the Positive Predictive Value of the Faecal Occult Blood Test

Navdeep Singh Alg BSc *, Lauren Beth Chalmers 2, Geoff Smith 2
1 92 Queens Road, Wimbledon, London, SW19 8LS . email: navdeep.alg07@imperial.ac.uk
2 The West London Bowel Cancer Screening Centre, Charing Cross Hospital

Abstract

Background: The guaiac Faecal Occult Blood Test is used as the initial screening tool in many bowel cancer screening programmes (BCSP), such as the UK. Patients with positive results are referred for colonoscopy. However, there is suspicion that certain drugs can induce occult bleeding and hence false positives.

Aim: To investigate whether Nonsteroidal Anti-inflammatory Drugs (NSAIDs), clopidogrel and warfarin reduce the positive predictive value for significant neoplasia (cancer or polyp ≥10mm) in an asymptomatic population undergoing FOBT (Faecal Occult Blood Test) screening for colorectal cancer.

Methods: This retrospective study investigated patients who had a positive FOB sample and then subsequently had a colonoscopy at The West London Bowel Cancer Screening Centre, from November 2007 to March 2011.

Drug information was taken from screening questionnaires and colonoscopy findings from pathology reports.

Results: 1,139 patients were included in the study. 32% of the patients had significant neoplasia. 33.2% of the patients were on at least one of the drugs.

The PPV (Positive Predictive Value) of the FOBT was compared between the drugs group and the controls group using a two-tailed, Fisher's Exact test, online on Graph-pad software. A p-value of less than 0.05 was taken as statistically significant.

The PPV for significant neoplasia on colonoscopy was reduced in those taking aspirin or NSAIDS (7%, P = 0.035). Patients on warfarin however, did not suffer from any reduction in PPV.

Conclusion: This is the first study to investigate the individual effect of these drugs on patients involved in the United Kingdom BCSP. It provides strong evidence that NSAIDs interfere with the current FOBT and therefore increase the number of unnecessary colonoscopies. Furthermore, there is convincing evidence that warfarin can be safely used whilst taking the FOBT. These results can be used to shape improvements in bowel cancer screening. For example, NSAIDs treatment could be temporarily stopped during the FOBT. On the other hand, alternative screening modalities such as the Faecal Immunochemical Test (FIT) with/without Computerised Tomography Colonography could be considered. The FIT is able to detect blood specifically released from the bowel and thus has been proven not to be affected by the same drugs. Furthermore, CT colonography has a significantly reduced complication rate compared to optical colonoscopy.

Keywords: colorectal cancer, faecal occult blood, NSAIDs
Squamous Cell Carcinoma in Skin tag of fissure-in-ano

Areeba Saif¹, Saif Ahmad ², Ammara Mushtaq *³

¹ Medical Student, Dow Medical College, Dow University of Health Sciences, Karachi, areeba_saif@hotmail.com, +92-331-2154114
² Saif Ahmad, Medical Superintendent and Head of Surgery, Sind Government Qatar Hospital, Orangi Town, Karachi, dr_saif76@yahoo.com, +92-333-2306528
³ Medical Student, Dow Medical College, Dow University of Health Sciences, Karachi, Ammara.mushtaq@live.com, +92-21-3697-8988

Abstract

Background: Carcinoma of the anal canal is an uncommon disease, with benign inflammatory anal lesions like fissures, fistulae and perianal abscesses, known to be predisposing factors to it. Neoplastic changes have been found to occur in fistulae of the anal canal but the occurrence of such changes in the skin tags of an anal fissure itself is unreported in literature.

Objective: To emphasize the need for excisional biopsy of suspicious sentinel piles in anal fissure surgery

Case Presentation: In our case, a 46-year-old man presented with complaints of pain on defecation and bleeding per rectum. He was diagnosed with fissure-in-ano in the posterior midline and a closed lateral internal sphincterotomy was performed; the skin tag (sentinel pile) overlying the fissure was excised and sent for histopathological investigation which reported a well-differentiated infiltrating squamous cell carcinoma. An MRI pelvis done post-chemo- and radio-therapy confirmed that there was no residual mass or recurrent tumour present and patient is now healthy with no reappearance of fissure-in-ano or recurrence of a tumour in the anal canal to-date.

Discussion: Though anal fissure has been recognized to be a risk factor for anal carcinoma, it hasn’t been suggested that the neoplastic changes take place in the skin tags of the fissure itself. However, adenocarcinoma and epidermoid cancer in anal fistula have been reported in several cases before. Our patient was surgically managed by closed lateral internal sphincterotomy with successful recovery. Surgical management of chronic fissure by lateral internal sphincterotomy is the recommended procedure for treatment. After histopathological diagnosis of anal carcinoma, the patient was given chemo- and radiation therapy and was successfully managed.

Conclusion: Since the occurrence of neoplastic changes in skin tag of anal fissure is previously unreported, this case emphasizes the importance of proper excision and biopsy of the skin tag associated with the fissure-in-ano so that in case a malignancy is present, it is detected early and chemo- and radio-therapeutic measures are taken for complete timely treatment.

Keywords: Squamous cell carcinoma, skin tag, fissure-in-ano, internal sphincterotomy
Risk Factor Associated with Malaria

Dr. Farhan Essa ¹, Syed Mansurul Haque ², Syed Askari Hasan ³, Ghazanfar Zaidi ⁴

¹ Dr. Farhan Essa (Assistant professor of microbiology at Dow University of Health Sciences, Karachi, Pakistan). dfrahanessa@essalab.com. Contact number: 03332137861
² Syed Mansurul Haque (4th year medical student at Dow University of Health Sciences, Karachi, Pakistan). mansurulhaque@hotmail.com. Contact number: 03002080151
³ Syed Askari Hasan (4th year medical student at Dow University of Health Sciences, Karachi, Pakistan). askarihasan_2004@hotmail.com. Contact number: 03343146540
⁴ Ghazanfar Zaidi (4th year medical student at Dow University of Health Sciences, Karachi, Pakistan). ghazanfarzaidi@gmail.com. Contact number: 03462763019

Abstract

Background: In Pakistan, 500,000 cases of Malaria are reportedly annually out of which 50,000 deaths occur. In 2006 in the province of Sind, malaria was found to be endemic throughout the year, therefore, apart from preventive techniques, it is necessary to point out the factors that make an individual susceptible to malaria to get one step closer to solving this nationwide problem.

Objectives: The purpose of the research was to find the risk factors and Malarial strain which are associated with contracting malaria and the effect it has in terms of Hemoglobin (Hb) level, total leukocyte count (TLC) and platelet counts on the patient. The, risk factors we will be assessing include 1) blood group 2) age 3) gender 4) endemic areas of Karachi. By the end of this research it would be clear if there is any blood group, age group, gender or locality of Karachi in which Malaria is more prevalent.

Methodology: 101 Malarial patients were studied from July 2011 to Dec 2011. The data was collected from a laboratory setting and Essa laboratory (ISO certified) was used for this purpose. The data was collected simultaneously from all the 6 branches of Essa laboratory spread all across Karachi to cover the whole city. Patient’s blood grouping was done from the blood sample collected. Automated analyzers were used to assess hemoglobin level (Hb), Platelet count and total leukocyte count. Age, gender and locality were confirmed from the patients personally. The data collected was statistically analyzed using SPSS version 16.0.

Results: Of the 101 patients 35.5% who developed malaria had B blood group while 30.1% O, 25.8% A and 8.6% AB. Of all the females 47% had a B+ blood group. Males were found more prone to malaria making 64.5% of the total while females constituting only 35.5%. The mean age of patients was found to be 26.72 years. The adult age group was more susceptible to malaria with 51.6% patients being in the age group of 18-45 years. Sadder area south of Karachi was found to report the most patients 67.7% of the total. Plasmodium Vivax proved to be by far the most prevalent strain of malaria in Karachi, 98 out of 101 patients (97%) had P.vivax while 3 patients (2.97%) had plasmodium falciparum. No cases of plasmodium malaerae or ovale were reported. Mean Hb, TLC and platelet levels were found to be 11.8, 5983 and 107,000 respectively. 76.3% patients having platelet levels below normal falling to as low as 6900. Females were found more prone to developing anemia compared to males with 78.78% of all females being anemic (below 12) while only 33.3% males were anemic.

Conclusion: The study points out that male are more prone to developing malaria compared to females, especially the adult age group probably because of the outdoor nature of their work. Blood group doesn’t seem to show a statistically significant association to malaria, more data need to be collected and analyzed to come up with a conclusive statement. Sadder area south of Karachi had more prevalence of malaria emphasizing the need to carry out malarial prevention programs in those areas to prevent future reoccurrences. Since females have been found more prone to
developing anemia in malaria iron supplements can added along with other anti-malarial medications.

**Keywords**: malaria, risk factors, haemoglobin, leukocyte count, endemic, karachi, Pakistan.
Meckel Gruber Syndrome: Second Trimester Diagnosis of A Recurrent Case In A Non-Consanguineous Marriage

Areej Alam¹, Mehreen Adhi², Raffat Bano³, Aisha Zubair¹, Ammara Mushtaq *¹
¹Medical Student, Dow University of Health Sciences, Dow Medical College, Karachi, Pakistan
²Department of Ophthalmology, Tufts Medical Center & Tufts University School of Medicine, Boston, USA
³Department of Obstetrics & Gynaecology, Aga Khan Hospital for Women, Karimabad, Karachi, Pakistan

Corresponding Author: Ammara Mushtaq, Undergraduate MBBS Student, Dow University of Health Sciences, Dow Medical College, Karachi, Pakistan. Email: ammara.mushtaq@live.com.
Phone: 92-342-2263-162, 92-21-3697-8988

Abstract

Background: Meckel-Gruber Syndrome (MKS) is a rare, autosomal recessive genetic disorder characterized by the clinical triad of meningo-encephalocele, enlarged polycystic kidneys and post-axial polydactyly, mostly affecting all four limbs. Consanguinity is an important factor in the genetic basis of the disease. We report a recurrent case of MKS in a non-consanguineous marriage, diagnosed in the second trimester, in a fetus carried and delivered by a female who had a previous history of carrying a child with MKS.

Case Presentation: A 35 year old female presented at the out-patients’ clinic in a private teaching hospital in Karachi, Pakistan at 7th week of gestation of her sixth pregnancy. She had a history of carrying a child with MKS, resulting in stillbirth. She was an otherwise healthy female and her marriage was non-consanguineous.

A trans-abdominal anomaly ultrasound performed at 18 weeks of gestation showed features consistent with MKS. This included a small and irregular fetal skull suggestive of microcephaly and a defect in occipital region suggestive of posterior encephalocele. A large cystic structure with a spoke wheel pattern was noted in the region of the neck, suggestive of a cystic hygroma. The heart was deformed and the inter-ventricular septum could not be visualized. Mild pericardial effusion was noted and the kidneys were enlarged and echogenic suggesting an infantile form of polycystic kidney disease. Both femurs appeared bent. The patient was referred to a Pediatric Surgeon, who reviewed the ultrasonography findings. Although the patient was counseled regarding the lethal outcome of the disease, the termination of pregnancy was declined, and a live newborn female was delivered at 34 weeks of gestation via an emergency C-section due to a breech presentation. Physical examination of the neonate at birth confirmed the features of MKS. The newborn female died 4-5 hours after birth.

Conclusion: We have presented a second trimester diagnosis of a recurrent case of MKS born to a non-consanguineous marriage. This represented a recurrence of disease in 2 of the 6 pregnancies. The diagnosis was made at 18 weeks of gestation based on ultrasonography findings of the typical triad of the disease, and were further confirmed by a physical examination of the neonate after birth. Efficient prenatal diagnosis may allow early termination of pregnancy and genetic counseling may reduce the incidence of this rare lethal syndrome.

Keywords: Meckel Gruber syndrome, recurrence, ultrasonography, prenatal diagnosis, second trimester, non-consanguineous marriage.
A Conception of Computing with Promise for Medical Education

Meurig Beynon\textsuperscript{1} and Will Beynon \textsuperscript{2}

\textsuperscript{1}Computer Science, University of Warwick, Coventry, UK. \texttt{wmb@dcs.warwick.ac.uk}
\textsuperscript{2}University Hospitals Leicester, Leicester, UK. \texttt{willmeurig@gmail.com}

* Corresponding Author: \texttt{wmb@dcs.warwick.ac.uk}

Abstract

\textbf{Introduction:} Advances in computing promise to revolutionise medical reasoning. For instance, \textit{the virtual physiological human (VPH) initiative\textsuperscript{1}} aims at ultimately developing virtual clones for personalised and predictive healthcare, and \textit{the OpenClinical project\textsuperscript{2}} at providing AI decision-support tools to enable healthcare professionals to deliver evidenced-based care accurately reflecting the ever-changing wealth of current medical knowledge. Both the VPH and OpenClinical draw inspiration from approaches to developing complex software systems within the established conceptual framework for computing. We argue that this 'computational thinking' framework is not best-matched to the issues they raise, and that an alternative perspective is essential to fully reflect the qualities of medicine as both art and science. Furthermore, non-traditional approaches to computing potentially provide adaptive and expressive tools for creating distinctive applications well-suited to medical educational objectives.

\textbf{Objective:} Computing advances have such potential impact on medical decision making that understanding how computing and medicine can best be integrated both in theory and practice is critical. We aim to raise awareness of ways of applying computing in medical education that respect the exceptionally broad nature of medicine as a discipline. By adopting too narrow a view of computing, we are in danger of construing the VPH and OpenClinical as respectively reducing the study of medicine to a grand challenge in computational science or to a sophisticated form of protocol-driven interaction. We instead propose a conceptual framework for computing - "\textit{Empirical Modelling (EM)\textsuperscript{3}}" - compatible with the aspirations of the VPH and OpenClinical projects, but giving greater consideration to the essential role for human intelligence and judgement. In this way, we illuminate what separates the medical student both from the robot and from the experienced doctor.

\textbf{Method:} We introduce and illustrate EM as an approach to computing based on ‘making construals’ rather than ‘developing computer programs’. Construals are physical artefacts - typically built most effectively with computers - that 'metaphorically' express expectations about relationships in the world. The central idea is that we make sense of phenomena by thinking about putative causes - what is acting in the situation to make changes (agents); what these actors are deemed to 'sense' and respond to (observables); and how agents' state-changing actions immediately affect several observables simultaneously in predictable ways (dependencies). We have constructed a simple online construal relating to physiological and clinical aspects of vivax malaria\textsuperscript{4} to demonstrate the key notions of agency, observation and dependency in a tool applicable to medical education.

\textsuperscript{1}http://www.vph-noe.eu/objectives/vph-for-researchers
\textsuperscript{2}http://www.openclinical.org/whitepaper.html
\textsuperscript{3}http://www.dcs.warwick.ac.uk/modelling
\textsuperscript{4}http://www2.warwick.ac.uk/fac/sci/dcs/research/em/publications/papers/118
Result: The development and interpretation of our interactive online construal is a potentially open-ended activity in which medical students, clinicians and researchers can all participate. Each participant interacts to change the state of the construal in essentially the same way - by introducing new observables or redefining existing observables - according to their perspective and experience. The construal serves – inter alia - to model the evolving states in the lifecycle of a malaria parasite, to show how symptoms may be correlated with these states, and to highlight gaps in our explanations for state-transitions. To the non-expert, it serves as a 'provocative model' that, rather than presenting definitive textbook answers, promotes questions, providing stimuli and bases for independent research or self-directed learning.

Conclusion: Unlike traditional conceptions of computing, EM emphasises activities where there is limited support from theory and the mechanisms operating must be explored speculatively. This makes it an ideal vehicle for developing medical experience where learning does not depend on knowledge alone or where uncertainties are central to the problems encountered. Similarly, EM provides an alternative platform for the vision for systems biology that underpins the VPH\(^5\) and the pragmatic decision-support afforded in applications such as OpenClinical.

Keywords: Medical science, medical education, clinical decision support, computational science, Empirical Modelling, construals

\(^5\) http://www.nature.com/msb/journal/v5/n1/full/msb200951.html
A case report of hydrocarbon injection during pregnancy

Taravat Fakheri 1, Anisowdoleh Nankali*2, Farahnaz Keshavarzi 3, Hamid Reza, Saeidiborojeni 4, Marzieh Soheili 5, Sara Daeichin 6

1 Assistant professor. Obs & Gyn Department. Maternity Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran.
2 Assistant professor. Obs & Gyn Department. Maternity Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran.
3 Assistant professor. Obs & Gyn Department. Maternity Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran.
4 Assistant professor. Neurosurgery Department. Maternity Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran.
5 MD. Kermanshah University of Medical Sciences, Kermanshah, Iran.
6 Bcs in Obstetrics. Maternity Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran.

Corresponding author: Dr. Anisowdoleh Nankali, Address: Maternity Research Center, Kermanshah University of Medical Sciences, Imam Reza Hospital, Parastar Blvd, sorkheh Lyjeh, Kermanshah, Iran. Tel: +989181314921. Email: anankali@yahoo.com

Abstract
hydrocarbon injection in domestic accidents or attempted suicide especially in pregnancy is not extensively discussed in the literatures. We have reported a case of a 21-years-old pregnant woman who referred to hospital suffering from abdominal pain and dyspnea. After evaluation, she was diagnosed as a case of abscess in right upper quadrant (RUQ) and right lower quadrant (RLQ) due to petroleum injection as well as fetal death in an attempt of suicide. This article comprises an illustrative rare case of petroleum injection during pregnancy with subsequent fetal death.

Keywords: hydrocarbon, petroleum, pregnancy, intravenous injection, soft tissue injection
Urinary α- Glutathione-s-transferase variations in cisplatin treated cancer patients with and without kidney injury

Saleena Ummer V *, Athiyamaan M S, Vadhiraja B M, Raveendra Prabhu, Nalini K

1 Saleena Ummer V, Assistant Professor-Senior Scale, Dept. of MLT, Manipal College of Allied Health Sciences, MANIPAL UNIVERSITY, Karnataka, India, Email: finduvsaleena91@gmail.com
2 Athiyamaan M S, Tutor, Dept. of Radiotherapy and Oncology, KMC Manipal, MANIPAL UNIVERSITY, Karnataka, INDIA
3 Vadhiraja B M, Associate Professor, Dept. of Radiotherapy and Oncology, KMC Manipal, MANIPAL UNIVERSITY, Karnataka, INDIA
4 Raveendra Prabhu, Professor and Head, Division of Nephrology, KMC Manipal, MANIPAL UNIVERSITY, Karnataka, India
5 Nalini K, Associate Professor, Dept. of Biochemistry, KMC Manipal, MANIPAL UNIVERSITY, Karnataka, India

Abstract

Introduction: The frequency of Acute Kidney Injury (AKI) is increasing all over the world. Despite significant improvements in therapeutics, the mortality and morbidity associated with AKI remains high. One of the most common causes of AKI is nephrotoxin administration. Platinum compounds like cisplatin are very effective as chemotherapeutic agents but the risk of nephrotoxicity frequently hinders the use of its higher dose to maximise its antineoplastic effects. The lack of early biomarkers of AKI has impaired our ability to initiate the preventive interventions in the nephrotoxicity caused by these agents in a timely manner. This study was designed to evaluate the variation of urinary renal tubular cell specific enzyme α-Glutathione-s-transferase (α-GST) in cancer patients treated with cisplatin chemotherapy. The urinary levels of α-GST, studied in a timely manner may help in identifying patients who may benefit from early interventions.

Methodology: This is a prospective observational cohort study in patients with head and neck malignancies qualified for three weekly chemosensitiser with cisplatin (dose 100mg/m2). Venous blood samples were collected from all the patients, (after obtaining Institutional ethical clearance) before the administration of cisplatin (baseline), and at 12 hours, 24 hours, 48 hours and 20days after cisplatin infusion and a random urine sample was collected before and at 2 hrs, 6 hrs, 12 hrs, 24hrs and 48hrs after cisplatin administration. Serum creatinine was estimated by Jaffe’s method using commercial reagent kit, and α–GST was estimated in all the urine samples by colorimetric kinetic assay using NBD-Cl. Results: There was a 20.5% incidence of acute kidney injury after cisplatin administration as suggested by a significant rise in the serum creatinine levels within the first 48 hours. The mean urinary α-Glutathione S Transferase levels at different time intervals show a clear temporal rise, especially after 2 hours after cisplatin administration, and at a slower rate thereafter.

Discussion: We observed that, in AKI group, there was a substantial rise in the enzyme values following cisplatin administration. The peak rise was seen around 6 hrs after cisplatin infusion, which was followed by a steady fall. Whereas the significant increase in serum creatinine was observed only after 48hrs. Hence an earlier detection of rise in enzyme levels could help in prompt intervention and prevention of further renal damage.

Keywords: Acute Kidney Injury, α-Glutathione-s-transferase, Nephrotoxicity, Acute Kidney Injury Network, Cisplatin
Knowledge of Palliative Care Among Medical Students in University

Edwin Koh Yew Chung¹, Siew En Suzen², Allysha Yeap Mei Xian³, Shameni Devi Umathavan⁴, Abdullah Muhamin⁵, Tam Cai Lian *⁶
Jeffery Cheah School of Medicine and Health Sciences, Monash University Sunway Campus, Malaysia. E-mail: tam.cai.lian@monash.edu. Phone: +603-551 44974

Abstract
This health promotion project aims to investigate whether there is a significance of clinical exposure towards knowledge on palliative care. Currently, this project falls under the developmental phase where current knowledge regarding palliative care between pre-clinical and clinical medical students was analysed. From the result obtained, it is shown that students who have undergone clinical training have higher mean scores compared to pre-clinical students. A survey was conducted among 180 first, third and fourth year medical students in regards to their knowledge in palliative care. Out of the 180 students, 115 students returned the questionnaire for evaluation. Out of a full mark of 20, the score for year one students ranged from 1 to 13 (mean = 5.50), while year four students scored from 2 to 16 (mean = 10.19). From the result obtained, it is shown that students who have undergone clinical training have higher mean scores compared to pre-clinical students. Therefore, the following step is the implementation phase, where a programme will be introduced to help improving knowledge and awareness. An evaluation method will be proposed to measure the effectiveness of the program.

Keywords: Palliative Care, Medical Students
Double Burden of Nutritional Disorder among Indian Women: An Assessment of Differentials and Determinants

Deepti Singh 1, Srinivas Goli 2
1 Doctoral Student, International Institute for Population Sciences. Govandi Station Road, Deonar. Mumbai-400088, Maharashtra. India Phone No: 91+ 9892167310. Email: d singh.singh87@gmail.com
2 Doctoral Student, International Institute for Population Sciences. Govandi Station Road, Deonar Mumbai-40008, Maharashtra. India. Phone No: 91+9967164322. Email: sirispeaks2u@gmail.com

Abstract
The emerging differentials and determinants of double disorder of nutrition across the socioeconomic and behavioral spectrum of women in India have been examined in this paper by utilizing the latest National Family Health Survey (NFHS- 3) 2005-06 data. Multinomial logistic regression and Multiple Classification Analysis (MCA) conversion model have been applied to find out the influential factors on the double burden of nutritional disorders. This study included a large number of explanatory variables in the analysis, and found some critical dynamics of the nutritional status of women in India. Women’s nutritional status (BMI) by mean differentials is more among disadvantaged groups than well-off groups. However, the deviation in nutritional status is more among prosperous sections than the poor. The socioeconomic, demographic factors and food habits show a significant influence on the nutrition status of women. The results suggest that the existing socio-economic disparity and consequential obligations that women face threaten the nutritional balance. Obliteration of these anomalies is important to ensure balanced nutritional status for women in India.

Keywords: Women; Nutrition; Double Burden; Differentials; Determinants; India
Evaluation of Algorithmic Training Efficacy in Neurosurgical Emergencies for Medical Students

Hamid Reza Saeidiborojeni ¹, Taravat Fakheri *², Fereshteh Jalalvandi ³, Pejman Soleimani ⁴, Jabar Parse ⁵, Mansour Rezaei ⁶

¹ Assistant professor. Neurosurgery Department. Kermanshah University of Medical Sciences, Kermanshah, Iran.
² Assistant professor. Obs & Gyn Department. Kermanshah University of Medical Sciences, Kermanshah, Iran.
³ MSC, Paramedical School, Kermanshah University of Medical Sciences, Kermanshah, Iran.
⁴ Assistant professor. Neurosurgery Department. Kermanshah University of Medical Sciences, Kermanshah, Iran.
⁵ MD. Kermanshah University of Medical Sciences, Kermanshah, Iran.
⁶ Assistant Professor in Biostatistics, Medical Biology Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran.

*Corresponding Author: E-mail: fakheritaravats@yahoo.com
Tel: 98-918-132-1399

Abstract

Background: Nowadays the question of separation between training and clinics in many clinical fields is extensively debated, and all universities endeavor to present their theoretical education in a manner close to clinics. Medical students require novel educational approaches that will enable them to function efficiently in clinical conditions. In the present study, we evaluated the efficacy of algorithmic and lecture-based training on learning of interns.

Methods: In this experimental study, we assessed scores obtained by two groups of interns, each comprising 30 interns as case and control groups, on a multiple-choice questionnaire with confirmed validity and reliability. The scores were compared before training and after two weeks of training, which was presented using the algorithmic method for the case group and lectures for the control group. Data were analyzed on SPSS software using independent t-test, paired t-test and ANOVA.

Findings: In the case group, the mean scores of interns increased from 10.034 ± 1.56 before training to 15.23 ± 1.57 after algorithmic training, indicating a significant difference. In the control group, the mean scores of interns increased from 10.47 ± 2.43 before training to 12.33 ± 1.54 after lecture-based training, indicating a significant difference. Analysis of variance indicated that the mean score of interns after training in the case group was significantly higher compared to those of the control group.

Conclusion: Training improves learning, and as medical students are more active in clinical fields, using novel methods of education such as algorithmic training may be more efficient compared to other methods.

Keywords: training, algorithmic, students, medicine, intern.
Patient Safety Assessment in Slovak Hospitals

Mikušová V.1, Rusnáková V.2, Naďová K.2,3, Boroňová J.1,4, Beťková M.4,5

1 Faculty of Health Care and Social Work, Trnava University, Trnava, SR
2 Faculty of Public Health, Slovak Medical University, Bratislava, SR
3 Hospital of Skalica, Skalica, SR
4 University Hospital of Trnava, A. Žarnova 11, 917 75 Trnava, SR
5 Constantine the Philosopher University in Nitra, Kraskova 1, 949 01 Nitra

Abstract

Introduction: Patient safety is recognized as a major issue for health care organizations. Assessment of safety culture is a key step in improving it in healthcare centers and patient safety culture is generally measured by surveys of providers worldwide. This type of survey was conducted also in the Slovak hospitals during 2010 and 2011 with the main aims to find out how healthcare workers perceive patient safety in their organization and how they assess safety culture in individual units.

Materials and Methods: A study included 3 hospitals from Trnava region and the total number of respondents included 1,787 hospital staff. The Hospital Survey on Patient Safety Culture (HSOPSC) Questionnaire from AHRQ (Agency for Healthcare Research and Quality) was used. The response rate was 75%. AHRQ methodic, Pearson’s Chi-squared test, pairwise proportion test ($p \leq 0.05$) and Cronbach’s alpha were used for statistical analysis.

Results: Patient safety in Trnava regional hospitals was evaluated as positive by 50% of healthcare workers. The highest scores were obtained in specific dimensions as overall perception of safety (74%) and handoffs and transition (70%). According to this survey, healthcare workers considered teamwork across hospital units (35%) and hospital management support for patient safety issues (39%) as being weak areas, from their perspective. Staff also admitted to being fearful of adverse event reporting. Physicians and nurses had significantly a different looking at communication, adverse events reporting and staffing in surveyed hospitals.

Conclusions: The survey found out some strong and weak areas that could be helpful for hospital management teams to increase incentives for patient safety and for the maintenance of patient safety culture therefore to improve healthcare quality and safety in these hospitals.

Keywords: patient safety, culture, hospital, survey
Spirometry as an Effective Prevention of Chronic Obstructive Pulmonary Disease

Ivanová Antónia¹, Mikušová Veronika¹, Machajová Michaela¹, Salát Dušan¹,²
¹Faculty of Health Care and Social Work. Trnava University, Trnava, Slovak Republic,
²University Hospital of Trnava, Clinic of Pneumonology and Fízioele, University hospital of Trnava, Trnava, Slovak Republic

Contact details: Trnava University, Faculty of Health Care and Social Work, Univerzitné nám. 1, 917 01 Trnava, Slovakia, E-mail address: antonia.ivanova@truni.sk, vemi18@yahoo.com

Abstract

Background: Spirometry is the gold standard for the diagnosis and assessment of COPD, as it is the most reproducible, standardized and objective way of measuring airflow obstruction. About 300 million people suffer by chronic obstructive pulmonary disease (COPD) in the World. It is estimated that COPD will be on the third position of death causality and also on the fifth position of incidence causality until 2020. Tobacco smoking is an important contributor to respiratory diseases; it is the major etiological factor for the development of chronic obstructive pulmonary disease. These diseases constitute a large part of the burden of respiratory mortality and morbidity in Europe.

Aim: The aim of our project was to spirometry voluntaries and improve citizens knowledge about hazard of smoking that is jointed with this disease.

Methods: The target population were Trnava inhabitants over 35 years, men and women, smokers and non-smokers without diagnostic COPD. The project was realized within the action “Health days of Trnava town” during June 16th – 17th, 2011 in Trnava. We did spirometry screening. The Spiro Tube PC spirometer was used for measuring. Outcomes were analyzed by R-project program. We measured 177 respondents in Trnava town square, that filled our questionnaire about primary symptoms of COPD.

Results: The highest number of respondents were in age group 50 to 69 years and 62 % of them were women and 38 % of them were men. Non-smokers were dominant in all group. The respondents, who had low pulmonary parameters FEV1 and FVC, were the most represented. A sputum expectoration at men was only the one significant risk factor (OR 1.45; 95% CI, 1.5 to 2.01, p≤0.05) in our research.

Conclusion: The project was successful because a lot of people had an interest to get information about this disease and wanted to measuring pulmonary parameters that to know if they have healthy lungs. The assumed additions of the project for future are to increase Trnava inhabitants’ information of COPD risks and implications with a long-term smoking association. Gradually increasing citizens interest about own health and thereby to promote early diagnostic and treating.

Keywords: COPD, Trnava region, spirometry, prevention
Posterior reversible encephalopathy in a child with acute glomerulonephritis and mal-rotated kidney

Doaa M. Youssef 1, Faten Fawzy2
1 Pediatric Department, 2 Radio Diagnosis Department, Zagazig University, Egypt
dody5176@yahoo.com

Abstract:
Posterior reversible encephalopathy syndrome (PRES) is a clinico-radiological syndrome which mostly associated with pre-eclampsia, autoimmune diseases and cytotoxic medication. Our understanding of this disease is based mainly on case reports which identify causes, pattern and prognosis; and as the reports in children not frequent we report a case of acute glomerulonephritis and PRES which presented with generalized convulsions, loss of conscious and on diffusion weighted MRI, the affected areas appeared hyperintense on both Diffusion Weighted Imaging (DWI) and Apparent Diffusion Coefficient (ADC) maps which is consistent with restricted diffusion in regions of PRES vasogenic edema. MR spectroscopy (MRS) revealed normal metabolite spectrum. Our case was completely reversible after blood pressure control

Keywords: Glomerulonephritis, children, reversible encephalopathy
Epidemilogy of Uranary Tract Infection in Neonatal Intesive Care Unit, Single Center Study in Egypt

Doaa M. Youssef¹, Randa S. Abd-El Lateef², Hanaa A. Mustafa¹, Sherif A. Seleem¹
¹Pediatric, ²Microbiology Departments Zagazig University, Egypt
dody5176@yahoo.com

Abstract

Introduction: The aim of this study is to describe the epidemiology of urinary tract infection (UTI) in newborn infants admitted to neonatal intensive care unit (NICU) of Zagazig University.

Patients and methods: This study included 206 neonates admitted to the NICU in the period from 1/1/2010 to 1/6/2010. All neonates were subjected to detailed history taking including Prenatal History, Natal history and Post natal history with stress on symptoms suggestive of UTI. We examined all neonates generally and locally, every case was subjected to urine analysis; suprapubic aspiration was done for all cases. “The diagnosis of UTI was established by presence of at least 5 leukocytes per high power field”. Urine culture, CBC, Blood culture and Ultrasound Scanning were also done for certain cases.

Results: We found 75 newborns with clinical findings suggesting UTI. We classified our neonates according to the presence of at least 5 leukocytes in urine per high power field into two groups; Group I (- ve cases) without UTI included 44 neonates (31 males & 13 females) and Group II (+ ve cases) with UTI included 31 neonates (24 males & 7 female). There was no significant difference between group I and group II as regard gender, age, weight and consanguinity. Incidence of UTI in NICU was 15.05% (33/206), Prevalence among suspected cases of UTI in NICU was 41.3% (33/75). Of the 39 neonates with sepsis 33 have UTI (79.5%). Of the positive cases 77.4% were full term neonates and 22.6% were preterm neonate. Of the 31 cases with positive urinary culture there were 18 cases (58.1%) showing E.Coli, and 13 cases (41.9%) were positive for klebsiella.

Conclusion: This study has high-lighted the need for routine urine analysis and culture especially in high-risk newborns and to monitor the prevalence of UTI early in life. Also routine ultrasonographic screening should be done in all newborns with UTI; to save the newborns and prevent the risk of complications which may end in renal scarring and renal failure.

Keywords: epidemiology, neonate, urinary tract infection
Assessment of Research Output from Medical Universities in Pakistan

Ammara Mushtaq¹, Momina Abid¹,*, and Muhammad Asif Qureshi²

¹ Ammara Mushtaq, 2nd year Medical Student, Dow Medical College, Dow University of Health Sciences, Baba-E-Urdu Road, Karachi 74200- Pakistan. Contact No.: 92-342-2263-162, 92-21-3697-8988. Address: C-57, Sec 14-A, Shadman Town No. 1, Karachi, Pakistan. Email: ammara.mushtaq@mail.com

² Momina Abid, 2nd year Medical Student, Dow Medical College, Dow University of Health Sciences, Baba-E-Urdu Road, Karachi 74200- Pakistan. Contact No.: 92-345-3254-916, 92-21-3584-7429. Address: 55/1, B-Street, Khayaban-e-Shujaat, D.H.A Phase V, Karachi, Pakistan. Email: momenaabid@gmail.com

³ Dr. Muhammad Asif Qureshi, Research Associate, Dow University of Health Sciences, Karachi. PhD student (final year), University of Glasgow, UK. Contact #: +92 333 2295341, +44 141 7529926596. Email: a.qureshi@duhs.edu.pk, m.qureshi.1@research.gla.ac.uk

Abstract

Background: This study was carried out keeping in view the ever-increasing importance of research, particularly in the field of medical sciences.

Aims and Objectives: The study aims to evaluate the contribution of the medical universities and medical college-affiliated universities of Pakistan towards research.

Study Design: List of Pakistani medical universities and their published research during 2007 to 2010 was retrieved from the HEC database with their permission. As per HEC criteria only those publications were included that were indexed in Journal Citation Reports published by ISI Thomson Reuter. Publications were analyzed for their year wise, city wise and university wise distributions. Descriptive statistical analyses were performed by generating Box and Whisker plots. All illustrations were generated by using MS Office 2008 and/or Minitab for Macintosh.

Results: From 2007-2010, the total number of publications from all medical universities or medical college-affiliated universities was 5886. Out of 26 medical universities or medical college-affiliated universities in Pakistan, only 20 had publications in 2007, 21 in 2008, 23 in 2009 and 24 in 2010. The total number of publications from all included universities in 2007, 2008, 2009 and 2010 was 875, 1504, 1563 and 1944 respectively. The highest number of publications was produced by the University of Karachi, Karachi that was 24.58% (n=1447). With respect to city-wise distribution of publications, Karachi produced the highest number of papers.

Conclusion: Research publications by Pakistani medical universities are way below the international standards. Our study is first of its kind and we highlight the importance of such studies so that we can improve our standards of published medical research.

Keywords: Medical research, University Ranking, Pakistan.
Tuberculosis in Al-Ain Medical district in UAE—Epidemiological Study from 2001-2006

M. A. Usmani *, S.M. Nurulain1, A.S.M. Al-Khajah1, F.A.Sheikh.2, J.P.Singh3
1UAE University, AlAin, UAE, P.O.Box 17666, AlAin,
2AlAin Hospital, AlAin, UAE.
3School of Forensic and Investigative Sciences, University of Central Lancashire, Preston,
Email: Corresponding author: auusmani@gmail.com

Abstract

Introduction: Tuberculosis (TB) is an infectious disease which is caused by Mycobacterium tuberculosis. TB has been declared a Global Emergency by World Health Organization (WHO) because it is estimated that between 2000 and 2020, nearly one billion will be newly affected, and from this number, 200 million will get sick, and 35 million will die from TB. The peoples from six Asian countries including Bangladesh, India, Pakistan, Philippines, Indonesia and China constitute the bulk of immigrant resident/labour force of United Arab Emirates (UAE). It is generally believed that TB infected expatriates, who come to work in the UAE, are responsible for the spread of the disease. However, another hypothesis from some scientific community states that there is an indigenous TB source in local community besides the immigrant route of transmission. The Al-Ain Medical District is one of the three Medical Districts of Abu Dhabi Emirate and covers the Eastern Region. Al-Ain has a higher proportion of Emirati nationals than elsewhere. It represents a true conservative resident population. However, the majority of the population is expatriate immigrants from TB endemic countries. Expatriate population pattern is same as in other parts of UAE.

Aims and Objectives: The study was undertaken to compare the present TB situation with the past and to determine whether this is an imported disease prevalent mostly in either routinely screened immigrant expatriates or there is an endemic source, also prevalent in the local population.

Methods: All Epidemiological data and samples were collected from the local hospitals and the UAE district clinics in Al-Ain. The data were collected for the period of 2001 to 2006 and analyzed statistically and compared with past reports. Nine different parameters were analyzed, including molecular epidemiology by IS6110 RFLP (restriction fragment length polymorphism).

Results: The study revealed that the prevalence of TB did not change significantly during the last twenty years compared with previous findings. However, the results showed that the disease seems to be more prevalent in expatriate population in terms of numerical figures, but the population ratio analysis shows that it is proportional to population size whether expatriates or Emirati Citizens. Moreover, the prevalence of disease is more pronounced in young adult of working age 25-30 years rather than the old age groups. The female to male ratio was increased in the present study period. Restriction fragment length polymorphism (RFLP) study revealed low copies of IS6110 which seemed to be related with South Asian sub-population strain. It has been realized that the molecular technique was of limited discriminatory power because it yielded less polymorphism and low number of IS6110 copies. Hence, secondary genotyping would have more benefit for a definite conclusion.

Conclusion: From this study, it may be concluded that the prevalence of TB in UAE remained more or less stable for the past 20 years. The results also show that expatriate carriers are not the only cause for TB but it is prevalent according to the proportion of the population size though more in numerical numbers in expatriate population. Molecular biology technique gave evidence of remotely acquired and latent source of infection in the resident population which may be a reason for stable infectivity rate in spite of increased local population and many fold increased in the expatriate labour force and stringent control measures adopted by Ministry of Health. More
scientific and extended molecular work is needed to establish the transmission route and etiology of the disease in the multinational, multi cultured and mixed ethnic population of UAE.

**Keywords:** Tuberculosis; M.tb.; RFLP; epidemiology; endemic; IS6110 copies.
Gemcitabine Associated Pseudocellulitis

Abhijai Singh *, Hemanth Hampole, Norlock Frances
Department of Internal Medicine, John H Stroger Jr Hospital of Cook County, Chicago, Illinois - 60612, E-mail: abhijaisingh@gmail.com. Ph:001-312-813-4257. Fax:001-312-864-9136

Abstract

Introduction: Clinical masqueraders of cellulitis range from non infective inflammatory conditions including panniculitis and eosinophilic cellulitis to neoplastic conditions like AML, mesothelioma and chemotherapy associated dermatitis.

Case description: A 63 years old Columbian gentleman, recently diagnosed with metastatic adenocarcinoma and treated with two cycles gemcitabine 1000 mg/m2 presented with painful, confluent, macular erythematous rash on bilateral lower extremities with pedal edema of one week duration. He was afebrile with a total leukocyte count was 5 x 10^9 per liter. Doppler ultrasound of lower extremity deep veins was unrevealing for thrombosis. He was initially treated with cefazolin. However, after lack of improvement in 48 hrs a possibility of Gemcitabine associated “pseudo-cellulitis” was considered and an evaluation for causality using Naranjo Probability Scale showed a “probable” relationship. Gemcitabine was withheld and patient was noted to have improvement in rash promptly within a couple of days, and edema also decreased.

Discussion: Gemcitabine is a nucleoside analogue which has been implicated in a wide variety of dermatological manifestations including erysipeloids, dermatitis and radiation recall phenomenon. Pseudocellulitis is a non necrotizing inflammation of the dermis and hypodermis, which can perplex clinicians and promote unwarranted use of antibiotics. It has typically been described as a radiation recall phenomenon when associated with Gemcitabine. However, our patient had no prior radiation exposure. Treatment involves withdrawal of the offender and NSAIDs are used for symptomatic management. Non IgE mediated hypersensitivity is a proposed underlying etiology. Recognition of this condition is the key since it mimics various life/limb threatening conditions. A good history, physical examination and negative workup for infections and venous thrombosis in a patient recently started on gemcitabine based regimen of chemotherapy would generally narrow the differential diagnosis. Recurrence of the symptoms with every infusion cycle would provide the confirmation.
Thoracic epidural analgesia versus intravenous opioid analgesia for the treatment of rib fracture pain

S H Waqar¹, M A Zahid¹, Kamal Nasir²
From the Surgical Intensive Care Unit, Departments of ¹Surgery and ²Anaesthesiology, Pakistan Institute of Medical Sciences, Islamabad Pakistan

Corresponding Author: Dr S H Waqar, Assistant Professor, Department of General Surgery Pakistan Institute of Medical Sciences, Islamabad Pakistan. Ph: Off: 0092-51-9260115, 9260469
Email: drshwaqar@gmail.com

Abstract
Background: Rib fractures are common and pain from rib fractures can be difficult to control, particularly in first few days. This pain may affect the pulmonary function, morbidity and intensive care unit stay. The limited evidence from the previous studies illustrates the difficulties in determining the relevant outcomes.

Objective: To compare and evaluate the efficacy of epidural analgesia versus systemic intravenous opioid analgesia for the treatment of rib fracture pain.

Methods: The case records of patients with rib fractures between January 1, 2007 to June 30, 2010, were reviewed. Data was collected from 94 patients who had three or more rib fractures. Entry criteria included patients older than 18 years with 3 or more than 3 ribs fractures and no contraindications to epidural catheter placement. All patients had initiation of thoracic epidural analgesia with bupivacaine or intravenous opioid analgesia within 24 hours of admission in intensive care unit.

Results: Injury Severity Score was not significantly different between two groups, while patients in epidural group had significantly more rib fractures. Patients who received epidural analgesia had significantly lower pain scores, improved pulmonary functions and decreased intensive care unit stay.

Conclusion: Thoracic epidural analgesia provided better pain control than systemic intravenous opioid analgesia in rib fractures. However, further research is needed to strengthen this conclusion.

Keywords: Epidural analgesia, Rib fracture, Thoracic trauma
Awareness of Post Graduate Residents regarding Medical Research – A Tertiary Care Hospital Experience

S H Waqar*, Zeeshan Razaq1, Muhammad Mukhtar Khan2, Tanvir Khaliq3, M A Zahid4, Khaleeq uz Zaman4

1Assistant Professor, Department of General Surgery, Pakistan Institute of Medical Sciences, Islamabad, Pakistan
2Post Graduate Resident, Dep. of General Surgery, Pakistan Institute of Medical Sciences, Islamabad, Pakistan
3Professor, Dep. of General Surgery, Pakistan Institute of Medical Sciences, Islamabad, Pakistan
4Professor, Dep. of Neurosurgery, Pakistan Institute of Medical Sciences, Islamabad, Pakistan

Corresponding Author: Dr S H Waqar, Assistant Professor, General Surgery Unit III, Pakistan Institute of Medical Sciences, Islamabad, Pakistan | Contact: Office: 0092-51-9260115 | Cell No: 0092333-5131365 | Email: drshwaqar@gmail.com

Abstract

Introduction: Research activity of postgraduate medical trainees is important as it promises better clinical care, critical reasoning, lifelong learning and future research activity.

Objective: To assess the awareness, attitudes and practices of post graduate residents (PGRs) regarding medical research at a tertiary care hospital.

Methods: Cross Sectional (Knowledge, Attitude and Practices) study done at Pakistan Institute of Medical Sciences, Islamabad, from January to March 2011. A self administered 15 items questionnaire was provided to hundred PGRs after obtaining their informed consent. The PGRs included in this study belonged to all three component hospitals of Pakistan Institute of Medical Sciences, Islamabad including Islamabad Hospital (Medical & Surgical Specialties), Children’s Hospital (Paediatric Specialties) and Maternal and Child Health Centre (Gynaecology & Obstetrics). The data was entered and analyzed using SPSS version 10.

Results: There were 63 males and 37 females. 54% PGRs belonged to 26-30 years of age group. Majority (83%) enrolled in Fellow of College of Physicians & Surgeons (FCPS) programme of various medical & surgical specialties. 55% used internet for accessing medical research, followed by 25% who used medical journals. 15% of PGRs had never ever read a medical journal. None of the PGR read a medical journal on daily basis. 43% PGRs didn’t know how to do literature search. 88% used internet for literature citing but none used it on daily basis. 95% PGRs had never ever written an article for a medical journal while only 10% had ever presented a paper at a scientific conference.

Thirty six percent ranked the level of research training at their institute as poor. Almost half (45%) didn’t get a feedback from their seniors on presenting a research proposal. Majority (94%) PGRs intended to do research in future. Lack of resources (31%) and poor research training (17%) were the major hurdles faced by PGRs to pursue research.

Conclusion: The survey revealed inadequate knowledge and awareness amongst PGRs regarding medical research. Though the attitudes towards research were positive, they were deficient practically in terms of reading and writing literature. Residency training and research facilities at the institution need to undergo major transformation in order to encourage meaningful research by resident trainees.

Keywords: Post Graduate Residents, Medical Research, Medical Journals
Body Mass Index: knowledge, practice and health evaluation
Cornelia, Rada
„Francisc I. Rainer” Anthropological Institute, Bucharest, Romanian Academy, Romania,
Email: corneliarada@yahoo.com

Abstract

Introduction: The health related expenses whether direct or indirect for the overweight individuals, the decrease of the quality of personal and social life of the obese individuals makes this subject a public health one. Specialized physicians, nutritionists, fitness trainers, psychologists, anthropologists etc. agree that both the explanations and the interventions are multidisciplinary and also include a series of factors.

Objective: The determining of the socio-demographical characteristics of the population that holds a high risk for overweight and obesity together with the evaluation of certain knowledge and beliefs related to Body Mass Index (BMI), state of health and physical activity. To examine the association between perceived overweight status and weight control, discrepancies between perceived and measured weight status.

Method: This article is based on project „Identitary values of the contemporary Romanian family in the framework of the globalization. An anthropological approach“, financially supported by European Social Fund (ESF) Contract POSDRU/89/1.5/S/59758/2011-2013. The sample by 862 subjects, not representative for the entire country, was random selected, aged 18-74 years, distributed relatively equal by environment, gender and age group. We have used an omnibus questionnaire of 96 items focusing on family functioning: economical, educational, cohesion-solidarity and sexual-reproductive. The subjects have also been measured and weighted. In this article we shall make reference to 4 items on BMI, physical activities, state of health. Statistical analysis (Pearson Chi-Square test) have been performed using the statistical programs SPSS.

Result: The prevalence of overweight and obesity in the sample in Romania is higher in the rural area, for the male individuals of over 35 years of age (p<=0.001). 52.4% (N=452) have stated they do not know what is the right weight according to their height. The others had a more accurate evaluation of the weight they should have (p=0.000); The least accurate evaluations of the ideal weight have been done by the subjects in the rural area (30.8% vs. 69.2%; p=0.009). The personal weight control is smaller in the rural area among the male subjects (p=0.000). The numerical level of people that regards themselves as being „active” and „very active” is larger in the rural area (p=0.000). Over half the subjects perceive their state of health as least good, most of them being in the rural area, of female gender and of an age of > 35 years. Overweight and obese men are not aware of their state of health being under the optimal level (p<=0.008).

The body weight control did not correlate with the normal BMI, with the correct estimation regarding the ideal weight but the concern for the weight control has raised according to the educational level (p=0.000). The extent to which the subjects consider themselves as „active” and „very active” is higher in the rural area (p=0.000).

Conclusion: The target of the educational programmes in Romania should cover especially the population with the following characteristics: originated in the rural area, male gender, over 35. Taking into consideration that in Romania most of the population up to 35 years of age is married and have children, we consider these parents need educational interventions in order not to pass the same unhealthy attitudinal and behavioural patterns related to diet and physical practice to their children.

Keywords: Body Mass Index, overweight, obesity, socio-economic factors, quality of life, public health
Menstrual characteristics’ and ‘Prevalence and Effect of Dysmenorrhea’ on Quality of Life of medical students

Shrotriya Charu*1, Ray Amita2, Ray Sujoy3, George Aneesh Thomas4:

1 3rd MBBS Fr Muller Medical College, Karnataka, India
2 Assistant Professor, dept of Obstetrics and Gynecology, Fr Muller Medical College, Karnataka, India
3 4th MBBS, Kasturba Medical College, Manipal, Karnataka, India
4 Senior Research Fellow, South Asian Cochrane Network and Center Christian Medical College Vellore

Corresponding Author: Fr Muller Medical College, Mangalore-575002, Karnataka, India.

Abstract

Background: A common gynecological problem encountered among female medical students is dysmenorrhea, which also appears to be a leading cause of absenteeism from college, hence arises a need to evaluate the menstrual characteristics, prevalence of dysmenorrhea and its effect on daily routine activities and quality of life of medical students.

Aim/objective: This is a cross sectional descriptive study, conducted on 560 female medical students with the objectives to evaluate the menstrual characteristics, prevalence and severity of dysmenorrhea, and its effect on the quality of life, particularly absenteeism from college.

Methods: Three medical colleges in Mangalore, Karnataka, South India provided the setting of our study. These were representative of a cosmopolitan nature of the study population. A total of 560 students were interviewed by the investigators. All participants were given a preformed questionnaire to complete. Besides menstrual characteristics the questionnaire included gradation of pain and quality of life based on the American Chronic Pain Association (ACPA) which was modified according to needs of our study. Chi-square test and logistic regression were used for statistical analyses.

Results: The average age of the participants was 20.57 years +/- 1.208 years (ranging from 17-24 years). The mean BMI of the participants was 21.69 +/- 3.27 kg/m2 (ranging from 14.7 kg/m2 to 33.54 kg/m2). The average age of menarche was 12.67 +/- 1.10 years, (9 to 16 years). The average menstrual cycle duration of the participants in the study group was 29.52 +/- 3.37 days.

97.2 %(533), family history of dysmenorrhea was present in 221 participants out of the total (560) no of participants.

Of the total (560), 86.96 % (487) participants reported to have physical premenstrual symptoms. 55.71% (312) participants, (out of 560) reported to have psychological premenstrual symptom.

There is a significant association between Quality of Life and dysmenorrhea and its severity.

Conclusion: Our study shows a significant association of dysmenorrhea with the age of menarche, family history, both physical and psychological premenstrual symptoms. Although there was an association of dysmenorrhea with chronological age, BMI and cycle length, these associations were not found to be statistically significant.

The most significant conclusion of our study was found to be high prevalence of dysmenorrhea, having a significant effect on the routine activities and a detrimental effect on the quality of life.

The alarming prevalence of self-medication in the form of NSAID's, easily available over the counter was also highlighted in our study.

Keywords: Dysmenorrhea in Medical Students, Effect on Quality of life,
Frequency of gram negative organisms isolated from sputum samples of patients with respiratory tract infections presenting to a tertiary care hospital

Muhammad Usman Shah 1, Mobasser Mahmood 2, Javaid Usman 3, Fatima Kaleem 4, Ali Khalid 5

1 Army Medical College, National University of Sciences and Technology, Pakistan.
   Email: usman_shah44@msn.com
2 Army Medical College, National University of Sciences and Technology, Pakistan.
   Email: mobasser88@gmail.com
3 Army Medical College, National University of Sciences and Technology, Pakistan.
4 Army Medical College, National University of Sciences and Technology, Pakistan.
   Email: fatima_kaleem@hotmail.com
5 Army Medical College, National University of Sciences and Technology, Pakistan.
   Email: ali_khalid1@yahoo.com

Abstract
Background: Respiratory tract infections present one of the most important problems that our health care system has to face today. The condition comprises upper and lower respiratory infections. The frequency of pathogens responsible for these conditions is changing. A broad array of pathogens have been implicated as etiologic agents, the most important being gram negative bacteria. Regional changes in the frequency of these organisms have also been noted other studies.

Aim & Objective: The objective of the study was to determine the frequency of gram negative bacteria isolated from sputum samples of patients with respiratory tract infections presenting to a tertiary care hospital of Pakistan.

Methods/Study Design: A descriptive, cross sectional study was carried out at the Microbiology department of Army Medical College, National University of Sciences and Technology, Rawalpindi, from May 2009 to February 2011, catering for the Military Hospital, Rawalpindi. All sputum samples sent from the hospital were processed according to standard microbiological procedures and the various organisms were identified and recorded on its subsequent culture.

Results/Findings: The research findings showed that 549 (34.4%) samples yielded a positive pathogenic organism on culture, 316 (57.6%) of which were gram negative bacteria. Pseudomonas aeruginosa was the most frequently isolated organism among the patients with 105(33.2%) organisms isolated followed by Hemophilus influenza 62 (19.6%).

Conclusion: Gram negative bacteria are the most common organisms isolated from sputum samples of patients with signs and symptoms of respiratory tract infections in the Pakistani population, with the main organism being Pseudomonas aeruginosa.

Keywords: Respiratory tract infection, Gram negative bacteria.
Caries Prevalence among Schoolchildren in Iran: A Cross-Sectional Study

Shahab Rezaeian¹*, Mina Shayan²
¹Department of Epidemiology & Biostatistics, School of Public Heath, Hamadan University of Medical Sciences, Hamadan, Iran
²Deputy of Health, Kurdistan University of Medical Sciences, Sarvabad, Iran
Corresponding author: E-mail: shahab fs@yahoo.com

Abstract

Background: The importance of dental caries as a persistent public health problem has been recognized in most countries particularly Iran. Although it has been reported that fluoride varnish and regular use of fluoride toothpaste can prevent caries, nevertheless according to the several studies data in different parts of Iran, it has a prevalence of between 38.2% to 74.7%.

Objective: The aim of the study was to assess the prevalence of dental caries among children in a residential school in Iran.

Methods: In this cross-sectional study a total of 2596 children were selected from primary, secondary and high schools in Sarvabad, located in the west of Iran. Dental caries prevalence was evaluated by DMFT and caries indexes were measured as the number of decayed (D), missing (M), and filled (F), teeth (T) (DMFT) or surfaces (DMFT). Oral exam was conducted and the presence of dental caries was recorded.

Results: A total of 2596 children were subjected to the study, wherein 42.9% children were girls and 82.8% children were rural. An age group in the range of 7 to 15 years children were included in the study, wherein 30.6% were primary schools, 32% were secondary schools and the rest high schools. The prevalence of DMFT was 37.2%, 61.3% and 41.5% for primary school, secondary school and high school, respectively. The frequency of DMFT was higher in secondary school (p<0.001). The total DMFT prevalence was 46.5% [95% CI: 44.6%, 48.5%] and prevalence was significantly higher among boys (51.1% in boys vs. 40.4% in girls, P < 0.001), and among rural schoolchildren (52.9% in rural vs. 15.5% in urban, P < 0.001).

Conclusion: There is the high prevalence of caries, particularly among secondary school children and as caries continues to be responsible for significant health, social and economic impacts, there is an urgent need for schoolchildren to receive a systematic education about dental health and the public health interventions among this population are therefore urgently needed.

Keywords: Caries, DMFT, School, Iran
Knowledge and Attitude of HIV/AIDS Infection among Medical Students

Dr Han Ni
MB, BS. M Med Sc (Internal Medicine), Assistant Professor, Department of Medicine, Melaka Manipal Medical College, Melaka, Malaysia
Former Medical Lecturer, Department of Medicine, School of Medicine, Universiti Malaysia Sabah
Correspondence to Dr Han Ni, Assistant Professor, Melaka Manipal Medical College, Jalan Batu Hampar, Bukit Baru, 75150 Melaka Malaysia
Email: hannidr@gmail.com

Abstract

Introduction: HIV/AIDS is a major public health problem with approximately 1600 new cases occurring every day. According to the global estimates by UNAIDS, the people living with HIV/AIDS was 33.4 million by the end of 2008, with 3.8 million being in South and South East Asia.

In Malaysia, the introduction of HIV virus was estimated to be around early 1980's. Since then, according to the Ministry of Health Statistics, 87,710 confirmed HIV infected cases, 15,317 AIDS cases and 13,394 HIV/AIDS related deaths are reported by the end of 2009. Adults aged between 20 and 39 years constitute for more than half of the new HIV infections. Every day, more than 10 Malaysians are tested positive for HIV infection.

Objective: The objective of this study is to assess the knowledge and attitude of HIV/AIDS infection among the medical students of Universiti Malaysia Sabah, a public medical school in Malaysia.

Method: This study is a cross sectional questionnaire based study conducted at the School of Medicine, Universiti Malaysia Sabah. A specifically designed questionnaire was distributed to all the medical students on the first day of the semester. The questionnaires regarding knowledge were focused on various methods of transmission, high risk behaviours and preventative measures. Attitude towards HIV/AIDS patients, sexual behaviours, condom usage, sex education and resource allocation for HIV/AIDS patients were assessed.

Result: A total of 155 medical students participated in this study, with the age ranging from 19 to 25 years. Majority gave correct responses for mode of transmission while only 60.6% had knowledge that HIV can be transmitted via kissing an infected person when oral ulcer is present. Concerning mother to child transmission, 72.3% responded that the transmission is in-utero and only 65.2% realized the transmission through breast milk. Regarding knowledge on high risk population for HIV infection, only 17.4% agreed for youth. 146 students (94.2%) had knowledge that HIV infection can be prevented by condom usage but only 69 students (44.5%) responded correctly the effectiveness of the condom. Majority of the respondents (83.2%) disagree for showing no sympathy towards HIV positive persons. Regarding various sexual behaviours, 43.2% and 35.5% approved for masturbation and oral sex respectively while 78.7% and 86.5% disagreed for anal sex and sex with changing partner respectively. 88 respondents (56.8%) agree for condom usage with every sexual encounter whereas 1 student believed that condom should never be used. Most of the students (98.7%) agreed for the need of sex education sessions. 90.3% did not believe that resource allocation for caring of HIV/AIDS patients is unworthy.

Conclusion: Even among the medical students, the knowledge of mother to child transmission through breast feeding is weak and most of them believe that transmission is mainly in utero. Only a small percentage of medical students regard the youth as one of the high risk populations for HIV infection. Majority of the students acknowledge that condom can be preventive of HIV infection but they did not know the extent of effectiveness of the condom usage. Furthermore, only 56.8% agree
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for condom usage with every sexual encounter. Based on the findings of this study, knowledge regarding mother to child transmission and condom usage must be more emphasized in the medical curriculum so that the future doctors could play the leading role in better prevention of HIV/AIDS infection in the community.

**Keywords:** Knowledge, Attitude, HIV/AIDS infection, Medical students
The Fear of Falling Among Older Adults: Zooming in homes in Malacca, Malaysia

Hanisah Mahmood  
hanisah_mahmood@yahoo.com
Siti Salwa Talib  
salwatalib@gmail.com
Abd Mutalib Embong  
mutablemembong@petronas.com.my
Azelin Mohamed Noor  
azelin_noor@petronas.com.my.com.my
Zullina Hussain Shaari  
zullina_shaari@petronas.com.my

Abstract
The study uncovers the perception of falls among older adults in Malacca, Malaysia and the presence of environmental hazards in their homes. Visits to the homes of 72 elderlies were made to determine their fear level of falling by using the Fear Efficacy Scale International (FES-I) and subsequently to identify the relationship between the fear of falling and environmental hazards while determining the relationship between age and gender with the fear of falling. Unlike previous studies, they are not concerned about falling and the fear of falling only affects those with physical and medical illness, and had had a history of a fall. Also, there is no significance between fear of falling and environmental hazards. Meanwhile female respondents are more prone to the fear of falling as compared to males and the older adults who fear of falling is significantly older than those who do not.

Keywords: Elderly, Falls, Home environmental hazards, Fear of falling
Heavy maternal Fish Consumption and Developmental Milestones- A Cross-Sectional Study

Nauman Ahmad Khan¹, Hina Ahmed ², Rizwan Ahmad Khan³
Dow University of Health Sciences, Karachi, Pakistan
Nauman Ahmad Khan: Phone: (092) 323-2392979, khan.nauman12@gmail.com
Hina Ahmed: Phone: (092) 322-2441360, hinaahmed87@gmail.com
Rizwan Ahmad Khan: Phone: (092) 333-3611889, rizkhan89@hotmail.com

Abstract

Background: Fish is a healthy addition to the diet. It’s vitamin, mineral and nutrient content and it’s protective effects on the cardiovascular system are common knowledge today. But are there conditions when excessive fish consumption can lead to negative effects on health? Studies have been, and are being conducted on the adverse effects of fish consumption, especially in children born to pregnant mothers whose diet consists predominantly of fish. Greater mercury levels in fish exposed to toxic substances in the sea have been under study as one of the components in fish that can cause adverse effects. We selected the village of Rehri Goth, located at the coastal areas of Pakistan, and home to a fishermen community where fishing is the primary means of livelihood for a large majority of the population and fish is the staple food in the community.

Objectives: To determine the impact of fish on the developmental milestones of children born to mothers consuming fish regularly during pregnancy and while breastfeeding.

Methodology: A questionnaire based, cross-sectional study with a sample of 244 mothers and a total of 352 indexed children. The study was conducted at a community centre and in the community at Rehri Goth, Karachi, throughout March-May 2009. In the community centre, mothers with their children present prior to seeing the primary care doctor were requested to participate in the study. Door-to-door interviews were also conducted in the community at large. Mothers were explained objectives of the study and written consent was taken. Only mothers with children under 5 years of age were included in the study. Age (in months) of achieving certain milestones was documented and compared with standard ranges of developmental milestones for Pakistani children. The milestones were divided into several categories: gross motor, fine motor and speech development.

Results: Out of a total of 244 mothers, 220 consumed fish daily during pregnancy and breastfeeding, a percentage of 90.1%. The mean age at beginning to walk was 11.1 months (S.D-2.1) for male children and 10.9 (S.D- 2.3) for females. The mean age at first words was 11.2(S.D-2.4) for males and 11.0 (S.D- 2.2) for females. The data was compared to the mean age of children achieving these milestones from other studies across Pakistan as well as normal ranges and it was found after adjustments for covariates that there is no significant link between greater consumption of fish during pregnancy and breastfeeding with delay in developmental milestones in children.

Conclusion: The study found no significant association between fish consumption and developmental delay. This is in agreement with several other studies conducted in different countries along these lines and implies that it is safe to consume fish on a daily basis which is an excellent and low-cost source of nutrients for low-income fishermen households. This cross-sectional study can be used as a pilot to conduct a larger scale lab-based cohort or case-control study to measure methylmercury levels in children and pregnant women as well as determine the mercury levels in the various types of fish consumed by the community to get a more definitive picture of causation.

Keywords: Developmental milestones, fish consumption, methylmercury, mercury levels
Immunization Awareness amongst Mothers of Children at A Tertiary – Care Hospital

Nauman Ahmad Khan¹, Hina Ahmed²
Dow University of Health Sciences, Karachi, Pakistan

Nauman Ahmad Khan, Phone: (092) 323-2392979. khan.nauman12@gmail.com
Hina Ahmed, Phone: (092) 322-2441360. hinaahmed87@gmail.com

Abstract

Background: Vaccination is a crucial tool to defend against childhood infectious disease. The prevalence of immunization and immunization awareness are affected by a number of factors including maternal age, literacy and socioeconomic conditions. To counter the high infant mortality rate in developing countries, WHO and UNICEF launched the Extended Program for Immunization (EPI) in 1976 to protect against the major infectious diseases affecting children. This study was conducted at Civil Hospital Karachi (CHK), the one of the largest hospitals in Pakistan.

Objectives:
- To assess the level of awareness about immunization amongst mothers at a large tertiary care hospital in a major city in Pakistan.
- To determine mother’s perceptions about the effectiveness of immunization
- The prevalence of complete immunization amongst children at CHK
- To document the major contributors to awareness about immunization amongst mothers.

Methodology: In this cross-sectional survey, a questionnaire was developed to gather information to define the demographic profile and to accomplish the study objectives. It was administered by trained medical students to mothers of children visiting pediatric clinics in Civil Hospital Karachi (CHK) during August-October 2009. There are 3 pediatric wards in CHK with over 40 patients in each ward and over 100 patients attending clinic per day. 500 mothers were interviewed in the survey. Fathers and all relatives besides the mothers were excluded from the survey. Full immunization was defined as completing all vaccinations according to the EPI’s guidelines. After explaining study objectives to mothers, written informed consent was obtained and assurance with regards to confidentiality was provided.

Results: 500 mothers and 1585 children were included in the study, with a mean 3.17 children per woman. The women were mostly uneducated (53%) and from low-income homes (51%). Full immunization status was reported in only 542 (35%) of children. At the same time, 447 (89.4%) mothers opined that vaccination prevents disease while 37 (7.4%) mothers thought that vaccination was harmful. 303 (60.6%) were aware of the government launched EPI program. The major sources of awareness regarding immunization were through doctors and ante-natal clinics (37.4%) followed by local door-to-door health workers (31.7%) and the family (13.0%). Surprisingly, the media was found to play a relatively small role in raising awareness (15.4%). The study revealed that awareness of vaccines was highest regarding diseases like poliomyelitis (91.1%), measles (51.1%), TB (38.3%), hepatitis B (29.8%).

Conclusion: While a large majority of mothers (89.4%) are aware of the role of vaccination in disease prevention, it is unfortunate that only 35% of children were fully immunized. This is lower than what other studies across Pakistan have reported. The reasons behind this gap between
knowledge and practice need to be evaluated. Our study showed that most of the awareness is attributed to the efforts of healthcare workers. The media on the other hand can and should be playing a more proactive role to raise greater awareness. More effective health policy development and planning can help translate awareness into greater immunization coverage and lower infectious disease prevalence and contribute to finally eradicating diseases such as polio in Pakistan and the rest of the developing world. This study provides insight into the prevalence of immunization in the population and can be used to conduct other hospital and community based studies following interventions such as health policy changes and media campaigns promoting immunization.

**Keywords:** Immunization, vaccination, public health, infectious disease, Extended Program for Immunization (EPI), pediatrics
Biventricular Heart Failure, an early sign of thyrotoxicosis

Sachin Kumar Amruthlal Jain, Kashyap Patel, Patrick Alexander, Shukri David
Department of cardiology, Providence Hospital and Medical Centers, Southfield, MI, USA

Abstract
The prevalence of congestive heart failure (CHF) is increasing. A rare cause of CHF is hyperthyroidism. It can affect the cardiovascular system manifesting from decreased systemic vascular resistance, increased left ventricular contractility, and sinus tachycardia to atrial fibrillation. Less than 0.5% is due to tachycardia-mediated mechanism. Heart failure in the absence of underlying cardiac disease or arrhythmia is thought to reflect a rate related cardiomyopathy that most likely resolves with treatment.

Our patient is a 56 year-old African American female with past medical history of subacute thyroiditis and medication noncompliance presented to ER with a two-week history of increasing exertional dyspnea and bilateral leg edema. She was hypertensive, tachycardic and tachypnic. Examination revealed bibasilar rales and 2+ pitting edema. Laboratory data revealed a TSH of 0.01 and free T4 of 3.3, consistent with hyperthyroidism. Two-dimensional echocardiogram revealed biventricular enlargement and ejection fraction of 25%. Thyroid uptake scan demonstrated significant homogenous uptake in both lobes consistent with Grave’s disease. Six months ago her thyroid scan showed 5% uptake with hyperthyroid state, consistent with subacute thyroiditis. She was treated with beta-blockers and diuretics with profound symptomatic improvement. Definitive therapy consisted of maintaining euthyroid state.

This case illustrates an unusual presentation of Grave’s disease with CHF without atrial fibrillation. Typically, thyrotoxicosis presents as high output failure. However, as time progresses it can cause low output failure. Dilated cardiomyopathy is an unusual manifestation of hyperthyroidism with unclear etiology. Early diagnosis is of utmost importance as some patients with hyperthyroidism may have a reversible form of dilated cardiomyopathy.

Keywords: Congestive heart failure, Grave’s thyrotoxicosis, Tachycardiomyopathy.
The Effect of Cycling on thoracic & Lumbar Spine Posture: An introduction to the back posture index (BPI)

A. Sofela, A. Shetye, B. Webb
King’s College London, London, UK

Abstract

Background & Objectives: The popularity of cycling, both as a sport and as a means of transportation has seen a dramatic increase in the United Kingdom over the past decade. Cycling is known to have positive effects on general body fitness and cardiovascular health, but the effects of cycling on the musculoskeletal system and joint structure & function are unknown. This study aimed to determine the effects of high intensity/long term, and low intensity/amateur cycling on upper trunk (thoracic spine) and lower back (lumbar spine) posture.

Methods & Design: The 102 subjects (34 female and 68 male) that participated in the study were split into three groups; a high intensity cyclist (study) group, a non cycling (control) group and an amateur cyclists group. The same observer took all the measurements in the study, measurements which include general body size measurements (such as height, weight, e.t.c); and the relevant postural angle measurements. A questionnaire was also used to collect data on the cycling type, cycling intensity and the athleticism of the subjects.

Results: The mean lumbo-sacral angle measurements were smaller in the study group compared to the control and amateur cyclists groups, with significant differences of 10.71 ± 25.40 (p < 0.05) and 14.12 ± 28.30 (p < 0.05) respectively. There were no significant differences in the thoracic spine angular measurements.

Conclusion: In comparison to the control group, long term/high intensity cycling significantly decreases the angle at the lumbo-sacral junction (eventually resulting in a pathological lumbar lordosis), while short term/low intensity cycling may increase the lumbo-sacral junction angle (flattened lordosis). Cycling for any period of time/at any intensity has no effect on either the upper trunk (thoracic spine) posture or the back posture index, BPI.

Keywords: cycling, back posture index, cardiovascular health, fitness
A G15719C Leptin Gene Polymorphism is Associated with Lesser Perception of Stress and Other Physiological Reactions to Stress in Adult Working Pakistani Women

Zeba Haque*, Farzana Yasmeen2, Darakhshan J Haleem3
1 Professor of Biochemistry, Dow International Medical College, Dow University of Health Sciences, Karachi, Pakistan
2 Professor Biomedical Engineering, NED University, Karachi, Pakistan
3 Dean Faculty of Sciences, University of Karachi, Karachi, Pakistan

Abstract

Introduction: The prevalence of obesity and depression is increasing at an alarming rate. The state of obesity and perception of job stress is different in both genders. The circulating levels of stress related hormones cortisol, serotonin and leptin are attenuated in stress.

Objective: To investigate variations in the coding regions of leptin gene in relation to stress perception and other biochemical and physiological parameters of stress perception.

Method: With verbal and written consent, twenty working women were identified from 5 corporate sections of local banks in Karachi. Stress perception was measured by standardized questionnaire. Depending on stress scores the data were classified as no/minimal, mild, moderate and severe stress groups. Changes in appetite were determined by visual analogue scale for hunger and desire to eat during stress. The chemical analytes were measured by ELISA. Leptin gene was sequenced using 3130 Genetic Analyzer of (ABI) Applied Biosystems using BigDye Terminator 3.1 Sequencing Kit protocols at Centralized Science Laboratory University of Karachi. One way ANOVA was applied to analyze data.

Result: The BMI and VAS for hunger and desire to eat increased significantly with the severity of stress (p<0.05). Although circulating levels of leptin and cortisol also increased with stress perception (p<0.05) but a decrease in cortisol levels was observed in the group with severe stress perception. Plasma serotonin decreased with increase in stress perception. A single nucleotide polymorphism was found in 5' flanking region of exon 2 of leptin gene compared to the reference gene fragment retrieved from gene bank with no minimal perception of stress. The guanosine at position 15719 in the reference fragment was replaced by cytidine. No variation was found in the DNA sequences of exon 2 of women with mild, moderate or severe perception of stress. No variation was found in the segment of exon 3 of leptin gene.

Conclusion: The consistent finding of a G15719C variant on the 5' flanking region of exon 2 of LEP in the group of women who claimed no/minimal stress suggest a role of this gene in stress induced obesity and other physiological reactions to stress.

Keywords: obesity, depression, biochemistry
Study of inimical relation in homoeopathic therapeutics

Dr Truptilaxmi Swain
Father Muller Homoeopathic Medical College, Mangalore, India
Email: truptilaxmi@gmail.com

Abstract
Introduction: The inimical relationship of remedies is the most critical moment in any Homoeopathic cure in second prescription, which has been analyzed from the point of view of remedy, reaction & remedy relationship. It provides a clue, makes the prescription easier. The data or lessons derived from experience could help to highlight the potential role of inimical relationship in homoeopathic management of cases.

Objective: The purpose of this paper is to enhance the importance of inimical remedies in clinical practice.

Materials and Methods: In a randomized prospective and retrospective review study was done from the records of outpatient department of Fr. Muller homoeopathic medical College and Hospital (FMHMC&H) from 2000 onwards till 2011. Moreover 100 cases with inimical prescription were found out of 8,000 standardized case records of FMHMC. Every prescription was seen & verified thoroughly. A sample of minimum 30 cases was selected depending on duration of action of remedies for this study. The diagnosis was based on clinical history, clinical presentation and examination findings. The cases were selected for the study after fulfilling the inclusion as well as exclusion criteria. Every case was analyzed with reference from materia medica, repertory and therapeutics whenever required, with a special emphasis on the inimical relationship of remedies.

Result: Effectiveness of the treatment was noted with the relief of symptoms, aggravation of symptoms and appearance of new symptoms and improvement of general health of the patient respectively. From the statistical analysis, it is found that the Homoeopathic medicines have adverse effects in inimical relationship prescription in clinical practice.

Limitations of the study:
1. As per the medical ethics inimical relation was given accidentally, which shouldn't be given since it is not beneficial.
2. Remedies having inimical relation were avoided while making a prescription.
3. The sample size is limited to 30 cases, therefore generalizing the result & conclusion of this study need to be done cautiously.
4. Frequent change of remedies was an obstacle to assess the action of the drugs.

Conclusion: The inimical relationship of remedies in clinical practice is effective in homoeopathic management which will enhance the percentage of cures. We observed both diet and remedies play a vital role in inimical prescription. More elaborate and prospective studies may be considered to give us a clearer picture.

Keywords: Relationship, inimical, adverse effect, observational study
Medical College Hostels in Karachi - Problems Faced by Medical Student

Dr’s Seema Mumtaz, Murad Qadir

Correspondence Author: Dr. Seema N. Mumtaz. Associate Prof. & HOD Deptt. Of CHS. Hamdard university, Karachi, Pakistan | Telephone #: 0333-2342492

Abstract

Background: Students who live independently are subject to less parental control which can initiate unhealthy behaviors. Such students are more prone to poor eating habits, lack of sleep, or the acquisition of new habits, such as smoking or drug use etc.

Aims and Objectives: This study was conducted to know the general problems faced by hostel based medical students. Also, through this study the researchers tried to assess the outcomes resulting due to these problems in students residing in hostels of Medical Colleges in Karachi during 2008.

Methodology: This was a cross sectional, descriptive study. The study population includes students living in the hostels of 05 public and private medical colleges in Karachi, 2008. Sampling criteria was non-probability convenient sampling and sample size was 200 students from 05 hostels. The study was questionnaire based and includes only male students. The data was analyzed for different variables by using SPSS-12.

Results: The response rate was 88%. All the respondents were male. 33.5% students were eating unhealthy food and 50% of the students were drinking impure water that subjects them to a number of illnesses in which diarrhea and food poisoning (51.5%) are the top most. 47.5% of the students suffered from illness 1-2 times during the last one month.

81% of the students share their rooms with one or more students, which directly affect their studies, sleep and privacy. 56.5% of the students suggested that these problems can be solved if one student is accommodated in one room.

29.5% of medical students living in the hostel have the habit of smoking, out of which 27.5% started smoking after coming to the hostel.

The ideal facilities were deficient in 90% of the hostels, like Internet facility, Transport facility, Back up support for electricity, Sweeper services, Recreational activities and gym facility.

Conclusion: The results of this study reveal that there is an immediate need to take steps to set the standards of hostel facilities. There should be a check on the mess to provide good quality of food to the hostellers so that the incidence of food-borne diseases can be decreased. The standards are also to be regulated and supervised by some governing bodies like college/Universities administration, HEC or PMDC etc.

Keyword: Medical students, medical college hostels, Karachi, Problems.
HIV, young people, misinformation: Italian AIDS and STDs Help-Line

Filippo Maria Taglieri, Anna Colucci, Pietro Gallo and Anna Maria Luzi
Department of Infectious Parasitic and Immune-Mediated Diseases
National Institute of Health in Italy, Rome, Italy
Corresponding Author: Filippo Maria Taglieri, Research psycho-socio-behavioural, Communication, Training Unit, Department of Infectious Parasitic and Immune-Mediated Diseases, National Institute of Health in Italy, Viale Regina Elena, 299, Rome, Italy
Tel. +39 06 49902168 Fax +39 06 49902695
E-mail: filippo.taglieri@guest.iss.it

Abstract
Background: This paper resulted from a survey carried out by the “Telefono Verde AIDS/Infezioni Sessualmente Trasmesse” (TV AIDS/IST) of the National Institute of Health in Italy.

Aim & Objectives: The purpose of this article is to show what are the information needs of young people who access to TV AIDS/IST National Service.

Methods: The study was developed within the context of daily calling only on HIV/AIDS received since 1987 by researchers of TV AIDS/IST.

The study sample was stratified into three age classes 10-14, 15-19, 20-24 years and was analysed in three different time bands: 1987-1994, 1995-2002, 2003-2010. For the year 1987 should be considered that the data collected are for six months as the activity of HIV/AIDS counselling was initiated at the end of June.

It was also created a variable “risk” on the basis of which the young people were identified, which, during the interview specialist telephone counseling reported having had at least one sexual intercourse (anal-receptive inserts, vaginal, oro-genital) is not protected by condoms.

The results were analyzed using version 3.5 of Epinfo software.

Results: These data show the information needs of a sample of Italian young people about HIV/AIDS, who calls TV AIDS/IST. It seems from the data analyzed that young people use Internet as a priority source of information, only then they make use of personalized services such as TV AIDS/IST.

In over twenty-three years of the TV AIDS/IST has received 687,970 phone calls of these 52,490 were received by young people aged between 10 and 24 years. The 70.9% (132,945) phone users are male and 29.1% (54,487) of female users, while 89 people (0.05%) the information is missing.

As regards the geographical distribution of phone calls, they have come from North 82,469 (44.0%), the Center 51,597 (27.5%), South 39,142 (20.9%), 14,099 from the Islands (7.5%) and 203 people (0.1%) this figure is not available.

One of the most surprising results that were observed was obtained by correlating, however, gender, age group and the affirmation to have had a risk is clearly seen as in girls (according to their assertions) the risk decreases with increasing age in contrast to the boys in whom the risk is directly proportional to age.

Conclusion: This study brings to light issue that should be a starting point to invest in HIV/AIDS education and prevention programs. In a country like Italy, which sees more and more people become infected because of sex without a condom, the scientific and personalized information still has a key role. In this scenario young people seem to be even more vulnerable for the age, for lack of information and for no perception of the risk of contagious.

Keywords: Young people, HIV/AIDS, Help Line, information, prevention, transmission.
Patient Satisfaction – A comparison between Public and Private sector hospitals of Peshawar

Dr. Afshan Khattak¹, M. Ismail Alvi², M. Awais Yousuf², S. Zain-ul-Abideen Shah², Diva Turial², Sohail Akhtar²

¹Pediatric consultant SKMCH, Pakistan  
²Peshawar Medical College, Pakistan  
rocksolid.zain@gmail.com

Abstract

Introduction: The concept of patient satisfaction is not new. Patients are one of the main stakeholders among the modern world of medicine. With changing patterns of disease, newer therapies and patients’ perceptions, care and cure are now entirely separate concepts. There have been several efforts to quantitatively measure patient satisfaction in Pakistani patients. Studies from Karachi, as well as Peshawar, either used patient satisfaction inventories used in developed countries or self prepared non-validated questionnaires. Not much work has been done to compare the patient satisfaction level in government and private sector hospitals.

Materials and Method: A cross-sectional comparative study in three private and two public sector hospitals of Khyber Pakhtunkhwa was conducted from May’2010 – January’2011. 200 patients were enrolled through convenience sampling. Interviews were carried out after taking informed consent using pre-validated modified PSQ III. Institutional agreement to conduct study and assurance of non-disclosure of institution’s name was ensured. Data analysis was carried out using SPSS v17.0 and Student’s T-test was applied to compare the scores.

Results: Total 200 patients (100 each from government and private sector hospitals) were interviewed after taking verbal consent. Mean patient satisfaction score in private sector hospitals was 121.94 ± 20.84 which was significantly higher than that of government sector hospitals, which was 104.97 ± 18.51 (p < 0.001). The scores for patient satisfaction in private sectors hospitals are significantly more in comparison with government sector hospitals in all aspects (p < 0.01) except “time spent with doctors” (p = 0.954).

Conclusion: In conclusion, patients in private sector hospitals are more satisfied than those in government sector hospitals. Both the groups are equally unsatisfied about the time spent with doctors.

Keywords: Patient satisfaction, hospitals, Pakistan
The influence of cigarette smoking on male human fertility

Azar Aghamohammadi
Department of midwifery, Sari Branch, Islamic Azad University, Sari, Iran
Corresponding Author: Tel.: +989113514912 ; fax: +981513267026
E-mail address: azareaghamohamady@iausari.ac.ir

Abstract
Background: The large number of men worldwide smoke and it is the fact that cigarette smoke contains known complication such as mutagens and carcinogens.

Aim & Objectives: The aim of this study was to evaluate consequences of cigarette smoking on sperm parameters.

Material & Methods: In this Cross-sectional study, From 1 April 2010 to 1 January 2011 a total of 280 male partners of infertile couples who presented to a St. Mary infertility center, sari, Iran for infertility evaluation, were included in this study. After exclusion of patients with excluded criteria 180 men entered in this study. Sperm parameters were measured according to the WHO criteria and were compared in non-smokers and smokers men. Data was recorded in the special forms according to our variables and analyzed by SPSS (independent sample t-test and Chi-Square test). Statistical significance was defined as P < 0.05.

Results: 180 patients were entered in this study. There were 40(21.7%) smokers and 144(78.3%) non smokers. There is no significant difference in sperm parameters in smoker and non smoker groups.

Conclusions: Our study does not corroborate reports of detrimental effects of cigarette smoking alone on sperm parameters.

Keywords: Cigarette smoking, Sperm parameters, Male infertility
Using transcutaneous electrical nerve stimulation on acupuncture points for labor augmentation

Azar Aghamohammadi

1 midwifery group, Islamic Azad University, Sari Branch, Sari, Iran
Tel: +98-911-3514912
azareaghamohamady@iausari.ac.ir

Abstract

Background: Drug using such as oxytocin for labor augmentation has many adverse outcome for both mother and her neonate.

Aim & objective: This study has been performed with aim of assessing the efficiency of transcutaneous electrical nerve stimulation (TENS) on specific acupuncture points to reduce the labor augmentation with oxytocin.

Methods: This study was a double-blind, placebo-controlled trial study. we assigned 64 nulliparous women, randomly who were in the first stage of labor. According to TENS on four acupuncture points (Hegu [LI-4] and Sanyinjiao [Sp-6]) (n = 32) or the TENS placebo (n = 32). Time of the first stage of labor and need to augmentation labor with oxytocin assessed in two groups. Finally, data was analyzed by SPSS (T-test and χ2). Statistical significance was defined as P < 0.05.

Results: TENS group decreased the need for labor augmentation.( 16(50%) in TENS and 25(78.1%) in TENS placebo group, P=0.019) The first stage time was shorter in the TENS group than in the placebo group. (180min in TENS and 238 min in TENS placebo group, P<0.000).

Conclusion: TENS used on acupuncture points could be a good alternative or complement to those parturients who seek an alternative to pharmacological labor augmentation in childbirth without any side effects on mother and fetus.

Keywords: TENS, acupuncture points, labor augmentation
Use of 24-hour urinary calcium for prediction of preeclampsia

Azar Aghamohammadi
Department of midwifery, Sari Branch, Islamic Azad University, Sari, Iran

Abstract
Background: Pregnancies with preeclampsia have higher rates of preterm labor, small for gestational age and neonatal intensive care unit admission than normotensive pregnancies. The purpose of this study was to assess the efficacy of 24-hour urinary calcium for the prediction of preeclampsia.

Materials and methods: One hundred fifty normotensive women at 20–26 weeks' gestation were enrolled in the study. All women were asked to collect a 24-hour urine sample. Urinary calcium were measured and expressed as milligrams per 24 h. The efficacy of 24-hour urinary calcium for the prediction of preeclampsia were assessed.

Results: Sixteen of the 150 women developed preeclampsia, including six who developed severe preeclampsia and 10 who developed mild preeclampsia. Compared with the normotensive women (n=134), the hypertensive patients (n=16) had significantly lower urinary calcium excretion (165.30±78.53 mg vs. 265.40±58.41 mg).

Conclusions: A decrease in 24-hour urinary calcium between 20 and 26 weeks' gestation is a risk factor for preeclampsia.

Keyword: preeclampsia; 24-hour urinary; calcium
Prevalence and Correlates of depression, and anxiety among a university students (King Faisal University Students)

Amr M(MD,Psychiatry) 1, Tarek Amin (MD, Family and Community Medicine) 2
1 Assistant Prof. of Psychiatry, College of Medicine in Al-Ahsa, Saudi Arabia
Assistant Prof. of Psychiatry, College of Medicine, Mansoura University, Egypt
2Assistant Professor of Family and Community Medicine, College of Medicine in Al-Ahsa, Saudi Arabia
Assistant Professor of Family and Community Medicine, College of Medicine, Cairo University, Egypt

Corresponding Author: Mostafa Amr, Associate Prof. of Psychiatry, College of Medicine, Mansoura University, Egypt. Current address: Department of Neuroscience, College of Medicine in Al-Ahsa, King Faisal University, Al Ahsa, Saudi Arabia, P.O. Box: 400, Hofuf 31982. Saudi Arabia
Email: mostafapsy@yahoo.com
Mobile: 00966/5066818994

Abstract
Background: Mental health among university students represents an important and growing public health concern for which epidemiological data are needed.
Objectives: The objectives of this study were to estimate the prevalence of mental health problems among undergraduate college students at King Faisal University, Saudi Arabia and to determine the possible correlates of these disorders among them.
Methods: A self administered anonymous survey was administered to a multistage random sample at King Faisal University, KSA. A total sample of 1696 undergraduate students (906 males and 576 females) form ten colleges included in the campus. Information about socio-demographics, presence of chronic disease conditions and other potential correlates as financial, personal, family problems were collected. Depressive and anxiety disorders were assessed using the Patient Health Questionnaire (PHQ).
Results: The estimated prevalence of any depressive or anxiety disorder was 21.9%. Major depressive disorders have been encountered in 9.9%, other depression of 19.4% and any depression of 24.4%. Panic disorder was found in 4.0% and generalized anxiety disorders in 14.0%. Suicidal ideation in the past four weeks was reported by 1.1% of students. Mental health problems were more prevalent among students of scientific colleges (medicine, Sciences, Agriculture and Engineering). Major depression and depression and anxiety disorders were significantly higher among females. Logistic regression revealed that students the type of college, female gender chronic disease condition , the presence of financial and personal problems were the significant predictors for major depressive disorders. Being married, increasing age and rural residence of the students were negative predictors for mental illnesses although they were not significant.
Conclusion: These findings highlight the need to address mental health in young adult populations, particularly among those of lower socioeconomic status.

Keywords: Depression, Anxiety disorders, University Students, Correlates.
Improving Prescribing Using a Fuzzy Pharmacology Expert System

Dr. Seyyed Mohammad Reza Farshchi
Department of Artificial Intelligence, Mashhad Branch, Islamic Azad University, Mashhad, Iran.
Address: Iran-Mashhad-Shahid Gharani Avenue- The Sixth Home-Plaque 23- Postal Code: 9195954367.
Tell: +989153081125.
Email: Mr.farshchi@sadjad.ac.ir

Abstract
Fuzzy pharmacology is a term coined to represent the application of fuzzy logic and fuzzy set theory to pharmacological problems. Fuzzy logic is the science of reasoning, thinking and inference that recognizes and uses the real world phenomenon that everything is a matter of degree. In pharmacology, fuzzy modeling has been used for the mechanical control of drug delivery in surgical settings, and work has begun evaluating its use in other pharmacokinetic and pharmacodynamic applications.

We test the hypothesis that the prescribing behavior of doctors would improve after having experience with a computerized rule based prescribing system based on fuzzy pharmacology. A prospective observational study of changes in prescribing habits resulting from the use of a computerized prescribing system in (1) a cohort of experienced users compared with a new cohort, and (2) a single cohort at the beginning and after 3 weeks of computer aided prescribing on 64 bed renal units in a teaching hospital.

Main outcome measures of this research is that the number of warning messages generated by the system; proportion of warning messages overridden; comparison between doctors of different grades; comparison by doctors’ familiarity with the system.

A total of 89321 records relating to 5995 prescriptions made by 103 users, of whom 42 were doctors, were analyzed. The prescriptions generated 15853 messages, of which 6592 were warning messages indicating prescribing errors or problems. Doctors new to the system generated fewer warning messages after using the system for 4 weeks (0.79 warning messages per prescription v 0.42 after 3 weeks, p=0.03). Doctors with more experience of the system were less likely to generate a warning message (Spearman’s r=0.90, p=0.04) but were more likely to disregard one (Spearman’s r=21, p<0.01). Senior doctors were more likely than junior doctors to ignore a warning message.
Fuzzy pharmacology is an emerging field that is based on these initial explorations, warrants further investigation.

Keywords: Fuzzy Pharmacology, Artificial Intelligence, Medicine
Comparison Efficacy and Safety Anti Platelet Prophylaxis of Aspirin plus Heparin with Heparin Alone on Asymptomatic Perioperative Deep Vein Thrombosis Was Diagnosed by Lower Limb Color Doppler in Patients Undergoing Off-Pump CABG Surgery

Seyed Jalil Mirhoseini¹, Seyed Khalil Frouzannia¹, Seyed Mohammad Yousof Mostafavi Pour Manshadi ²*, Nafiseh Naderi², Sadegh Sayegh³

¹Associate Professor of Cardiovascular Surgery, Department of Cardiovascular Surgery, Shahid Sadoughi University of Medical Science, Afshar Hospital, Yazd, Iran
²General Physician, Ali ben Abitaleb Medical College, Islamic Azad University, Yazd, Iran
³Medical Student, Shahid Sadoughi University of Medical Science, Yazd, Iran

* Email: s_m_yousof_mostafavi@yahoo.com | Tel: 00989133538922

Abstract

Introduction: Little evidence exists about the risk of venous thrombosis after coronary artery bypass graft (CABG) surgery. According to available studies, about one fifth of CABG patients develop symptomatic or asymptomatic deep vein thrombosis, whereas less than 1% of patients suffer from clinically evident pulmonary embolism. Deep vein thrombosis (DVT) and pulmonary embolism may influence the outcome of coronary revascularization in terms of morbidity and mortality in the short and medium-term, but unfortunately no clear consensus still exists regarding proper thromboprophylaxis measures.

Aim & Objectives: This study was designed that test hypothesis of comparison prophylaxis anticoagulant protocol of Aspirin plus Heparin with Heparin alone on perioperative DVT about efficacy and safety of these protocols.

Methods & Materials: 120 patients undergoing off pump CABG were randomly to receive heparin (Hep) or heparin plus aspirin (Hep-Asp). The heparin group received routine dose of heparin after initiation of standing in hospital until time of freedom of hospital and the Hep-Asp group received routine dose of heparin and dose of Asp 80 mg daily oral, same duration preiperative to Hep group. We evaluated Post-CABG variables, including: deep vein thrombosis was diagnosed by lower limb color Doppler (LLCD) and laboratory data such as HGB-HCT-PLT and side effects such as bleeding, pulmonary embolism. Primary LLCD was done in the time of admission and secondary LLCD was done in the time of freedom of hospital. We used SPSS v.15 and Chi-square, ANOVA and Fisher exact test to analysis data.

Results: The mean age of the patients was 62.10±10.71 years and males to females ratio was 2.24. Asymptomatic DVT occurred in 12 (10%) patients undergoing CABG. Significantly difference in the incidence of DVT was found between the heparin (16.7%) and heparin plus aspirin group (3.3%) [p=0.015]. New Anticoagulant protocol Heparin plus Aspirin can reduce significantly thrombosis compared with heparin alone. No statistical difference between two groups about laboratory data such as HGB-HCT-PLT and side effects such as bleeding, pulmonary embolism (PE) indicate that all of patients have not PE at all in this research. No statistical difference between two groups about bleeding.

Conclusion: Aspirin plus heparin reduces DVT significantly and this prophylaxis intervention better than heparin alone about anticoagulant efficacy and safety in blood data and side effects in patients underwent elective off pump CABG surgery. These results need to future studies about detecting of efficacy and safety of these protocols exactly again. We suggest utilize of aspirin plus heparin in cardiac surgical procedure instead of heparin alone.

Keywords: Asymptomatic Deep Vein Thrombosis (DVT); Aspirin; Heparin; CABG; Prophylaxis of Anticoagulant
Rheumatologic Clinical and Serological Findings in Valvular Heart Patients Candidate for surgery in Yazd Afshar Hospital

Mohammad Bagher Owlia1, Seyed Jalil Mirhoseini2, Nafiseh Naderi3, Seyed Mohammad Yousof Mostafavi Pour Manshadi *3, Sadegh Sayegh4
1Associate Professor of Rheumatology, Department of Rheumatology, Shahid Sadoughi University of Medical Sciences, Yazd, Iran
2Associate Professor of Cardiovascular Surgery, Shahid Sadoughi University of Medical Science, Afshar Hospital, Yazd, Iran
3General Physician, Ali ben Abitaleb Medical Collage, Islamic Azad University, Yazd, Iran
4Medical Student, Shahid Sadoughi University of Medical Science, Yazd, Iran
* Email: s_m_yousof_mostafavi@yahoo.com | Tel: 00989133538922

Abstract

Introduction: Valvular heart diseases are among the frequent causes of cardiac surgery. Some of the patients have a well known rheumatic condition. Heart valves are fragile connective tissues which are vulnerable to any systemic autoimmune disease. Valvular heart diseases have congenital or acquired causes that acquired reasons are including rheumatoid fever and infection. Rheumatoid diseases result from immunological reaction; type II and type IV. Incidence and importance of heart disease following rheumatological disorders is increasing, that these can elevate morbidity and mortality. Rheumatoid diseases with cardiac demonstration are such as arthritis rheumatoid, lupus, and rheumatoid fever.

Aim & Objectives: This study was design to evaluate incidence of rheumatologic clinical demonstration and serology in patients candidate for heart valvular surgery in Afshar cardiovascular center, Yazd, Iran.

Materials & Methods: 120 patients candidate for valvular heart surgery who had not any known rheumatologic diagnosis enrolled this study. All of patients were examined separably, Careful history and physical examination taken from rheumatologic stand point. Tests such as CRP, ESR, UA and CBC, plus most sensitive screening serologic tests (rheumatologic tests) such as ANCA-C, P, ANA, RF, APL-IgG,IgM, were evaluated before surgery. All of date saved in questionnaire and SPSS ver.15 was utilized for statistical analysis.

Results: The mean age of patients was 48.18±17.65. 64 cases (53.3%) were male and 56 cases (46.7%) were female. Males to females ratio was 1.14. 45.8% of patients had history of non-mechanical joint disease, 14.2 % had history of rheumatologic conditions in their family, and 30% had history of constitutional symptoms. 29.8% had positive joint findings in their physical exam. 5% of patient had abnormal urine. 52.5% of all patients had positive rheumatologic serology (rheumatoid factor 34.2%, Anti CCP 2.5%, ANA 4.2%. ANCA and APA were positive in a few cases). Amount of positive CRP was 26.7% and elevated ESR was 36.7%.

Conclusion: Various rheumatologic causes have part in involvement of most valvular heart diseases that these cause repair or replacement of valve in these patients. Also the signs dependent to immunological system in patient with involvement of valvular heart diseases, probably state the important role of autoimmune and undifferentiated connective tissue diseases in pathogenesis of heart and valvular diseases that cause surgery extra our notion limitation.

Keywords: Clinical Finding; Serologic Rheumatologic; Valvular Heart Disease; Rheumatism
Audit of sepsis management in acute admissions at a District General Hospital

Bentley, R. James, M. Young, M. Horne, G.

Abstract

Background: Sepsis is a syndrome characterized by widespread systemic response to infection, which can rapidly lead to organ failure and, eventually, death. 30% of patients die within the first month of diagnosing severe sepsis, rising to 50% mortality at 6 months. Improved patient outcome depends on rapid recognition of sepsis and early, aggressive treatment.

In 2008, the Surviving Sepsis Campaign updated a set of international guidelines for the management of severe sepsis and septic shock, aiming to improve the quality of care given to patients with sepsis, and reduce the mortality associated with it.

Sepsis is increasingly common, with an estimated 18 million cases occurring annually worldwide. It is expensive to investigate and treat, and costs the US health service approximately $17 billion per annum.

Aims: To assess the implementation of the 'surviving sepsis' resuscitation bundle in a District General Hospital.

Methods: Standards were identified according to guidelines set out in the Surviving Sepsis Campaign resuscitation bundle. A proforma was used for data collection. Parameters were lactate measurement, blood cultures taken prior to antibiotic administration, delivery of broad spectrum antibiotics within three hours of presentation, and the use of intravenous fluids to treat hypotension or raised lactate. Cases were identified during the daily meeting on Acute Medical Admissions.

Results: Data was collected on seventy-eight patients admitted via A&E or directly to Acute Medical Admissions. 14% (n=11/78) were managed with the complete sepsis care bundle, implemented within the recommended three hours. 64% of patients (n=50/78) had blood cultures taken, however only two thirds of these (n=34/78) were taken prior to administration of IV antibiotics. 82% of patients (n=64/78) received intravenous fluid resuscitation, but only 55% (n=43/78) had a serum lactate measured. The rate of implementation of the sepsis care bundle was found to be better overall in A+E, with 70% of patients (n=32/46) receiving at least three of the four basic management steps at admission, compared with just 47% (n=15/32) in Acute Medical Admissions.

Conclusions: At present, patients admitted with sepsis are not always managed according guidelines. Implementation of the sepsis care bundle is better in A+E than Acute Medical Admissions, but there is significant room for improvement in both departments. Failure to quickly recognize sepsis and implement basic resuscitation leads to poorer patient outcomes and prolonged hospital admissions, subsequently putting pressures on healthcare resources. Education of staff and the advertisement of guidelines will help to improve our management of sepsis and optimize patient care, thereby reducing overall mortality and morbidity.

Keywords: Sepsis, Surviving Sepsis Campaign, Management
Effect of Palm Vitamin e on Sperm Morphology of Streptozotocin Induced Diabetic Rats

1Jamaludin M., 1Daren K., 1Siti Balkis B.
1Biomedical Science Programme, Faculty of Health Science, Universiti Kebangsaan Malaysia, 50300 Kuala Lumpur, MALAYSIA

Corresponding author: Jamaludin Mohamed, PhD. Programme of Biomedical Sciences, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, MALAYSIA.
Tel. No. : +603-9289 7632
Email : jamal3024@yahoo.com

Abstract
Diabetes mellitus is a common endocrine metabolic disorder, which results in the impairment of uptake and storage of glucose and reduced glucose utilization for energy purposes. Free radicals are very reactive chemical species, can cause oxidative injury. The initial and most essential step of the infertility evaluation is semen analysis. The role of vitamin E as the body's primary lipid-soluble antioxidant makes it a good candidate for investigation of effects against reactive oxygen species (ROS). The aim of the present study was to investigate the morphological changes of sperm in streptozotocin induced diabetic rats treated with palm vitamin E (PVE). A total of 40 (250-280g) Sprague Dawley rats were used and divided into four groups randomly. To induce diabetes mellitus STZ 45 mg/kg was injected intravenously. The diabetic rats were divided into two groups: supplemented with PVE (200 mg/kg/day) and non-supplemented with PVE. The non-diabetic rats were also divided into two groups: supplemented with PVE (200 mg/kg/day) and non-supplemented with PVE. Following of four weeks of force feeding treatment, rats were sacrificed and sperm samples were taken from the cauda. For qualitative analysis of sperm histology, cauda is excised in petri dish containing Hank’s buffer solution. Sperm obtained from the cauda is analysed for sperm viability using eosin-nigrosin staining. As for blood glucose, the mean level of blood glucose for normal rats are 172.01, normal + PVE is 144.96, diabetic rats are 510.41 and for diabetic + PVE is 536.91mmol/L in the period of four weeks. Based on the staining observation there is notable improvement in the sperm analysis such as viability and morphology. This study suggested that PVE may be effective in reducing oxidative stress in sperm of STZ induced diabetic rats. It could be concluded from the present results that administration of PVE offers significant protection to diabetes-induced oxidative stress by decreasing lipid peroxidation and activating antioxidant enzymes in the testes, thereby ameliorating diabetes-induced suppressed reproduction in male rats.

Keywords: Palm vitamin E, sperm, lipid peroxidation, diabetes
Effects of Aqueous Extract of Hibiscus sabdariffa L. (Roselle) Calyx on Bovine Sperm Membrane

Jamaludin, M., Nor Azlinda, Z., Muhd Hanis, M.I. & Siti Balkis, B.
Biomedical Science Programme, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, MALAYSIA.
Corresponding author: Jamaludin Mohamed, PhD. Programme of Biomedical Sciences, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, MALAYSIA
Tel. No.: +603-9289 7632
Email: jamal3024@yahoo.com

Abstract
Sperm cryopreservation is a crucial in preserving sperm quality and studying male fertility defects. However, the process will cause several sperm abnormalities as it will produce excessive ROS that damage the sperm. As consequences, membrane cell disrupt, DNA of the sperm will damage and sperm motility diminished as well as its viability deteriorated. Therefore, this study was conducted to determine the ability of aqueous extract of roselle calyx in protecting sperm freezing-thawing condition. UKMR-2 type has been chosen because it contains high antioxidants compared to other variety of roselle. All the control and treated group are incubated at 37°C for six hours. Extraction of sperm membrane is done to get pure sperm membrane. Sperm membrane that was treated with aqueous extract of roselle calyx of 15 mg/ml, 25 mg/ml and 50 mg/ml showed a significant increased compared with control. Concentration of malondealdehyde (MDA) in sperm membrane treated with aqueous extract of roselle calyx concentration of 15 mg/ml, 25 mg/ml and 50 mg/ml are decreased compared to control. It showed less lipid peroxidation occurred in the membrane that was treated with aqueous extract of roselle calyx. The increasing and decreasing of protein and MDA were depending on the dose of the roselle concentration. There were no significant changes in the sperm morphology of the three treatment groups of the aqueous extract of roselle compared with control group. In conclusion, this study found that the aqueous extract of roselle calyx could reduce ROS production in sperm freezing-thawing process.

Keywords: Roselle, UKMR-2, bovine sperm, lipid peroxidation, freezing-thawing process
Role of α-Lipoic Acid (ALA) on Oxidative Stress in Sperm of Streptozotocin-Induced Diabetic Rats

SITI BALKIS BUDIN¹, NORHISHAM HARON², CHEW FANG NANG¹, MUHD HANIS MD IDRIS¹, DAREN KUMAR JOSEPH¹, JAMALUDIN MOHAMED¹

¹Department of Biomedical Sciences, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, MALAYSIA.
²Faculty of Health Sciences, Universiti Teknologi Mara (UiTM), Puncak Alam campus, 42300 Bandar Puncak Alam Selangor, MALAYSIA.

Corresponding author: Jamaludin Mohamed, PhD. Programme of Biomedical Sciences, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, MALAYSIA.
Tel. No. : +603-5928 9763
Email : jamal3024@yahoo.com

Abstract

Increased oxidative stress and impaired antioxidant defense mechanism are important factors in the pathogenesis and progression of diabetes mellitus and other oxidant-related diseases. Reproductive dysfunction is recognized as a consequence of diabetes mellitus. In this study, the possible protective efficacy of α-lipoic acid (ALA) on sperm characteristics, peroxidative damage and antioxidant levels were assessed in the epididymal sperm as well as in testes of four different groups which includes non-diabetic without ALA, non-diabetic with ALA, diabetic without ALA and diabetic with ALA group. Diabetic groups were induced by a single intravenous injection of STZ (45 mg/kg body weight). ALA treatment (100 mg/kg body weight) was given throughout four weeks by oral gavage while non-treatment groups otherwise received a vehicle. The sperm count was significantly increased in non-diabetic rats treated with ALA as compared to sperm count from the non-treated control group (P<0.05). The epididymal sperm of untreated diabetic rats showed a significant increase in lipid peroxidation for five-fold, along with a significant decrease in vitamin E level as compared to sperm from the control group (P<0.05). These changes were associated with a significant decrease in sperm motility of untreated diabetic group (P<0.05). Treatment with ALA showed a significant increase in glutathione peroxidase activity and vitamin C level in epididymal sperm of non-diabetic rats (P<0.05). The level of vitamin C in epididymal sperm was significantly increased in diabetic rats after ALA treatment (P<0.05). In conclusion, the results suggest that diabetes mellitus elicits spermatotoxic effects in male rats through induction of oxidative stress. The treatment of diabetes mellitus with 100 mg/kg body weight of ALA for four weeks may not be effective to reduce oxidative stress in sperm in the STZ-induced diabetic rats.

Keywords: diabetes mellitus, oxidative stress, sperm, α-lipoic acid
Broken Heart: More than just a figure of speech for women!

Navneet Kumar, Meenal Tiwari, Sachin Kumar Amruthlal Jain, Shukri David
Department of Internal Medicine and Division of Cardiology, Providence Hospital & Medical Center, Southfield, Michigan, USA 48075
Corresponding Author: Navneet Kumar Email: drnavneetkumar@gmail.com

Abstract
Introduction: Takosubo cardiomyopathy /broken heart syndrome /apical ballooning syndrome is a rare non ischemic cardiomyopathy causing transient left ventricular dysfunction, which can mimic myocardial infarction on presentation. It is commonly seen in post menopausal women and is precipitated by stressful events. Although exact mechanism has not been found, rise in level of catecholamine, use of pressors, hyperthyroidism and electrical cardioversion have been reported as precipitating factors.

Case Discussion: We describe three different cases scenarios of elderly post menopausal women presenting with ST Elevation Myocardial Infarction (STEMI). Cardiac catheterization showed the diagnosis of Takosubo cardiomyopathy.
First one, 67 year African American female presented with acute onset precordial chest pain, non-radiating, relieved minimally with rest and shortness of breath while cleaning her lawn in morning. No similar episodes in past. No significant past medical history. No history of any cardiovascular disease in family. A non-smoker, non –alcoholic, she denied illicit drug use. No stressors, travel history, or any other cardiac risk factors were present. With ST elevation in leads V₂, 3 and positive cardiac biomarkers, she was rushed for cardiac catheterization which showed non critical stenosis and Ejection Fraction (EF) of <20%. She was discharged on ACE inhibitors and beta blocker. Follow up after one week showed her EF improved to 25%.
Second, a 70 year Caucasian lady came to ER with shortness of breath, diaphoresis, fever, elevated troponins and ST elevation in lead V₁. Urgent cardiac catheterization showed non-significant stenosis but left ventricular dyskinesia and ejection fraction of 20%, hinting Takosubo cardiomyopathy. Her past medical history was positive for COPD, DM and Hypertension. On further questioning she revealed that there was tremendous stress with her husband recently. Five days later Echocardiogram showed improvement in her EF from 20% to 35%.
Last is an 81 year lady with atrial fibrillation who underwent in-patient electric cardioversion. She was discharged in sinus rhythm but the following day she came back in pulmonary edema, elevated troponins and ST elevation. On cardiac catheterization hypercontractile ventricular base and apical ballooning was found with EF <20% (previous EF 55%). Recent electric cardioversion could be the precipitating factor. She was discharged on warfarin, carvedilol, amiodarone and aspirin. Two weeks later she was still in sinus rhythm and her EF had increased to 30%.

Conclusion: Our cases suggest Takosubo cardiomyopathy should be kept in mind in STEMI patients with non critical coronary artery disease and low ejection fraction on cardiac catheterization since these patients have overall good prognosis. Emotional vulnerability, electric cardioversion and stressful work could be the possible precipitants.

Keywords: Takosubo cardiomyopathy, broken heart syndrome, cardiology
Unusual Clinical Presentation of Generalised Gingival Enlargement – A Report of 3 Cases

Smitha Rani Thada ¹, Vineetha R ², Keerthilatha M Pai ³
¹Assistant Professor, ²Assistant Professor, ³Professor & Head, Department of Oral Medicine & Radiology, Manipal College of Dental Sciences, Manipal, India

Corresponding Author: Dr. Smitha Rani Thada, Flat no 204, Anand apartments, Karangalpady, Mangalore – 575003, Karnataka, India
Mobile no – 09880813732
Email: smitha.rani@rediffmail.com

Abstract
Gingival hyperplasia is an aesthetically disfiguring condition causing psychological & masticatory disturbance of the oral cavity. There are wide varieties of causes of gingival enlargement ranging from most common causes like plaque accumulation, poor oral hygiene to serious systemic illnesses including blood dyscrasias, syndromes & side effects of several drugs. Here we report a case series of a neoplastic, a syndrome associated & a drug induced gingival enlargement along with a concise review on the various etiologies & clinical features of generalised gingival enlargement.

Keywords: Generalised Gingival Enlargement, gingival hyperplasia, neoplastic
Does structuring of resident research and scholarly activities at a non-university Internal Medicine residency program change perception of participating residents?

Navneet Kumar, Sachin Kumar Amruthlal Jain, Yazan Khouri, Khalid Zakariya
Providence Hospital & Medical Center, Southfield, MI, USA

Abstract

Introduction: Since centuries universities have played a pivotal role in promotion of research in natural sciences. Medical field is no different. In USA, Accreditation Council for Graduate Medical Education (ACGME) now requires all medical residents to be involved in scholarly activities. Research activity is seen as the most desirable of these. Studies show that though residents at non-university programs are as likely to participate in research as compared to their university based counterparts, they are more likely to report barriers like lack of faculty mentors and resident interest. Various models have been proposed to promote resident research activities but do they really change the perception of participating residents?

Objective: To evaluate the impact of structuring of resident research and scholarly activities at a non-university Internal Medicine residency program on the perception of participating residents.

Methods: We introduced a research committee comprising of Associate Program Director and 2 residents who were actively involved in research. A yearlong structured program was then drafted which aimed at promoting research among residents. It comprised of extensive interactive sessions on a variety of research topics, including literature search, collecting data, its analysis and manuscript writing. Thrusts were made to expose residents to research methodology. Timely monitoring was done to identify barriers and find solutions. Residents identified their mentors and formed research groups. They were encouraged to submit their researches in various local and national conferences and peer reviewed journals. At the end of the academic year they were asked to undertake a questionnaire to assess their perception of the change. Questionnaire was internally validated and pilot tested. Responses were based on Likert type 4 point scale. It included parameters to test clarity and relevance of questions. Data was then analyzed.

Results: A total of 40 residents took the questionnaire including 1st, 2nd and 3rd year residents. Analysis showed that all questions were clear and relevant. Residents agreed that the structuring of research and scholarly activities resulted in significant improvement in their research aptitude and in turn research productivity.

Conclusion: Structuring of research and scholarly activities for residents of non-university Internal Medicine residency program had positive changes in the perception of residents who felt that it resulted in significant improvement in their research productivity.

Keywords: internal medicine, residents, cardiology
Trends in Percutaneous Coronary Interventions: Our experience from 1999-2010

Navneet Kumar, Sachin Kumar Amruthal Jain, Patrick Alexander, Shukri David
Providence Hospital and Medical Center, Dep. of Internal Medicine, Section of Cardiology USA

Abstract

Introduction and Objectives: From the simple balloon based tool for dilating focal stenosis of coronary arteries described by Gruntzig to the introduction of initially metallic and later on drug eluting stents (DES), Percutaneous Coronary Intervention (PCI) has come a long way. Many large randomized trials have shown the key role PCI plays in management of patients of coronary artery disease. In patients with acute coronary syndromes, PCI has been shown to prevent myocardial infarction. It also improves symptoms and decrease medication requirement in stable angina patients. We decided to study the trends of PCI, Coronary Artery Bypass Graft (CABG), usage of different stents and its consequences at our hospital.

Methods: Ours is a non-university based hospital with accredited cardiology and intervention cardiology fellowships. A retrospective analysis was performed from 1999 to 2010 using hospital database to obtain data on number of CABG, PCI and types of stents (if used). This data was analyzed to see the trends.

Results: We saw that total number of left heart catheterizations (LHC) is increased from 2336 (1999) to 2891 (2010). CABG rates fell from 15% to 6% after introduction of DES. Percentage of stents placed during LHC increased from 34% (1999) to 42% (2010) with 95% single vessel. Number of stents placed per coronary intervention increased. Trends on using different stents varied according to issues like early stent thrombosis and introduction of a ‘better’ stent. Most commonly used DES was Promus (72%) followed by Taxus (28%). Interestingly we found that Bare Metal Stents (BMS) are been used more frequently, up from 23% (2004) to 29% (2010) though overall total number of BMS being used have fell from 792 (1999) to 357 (2010).

Conclusion: As expected there is increasing trend of PCI along with increased use of stents. The increase in the use of Bare Metal Stents can be linked with the issues with adherence to antiplatelet therapy, early stent thrombosis and price. However, introduction of PCI has led to a fall in the rates of Coronary Artery Bypass Grafts. Better post PCI medical therapy need to be worked out so that the barriers to use of DES are addressed.

Keywords: Percutaneous Coronary Interventions, cardiology, intervention
An unusual complication of weight lifting: Aortic Dissection

Navneet Kumar, Samir Bhalodia, Meenal Tiwari, Asad Omar
Department of Internal Medicine, Providence Hospital & Medical Center, Southfield, Michigan, USA 48075
Corresponding Author: Navneet Kumar Email: drnavneetkumar@gmail.com

Abstract

Introduction: Aortic dissection (AD) is a catastrophic event secondary to number of precipitating factors (Kamalakannan, 2007). Weight lifting, on the contrary is a rare causes of AD. Researchers from Yale University School of Medicine 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 Presentation: 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 mild left lower quadrant abdominal tenderness on deep palpation with otherwise normal exam. Vitals and routine labs were within normal limits. EKG showed sinus. 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. 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: 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.

Keywords: Aortic dissection, case report, cardiology
Efficacy of Bacopa monnieri on Cognitive functions of Medical Students

Navneet Kumar1, L.G. Abichandani2, V.R. Thawani3, K.J. Gharpure4

1 MD, Resident Physician, Department of Internal Medicine, Providence Hospital & Medical Center, Southfield, Mi, USA 48075.
2 MD, Professor, Department of Biochemistry, Grant Medical College, Mumbai, India.
3 MD, Professor & Head, Department of Pharmacology, VCSGGMSRI, Srikot, Srinagar, Pauri-Garhwal, Uttarakhand, India 246174.
4 BPharm, Retired Pharmacist, Government Medical College, Nagpur, India 440003.

Corresponing Author:Navneet Kumar; Email: drnavneetkumar@gmail.com

Abstract

Rationale: Bacopa Monnieri, popularly known as Brahmi, has been traditionally used in Ayurveda since ages for its memory enhancing properties. However during our search, we could not find any reference of its trial on intellectual sample. Hence this study was planned to evaluate the effect of Bacopa monnieri on memory of medical students.

Objective: To evaluate the efficacy of Bacopa monnieri on memory of medical students.

Method and material: This was a randomized double blind placebo controlled non-crossover, parallel trial. After institutional Ethics Committee approval, application of inclusion and exclusion criteria, information sheet was provided to the students willing to participate in the trial. Informed, written, witnessed consent was obtained from 60 medical students of second MBBS third term regular batch. Baseline biochemical and memory tests were done. The sample was randomly divided in two groups to receive either tablet of Bacopa monnieri 150 mg or matching placebo twice daily for six weeks. All baseline investigations were repeated at the end of the trial. Students were followed up for 15 days after intervention.

Results: Statistically significant improvement was seen in tests relating to the cognitive functions with use of Bacopa monnieri. Blood biochemistry also showed a significant increase in serum calcium levels.

Keywords: Brahmi, Phytochemical, Herbal, Cognition enhancer, Neuropsychological tests
Control of tobacco related cancer in India - An Overview

Jaiswal A¹, Mishra SK²
¹ Junior Resident, Saraswathi Institute of Medical Sciences, Hapur, India
² Medical officer, AMC.
Email: dr.ashutosh@sify.com

Abstract

Introduction: Despite having strict laws such as “The Cigarettes Act (1975)” and “The Cigarettes and Other Tobacco Products Act” (2003) along with international collaboration with WHO Framework convention for tobacco control, Tobacco related cancers (TRC) continue to be the most prevalent cancers in India.

Aim: To assess the burden of TRC in India and impact of current control measures on TRC.

Method: Collection of data through review of literature. Data on tobacco consumption and relative proportion of TRCs was analyzed to assess the impact of tobacco control program.

Result: Data from National Cancer Registry Program (2001-04) showed the age adjusted rates (AAR) of cancer per 100,000 population ranges from 43.8-114.9 and 39.8-116.5 per annum for males and females respectively. Among these, TRCs have the highest relative proportion of 51%-34.7% and 10.1%-16.8% for males and females respectively.

Average rate of increase of tobacco consumption which was 11.4 million kg/year from 1981-91 decreased to 0.125 million kg/year from 1991-03. Despite this decrease, total consumption continues to be high. Relative proportion of TRCs during this period has not changed.

Conclusion: Tobacco control measures have a definite impact on the rate of increase in tobacco consumption, consequential the relative proportion of TRCs did not change.

Keywords: tobacco, WHO, tobacco related cancers
How much of anatomy is enough?

Dr Tabinda hasan
Dept. of anatomy, Faculty of medicine, Jazan University, Saudi Arabia
Email: drtabindahasan@gmail.com | Mobile- 00966532315920

Abstract

Background: Anatomy has always been revered as the keystone of good clinical practice. A medical student's first haptic appreciation of the human body starts with cadaver dissection. Anatomy bridges the gap between the dignity of death and the miracle of life. It creates empathy for the future patient; its knowledge reduces risk of accidental damage to related structures during invasive procedures. It trains our future physicians and surgeons in facing 'end of life' situations with calm logic. Anatomy builds the morphological knowledge platform for effective and safe clinical communication among doctors and with patients. In a nutshell, it frames the professional character of medical personnel. The advantages of anatomy as a subject are too many and undisputable.

Paradoxically, despite its grandiose status in medicine, its scope as a career option is progressively declining. There is a statistically significant global shortage of anatomy teachers; more so in developing countries. This discrepancy between requirements and availability might be educationally unsound; for how could fruitful health science progress in the absence of knowledge givers of life sciences? This paper addresses an under-mentioned, yet urgent issue of the modern medical education system.

Discussion: Choosing a specialty as a life-long career in medicine is governed by complex interacting variables like personal traits of individuals, aptitudes, learning styles, cultural factors, social esteem attached to particular sub-specialties, saturation levels in job placements, institutional pedagogic environments, infrastructure, research facilities, future career growth, financial returns etc.

Presently, anatomy is chosen as a career by a few. The subject itself is usually perceived as cumbersome, dull and didactic. The knowledge of anatomy, though painstakingly acquired, is often cheerfully let go. The dogmatic, superfluous nature of the subject scares away many as anatomy becomes a rite of passage rather than a valid career option. This failure to evolve and adapt in league with 21st century medicine plays directly upon those looking for reduced curriculum content and modernized learning experience. Extrinsic pressures like decreased availability of cadavers, expensive maintenance of dissecting rooms, exponentially increasing student loads and lack of trained personnel further over-stretches the system and limits in-house trainees that can be accommodated in anatomy departments. Unsatisfactory job opportunities, stringent salaries and inadequate research facilities further compromise anatomy as a career option, especially in resource limited nations. The stigma of a 'non clinical subject' dims down the essence of being a doctor working in active hospital settings.

The underlying factors must be resolved through strengthened organizational framework and strategic planning. For a renewed interest, anatomy needs to shake off its 'old fashioned' image and reinvent itself as a subject through integration of technology, clinics and 'core knowledge' based tailoring.

IT, radiology, body art, patient cases, problem based learning, recent advances, models; anything that sparks interest should be promoted. Students must be convinced of its promising future in postgraduate specialist and surgical training. Meaningful assessment of anatomy teaching and
Learning must be done, including content, delivery mode, impact, relevance, applicability, practicability etc. Proactive efforts must be made to increase freshmen awareness of the academic scope of anatomy, job opportunities, career and research prospects. This is possible through inter and intra institutional academic and logistic collaboration among departments, collages, hospitals and research centers. Build up of research opportunities and positive interests are possible through facilitatory government funds, teaching incentives and appropriate work based recognition.

**Conclusion:** For doctors, anatomy in some form will continue to be essential to safe medical practice. Becoming an anatomist is not the choice of mediocre students or the waste of a doctor's degree. It is an instrument to train future physicians in saving lives. Undeniably, a teacher of anatomy cannot be replaced.

**Keywords:** anatomy, education
Measuring the quality of colonoscopy at a district general hospital in South East England: adenoma detection rates and withdrawal times

Roland Fernandes
Medway Maritime Hospital, Gillingham, Kent ME7 5NY, UK
rfernandes@doctors.org.uk

Abstract

Aims: Colonoscopy has traditionally been seen as a diagnostic or therapeutic procedure. However it also has a role in disease prevention. Research has shown that polypectomy of adenomas prevents 76-90% of incident colorectal malignancy. The NHS quality Assurance guidelines for colonoscopy state that adenomas should be detected in at least 35% of screening colonoscopies. If the adenoma detection rate declines, the withdrawal time must come into scrutiny. The withdrawal time itself is defined as the amount of time from the ileo-caecal value to withdrawal of the colonoscope. If no pathology is found it is recommended by the British Society of Gastroenterologists that the withdrawal time is at least 6-8 minutes, with some pushing for a minimum of 10 minutes. The aim of our audit was to ascertain the adenoma detection rate and withdrawal time in two district general hospitals in the south east deanery, to allow comparison with the national NHS guidelines and improve service development.

Methods: Data was collected over a 5 month period commencing in June 2011. A proforma was completed by endoscopy staff at the time of colonoscopy and included the following details: date of colonoscopy, patient demographics, Operator and extubation time. Data was excluded if the colonoscopy was part of surveillance or was a repeat colonoscopy. The proformas were then used to correlate subsequent histological findings. Statistical analysis yielded that at least 56 cases were required for statistical significance at a pvalue <0.05.

Results: Data was collected for 134 patients that met the eligibility criteria. The mean age of those undergoing colonoscopy was 71 years, (age range 49-88 years) The male to female ratio was 75:59. The majority of colonoscopies were performed by consultants 59%, with the remaining being performed by specialist nurses 17% and registrars 9%. The adenoma detection rate in our sample was 28%. The mean extubation time was 8 minutes. There was no significant difference in extubation times in terms of operator designation. If no biopsies were taken or normal mucosa was later found on histology the mean extubation time in our sample was 7 minutes. The adenoma detection rates were statistically higher for specialist nurses than both consultants and registrars (p<0.005).

Conclusion: Adenoma detection rates are important quality control markers for colonoscopy centres. If the detection rates fail to meet the national guidelines of at least 35%, one must explore whether a possible explanation lies in too rapid withdrawal of the colonoscope causing pathology to be missed. In our sample, although the extubation times were in accordance with national guidelines, our adenoma detection rate was lower than expected. It is feasible that the lower adenoma detection rate could be related to a decreased prevalence of the pathology in our population subgroup. Our results also provide further evidence in support of specialist nurse endoscopists.

Keywords: colonoscopy, adenoma detection, endoscopists
A Case of Recurrent Urinary Tract Infection

Aung Htet¹, Han Ni²*

1) Consultant Radiologist, Department of Radiology, No.2 Defense Services General Hospital (1000-bedded), Naypyitaw, Myanmar
   Email: dr.ahtet@gmail.com

2) Assistant Professor, Department of Medicine, Melaka Manipal Medical College, Jalan Batu Hampar, Bukit Baru, 75150 Melaka Malaysia
   Former: Medical officer, Yangon Children Hospital, Myanmar
   Email: hannidr@gmail.com

This case was in Yangon Myanmar before the author joined medical college in Malaysia.

*Corresponding Author: Dr Han Ni, Assistant Professor, Melaka Manipal Medical College, Jalan Batu Hampar, Bukit Baru, 75150 Melaka, Malaysia

Abstract

Urinary tract abnormalities in cases of urinary tract infection are common in pediatric practice. Imaging is important to identify the underlying urinary tract abnormalities. This report presented a case of urinary tract infection with urinary tract abnormalities where imaging diagnostic decision making was not straightforward even with high index of suspicion according to theoretical knowledge.

Keywords: Urinary Tract Infection, Urinary Tract Abnormalities, therapy
The influence of thyroid hormones on the cardiovascular system by monitoring some parameters of lipoprotein metabolism

Biljana Talevska  
Demir Hisar, Macedonia  
Email: talevska_b@yahoo.com

Abstract

Background: Thyroid hormones regulate the activity of enzymes that play key role in the metabolism of lipoproteins. Thyroid dysfunction resulting in lipid abnormalities. Atherogenic lipid profile indicate an increased risk of cardiovascular disease.

Objective: The aim of this study was to assess the impact of thyroid disorders on lipid profile and association with risk of atherosclerotic cardiovascular disease.

Methods: We examined hypothyroid (n=40) and hyperthyroid (n=40) patients men and women at random, and euthyroid-healthy subjects (n=60, control group) between 30-75 years of age. Thyreostimulating hormone (TSH), free thyroxine (fT4), low density lipoprotein (LDL), high density lipoprotein (HDL) were studied in three groups of respondents with standardized tests.

Results: ANOVA was calculated among the three groups. The results showed that hypothyroid patients have significantly higher values of LDL-cholesterol (p<0.05) compared with euthyroid group. In hyperthyroid patients have significantly lower values of LDL-cholesterol in males (p<0.05) in contrast to euthyroid respondents, while the females are statistically insignificant elevated. As for HDL-cholesterol, its values are significantly smaller (p<0.05) in both groups compared with control group. The results also showed that female hyperthyroid patients have higher significantly values of LDL-cholesterol than males. The difference between the two sexes in hypothyroid group is not statistically significant. HDL-cholesterol in hyperthyroid men is significantly smaller than females. This significant difference is not observed in hypothyroid men and women.

Conclusion: The summarized results showed that hypothyroid patients due to abnormal atherogenic lipid levels are at greater risk of atherosclerotic cardiovascular disease. These changes are different depending on gender.

Keywords: hypothyroidism, hyperthyroidism, LDL-cholesterol, HDL-cholesterol, cardiovascular diseases
The Healthcare Tsunami

Sukhen Dey  
President, Strategic Wisdom, Louisville Kentucky, USA  
Indiana University Southeast, New Albany, Indiana, USA  
Email: s.dey@insightbb.com

Abstract  
The primary objective of this paper is to point out some alarming trends and statistics on global healthcare. As a researcher, author and technologist, the author has been engaged with research on global healthcare data for a few years. A number of observations (projections) seem to be rather alarming and worth sharing with this distinguished consortium.  
In this paper selected healthcare-related statistics involving developed and underdeveloped economies have been discussed along with some technological, educational and public awareness measures which require serious attention from the international healthcare community. The destructive nature of the regressive state of healthcare all throughout the world in the authors’ opinion is monumentally profound than any ‘nuclear threat’. As the title alerts, the global healthcare scene appears to be facing a “Healthcare Tsunami”.

Keywords: Healthcare, Healthcare Tsunami
Protecting the unprotected: How does HIV infection effect sepsis in children with severe acute malnutrition in Blantyre, Malawi?

J. A. Malone
Affiliation - University of Liverpool, UK
Email: j.malone@student.liv.ac.uk

Abstract

Background: Malnutrition is a preventable cause of a large number of child deaths worldwide. Evidence shows that these children have immunodysfunction putting them at increased risk of bacteraemia and sepsis. HIV reactive children are also at greater risk of infection. There is a deficit in research looking at the combined effect of HIV and malnutrition with regards to sepsis in young individuals.

Method: A structured literature review was carried out.

Results: HIV reactive malnourished children are at increased risk of severe malnutrition, infection and mortality. Among malnourished children with sepsis, the organisms responsible do not differ between HIV-reactive and HIV non-reactive patients. The symptoms may persist for longer with reactive patients.

Conclusion: More research is needed to look at this vulnerable group of patients who pose complex management issues to medical staff. Large sample size comparison of HIV reactive against non-reactive malnourished children with sepsis would be useful to highlight differences in outcome.

Keywords: Malnutrition, HIV infection, Malawi, Paediatrics, Global Health
Health Seeking Behaviour of Elderly in Myanmar

Soe Moe 1, Kyi Thar 2, Daw Khin Saw Naing 3, Maung Maung Than Htike 4

1 Dr. Soe Moe; Associate Professor, Department of Community Medicine, Melaka Manipal Medical College, Malaysia | Email: soemoe2006.40@gmail.com
Contact: Melaka Manipal Medical College, Jalan Batu Hampar, Bukit Baru, 75150, Melaka, Malaysia

2 United Nations Office for Project Services, Myanmar
Email: ky.thar@gmail.com
Contact United Nations Office for Project Services, Yangon, Myanmar.

3 Dr. Daw Khin Saw Naing; Associate Professor & Head, Department of Community Based Medicine, School of Medicine, Universiti Malaysia Sabah, Sabah, Malaysia
Email: Naing53@gamil.com
Contact: Department of Community Based Medicine, School of Medicine, Universiti Malaysia Sabah, Jalan UMS, 88400 Kota Kinabalu, Sabah, Malaysia

4 International Health Division, Ministry of Health, Myanmar
Email: mmth74@gmail.com
International Health Division, Ministry of Health, Office No 4, Nay Pyay Daw, Myanmar

Abstract

Background: Myanmar is the country with estimated population of 58.38 million, 8.79% of which is elderly. In the age structure of Myanmar proportion of elderly increased from 2.14% in 1980 to 8.79% in 2008-2009. Therefore Ministry of Health Myanmar started healthy aging programmes and projects since 1992-1993. However only 88 townships are covered under the programme and there are some out-reach area. This study was done in villages which are not included in the current elderly projects.

Aim & Objectives
To identify the Health status of aging population in selected townships of upper and lower Myanmar.
To identify the health seeking behavior of elderly
To find out the association between the health seeking behavior of elderly and socio-demographic characteristics.

Methods/Study Design: This is a cross sectional survey to study health status and health seeking behavior of the elderly people in Myanmar. Study areas are Taungu from Lower Myanmar and Ye Oo from Upper Myanmar both of which are not under cover of elderly project and have no adequate data for elderly health care. Sample size calculation was done by Epi Info StatCalc. Total 729 elderly were under study. According to elderly population in Taungu and Ye Oo, 1/3 of the sample was taken from Taungu and 2/3 taken from Ye Oo. In both townships village tracts were randomly selected to visit and face to face interview were done to the consented elderly till the desired sample.
sized has obtained. Data collection tool is pretested pre-coded questionnaire. SPSS software was used for data editing and analysis.

**Result and finding:** Among the respondents, 41% are male and 59% are female. 95.5% are Myanmar and the rest are ethnic minorities. 53% of elderly are still productive, out of which 36% were working full time at the time of interview. However, 39% of elderly have income below poverty line. 81.1% are primary or lower level education. 42% of elderly have illness within one year. For that illness there is different pattern of health seeking in Taungu and Ye Oo. Majority in Taungu seek health from private practitioners while majority from Ye Oo seek health from rural Health centre. At the time of interview, 13.1% has illnesses. For the current illness all take self treatment or treatment given by family member. In Ye Oo majority are taking treatment from private doctor followed by RHC and only 10% take self treatment and 6% take treatment with traditional healers. No gender difference is seen in current illness as well as illnesses of elderly within one year was found. Socioeconomic and education associated with illnesses and treatment seeking.

**Conclusion:** This study reveals nearly half of the elderly had illnesses within one year that high light needs for special care for elderly. There were risk conditions like low education and poverty which is associated with current illnesses as well as illnesses within one year. There is a differences in health seeking pattern in Upper (Ye Oo) and lower (Taungu) Myanmar showing needs for further research in quality of elderly health care and factors related to health seeking behavior of elderly.

**Keywords:** Gender, elderly, morbidity, Myanmar, Rural