

Selected Abstracts of Articles Published Elsewhere by Authors in Kuwait

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Additional Case of *Ramichloridium Mackenziei* Cerebral Phaeohyphomycosis from the Middle East

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In this report we describe a case of cerebral phaeohyphomycosis involving a 56-year-old Egyptian male who worked as a mason in Kuwait for 6 years. Computerized tomography scan of the brain revealed the presence of a large abscess in the left occipital lobe. Aspirated pus from the abscess showed branched, septate, hyphae with light brown pigmentation. Cultured pus grew the fungus *Ramichloridium mackenziei*. Despite amphotericin B (1 mg/kg (-1) per day) therapy for 2 weeks, the patient expired. The isolate was later found to be resistant to amphotericin B (>32 microg/ml (-1)). Antifungal susceptibility testing to other agents was also performed.

Racial Variation in Risk Factors and Occurrence of Acute Myocardial Infarction: Comparison between Arab and South Asian Men in Kuwait

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Background: There are little data available on the rates of occurrence, risk factors and mortality due to acute myocardial infarction among the various ethnic groups living in Middle-East countries. Therefore, we did a study to compare Arabs and South Asians living in Kuwait.

Methods And Results: The data for this retrospective study were collected from the computerized database of the Coronary Care Unit at the Mubarak Al-Kabeer Hospital (a 476-bed teaching hospital) and the 1997-2000 Census data for the State of Kuwait. Arab and South Asian men above 25 years admitted between September 1997 and August 2000 with a diagnosis of acute myocardial infarction were included in the study. A total of 866 Arabs and 277 South Asian men were admitted. The rate of admission for the entire patient population was two-fold higher among Arabs as compared with South Asians (6.7/1000 population and 3.3/1,000, respectively). Diabetes mellitus was present in 453 Arabs (52.3%) and 109 South Asians (39.4%) ($p < \text{or} = 0.001$) of those > 25 years of age. Hypertension was recorded in 247 Arabs (28.5%) and 57 South Asians (20.6%) ($p < \text{or} = 0.01$). Among patients < 55 years of age (454 Arabs and 226 South Asians); the rate of admission was 4.0/1,000 in Arabs and 3.5/1,000 in South Asians (not significant). Hypertension was present in 97 Arabs (21.3%) and 43 South Asians (19%) (not significant). Diabetes mellitus was present in 202 Arabs (44.5%) and 80 South Asians (35.4%) ($p < \text{or} = 0.05$). Smoking was recorded in 353 Arabs (77.8%) and 160 South Asians (70.8%) (not significant). Hypercholesterolemia was presenting 182 (40.1%) and 88 (39%), respectively (not significant). While in hospital, 11 Arabs and 9 South Asians died (not significant).

Conclusions: Among men > 55 and < 75 years of age, Arabs had a higher rate of admission with

acute myocardial infarction compared with men of South Asian origin. The incidence of diabetes and hypertension was significantly higher among Arabs in this age group. In younger patients (< 55 years), the rate of acute myocardial infarction was not different between the two groups; however, diabetes was present more often among Arabs. The smoking rate is very high in both groups and is an important risk factor for both Arab and South Asian men living in the Middle East.

Silent Brain Infarcts are Rare in Kuwaiti Children with Sickle Cell Disease and High Hb F

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Overt stroke is rare among sickle cell disease (SCD) patients in Kuwait. However, there are no previous studies of silent cerebral infarcts, which have been described in up to 20% of American children with Hb SS. We have carried out a prospective brain MRI study among otherwise normal SCD patients, who were consecutive patients seen in a 1-year period to document the prevalence of silent cerebral infarcts in children with sickle cell disease in Kuwait. Any patient with a previous seizure or other neurological abnormality was excluded. MRI was done with a 1.5 Tesla unit with super-conducting magnet. T1- and T2-weighted sagittal and axial sections and proton density axial images were obtained in 5-mm thick sections. The study group consisted of 30 (23 SS and 7 Sbeta(0)Thal) patients-19 males and 11 females-whose ages ranged from 6 to 17 (mean of 9.8 +/- 3.5) years. Hb F ranged from 11% to 35% with a mean of 22.8% +/- 5.7%. Only one patient, a 10-and-a-half-year-old boy with Hb SS, showed hyperintense signals in the parietal white matter, consistent with small infarcts, thus giving a prevalence of 3.3%. Silent brain infarcts are uncommon in our patients, and the protective factors remain to be fully elucidated.

Long-term Functional Results of Transhiatal Oesophagectomy and Colonic Interposition for Caustic Oesophageal Stricture

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Aim of the study: Various surgical procedures have been advocated for replacement of the scarred oesophagus in children. We report here on our experience of oesophago-coloplasty.

Methods: Over a 10-year period, 100 children (62 boys, 38 girls) with intractable caustic stricture of the oesophagus underwent transhiatal oesophagectomy and left colonic interposition. Their age at the time of reconstruction ranged from 14 months to 8 years (mean 3.4 years).

Results: The patients were followed up post reconstruction for a period ranging from 5 to 15 years. There were 3 deaths from respiratory failure. Stricture of the cervical oesophagocolic anastomosis occurred in 6 patients and needed repeated dilatations (in 2 patients) and surgical revision (in 4 patients). Mild redundancy of the colonic substitute in the chest was noted in five cases, but in no case there was dysphagia necessitating revision of the colonic transplant. Peptic ulcer or symptomatic gastric-colic reflux was not seen in this group of patients. All of our patients are able to swallow and eat a normal unrestricted diet, they are gaining weight and enjoying a normal life pattern.

Conclusion: We conclude that isoperistaltic left colon, based on both the ascending and descending branches of the left colic vessels with simultaneous oesophagectomy utilising the transhiatal approach, is the best substitute for a scarred oesophagus in children with satisfactory long-term functional results.

Antibiotic Resistance of Enterococci Isolated at a Teaching Hospital in Kuwait

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Enterococci isolated in a teaching hospital were studied for their resistance to different antibiotics. Minimum inhibitory concentrations to high-level aminoglycosides and glycopeptide antibiotics were determined by agar dilution and E-test methods respectively. Genes encoding aminoglycoside-modifying enzymes were detected by the polymerase chain reaction (PCR). 195 enterococci were isolated from urines (54.3%), wounds (16.4%), blood (10.2%), and miscellaneous sources (18.9%). They consisted of *E. faecalis* (88.7%), *E. faecium* (9.2%), *E. casseliflavus* (1.5%) and *E. bovis* (0.5%). None of the enterococci produced penicillinase but 3.5% of them were resistant to ampicillin. They were also resistant to high-level gentamicin (15.9%), kanamycin (22.0%), streptomycin (21.0%), tetracycline (65.1%), erythromycin (62.6%), ciprofloxacin (36.1%), chloramphenicol (26.1%), vancomycin (3.0%) and teicoplanin (2.0%). Most of the high-level aminoglycoside-resistant isolates contained genes coding the bifunctional aminoglycoside modifying enzymes AAC(6')-APH(2''), APH(3') and ANT(6') but not the ANT(4') enzyme. The results demonstrated a low prevalence of vancomycin resistance among Enterococci in this hospital.

Epidemiology of Tuberculosis in Kuwait from 1965 to 1999

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Background: After several decades of continuous decline, the incidence of tuberculosis (TB) has increased over the last 10 years in several regions of the world. No reports have been published describing the epidemiology of TB in Kuwait.

Objectives: To examine the trend of TB in Kuwait from 1965 to 1999 and analyse the factors associated with this trend.

Methods: Annual reports of the Kuwait central TB unit were examined. Tuberculosis registers recommended by the World Health Organization (WHO) and the International Union Against Tuberculosis and Lung Disease (IUATLD), which were available for the years 1998 and 1999, were also examined.

Results: The notification rate of TB for the whole population has declined from 259 per 100000 in 1965 to 24/100000 in 1999. There has been a steeper decline among Kuwaiti nationals, from 355/100000 in 1965 to 14/100000 in 1999. The average annual rate of decline in all cases of TB among Kuwaiti nationals was 11.9% from 1965 to 1976, and 11.0% from 1976 to 1989, but there was a slight rise of 4.3% per year from 1989 to 1999. The average annual rate of decline in all cases of TB among non-nationals was 6.3% from 1965 to 1976, and 8.3% from 1976 to 1989, but there was a rise of 2.3% per year from 1989 to 1999.

Conclusion: Tuberculosis in Kuwait declined steadily from 1965 to 1989. Since 1989 there has been a slight rise in TB incidence in Kuwait among both Kuwaiti nationals and non-nationals.

Profiles of Activated T Lymphocytes in Peripheral Blood of Kuwaiti Psoriasis Vulgaris Patients

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We have previously reported unexpected immunological features of psoriasis among Kuwaitis, suggesting novel patterns of immune reactivity contributing to the disease. To better define this phenomenon, we herein describe profiles of major populations and immunologically activated subsets of peripheral blood lymphocytes in a cohort of Kuwaiti psoriasis vulgaris patients. Whole venous blood from fifteen psoriatic and twenty eight normal, healthy subjects was analyzed by 2-color flow cytometry for levels of major lymphocyte species and their immunologically activated subsets. When compared to normal subjects, psoriatic blood contained lower cell densities of CD2+, CD8+ ($p = 0.002$ respectively) and B lymphocytes (CD19+) ($p = 0.003$), with a trend toward a lower CD4+ density ($p=0.072$). Within each major lymphocyte population, activated lymphocytes were present at higher percentages in psoriatic than in healthy blood. These included CD4+ HLA-DR+ ($p = 0.002$), CD4+CD25+ ($p=0.043$), CD4+CD54+ ($p=0.005$), CD8+CD25+ ($p=0.015$), CD8+ HLA-DR+ ($p = 0.046$) and CD3+CD16+CD56+ ($p=0.023$). Additionally, psoriatic patients were found to have an expanded ratio of memory to naive T cells (CD45RO+CD45RA+) relative to control subjects; this was expected on the basis of increased immune activation. Our findings are consistent with a picture of psoriasis as a disease mediated by activated lymphocytes.

Satisfaction with Physiotherapy among Patients at a General Hospital in Kuwait

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Objective: A pilot survey was conducted with adult patients attending the Physiotherapy Department at the Farwaniah Hospital, Kuwait, during the year 2000, to validate a questionnaire measuring outpatients' satisfaction with different aspects of physiotherapy care and associated socio-demographic factors.

Methods: This study was carried out in the Department of Physiotherapy, Farwaniah Hospital, State of Kuwait, during a time period of 5-months. A structured questionnaire was developed to include questions relating to ease of contact for appointments, the organizational settings, quality of therapeutic services, overall satisfaction with the department, and willingness to re-utilize or to recommend the department in the future, along with socio-demographic data and the duration of the disease.

Results: A total of 144 questionnaires were completed by a group of mostly women (64%) married (70%) participants, with a mean age of 40 years. Kuwaitis were 59% of the group, and less than 50% had a secondary education or more. A vast majority of participants perceived the department was easy to contact. Those with lower such perception were relatively older patients. On all other dimensions of satisfaction, the response was generally positive, regardless of socio-demographic variables or duration of disease. Less educated patients had a slightly lower tendency to recommend the department in the future (51%) than more educated ones (60%).

Conclusion: Patients in Kuwait tend to express high levels of satisfaction with health services, an attitude, which may be biased by cultural reluctance to express public negative views. Alternatively, it may be influenced by the relatively sustained interaction between patients and their therapists. It is important to provide more orientation to older, less educated patients who may feel lost within a process they do not fully comprehend.

Developments in the Instruction of Biostatistics at the Kuwait University Health Science Centre in a decade

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Background: Kuwait has witnessed many changes that influenced, among other things, the structure of medical education including biostatistics. This article describes the developments in biostatistics instruction and curriculum in the Health Science Centre, University of Kuwait, during the past 10 years.

Description: Instead of teaching biostatistics as an independent component, the university has developed an integrated course (35 hr of lectures and 12 hr of tutorial sessions) of biostatistics, epidemiology, and demography that is taught to undergraduate medical and dentistry students to ensure interdisciplinary interaction, to remove redundancies, and to standardize terminology across the three disciplines. The core curriculum of the biostatistics course is compatible with the recommendations of the American Statistical Association. Separate biostatistics courses are also offered to pharmacy and allied health students to address their diverse interests. In addition, new biostatistics and computer applications instruction courses were developed and are taught to the students of the Master of Science (MSc), Master of Public Health (MPH), and PhD programs. For continuing medical education, a workshop on biostatistics and computer applications is organized annually for the medical profession as a collaboration between the Health Science Centre and the Kuwait Institute for Medical Specialization.

Evaluation: The instructor and curriculum content of the biostatistics courses are confidentially evaluated and independently analyzed by the office of the Vice Dean for Academic Affairs. Overall, students evaluate the biostatistics instructors highly and are pleased with the content of the biostatistics curriculum.

Conclusions: During the last decade, biostatistics instruction in the Kuwait Health Science Centre had many new developments. An integrated course on biostatistics, epidemiology, and demography was developed with emphasis on problem solving and small group learning. Another biostatistics course is offered to the students of the new faculty of pharmacy. Further biostatistics courses became operational for the postgraduate programs: (MSc), (MPH), and PhD. Continuing medical education is supported by workshops, which is a sign of collaboration with the health community, and a consultancy office has been established. Overall, biostatistics instruction is well received by students, and the role of biostatistics is recognized by researchers from the medical profession.

No Evidence for an Association between the 5-Hydroxytryptamine 5-HT_{2a} Receptor Gene and Schizophrenia in Kuwaiti Arabs

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The prevalence of T102C polymorphism of the 5-hydroxytryptamine 5-HT_{2a} receptor gene has been investigated using a polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) method in 80 Kuwaiti Arabs with schizophrenia and in 109 normal healthy controls

with a similar ethnic background. There was no significant difference in the frequency of T102 polymorphism in the Kuwaiti cohort of schizophrenia patients and the controls ($P = 0.23$). The data from Kuwaiti Arabs (although our sample size is relatively small) support the findings from some other populations (Caucasians, Japanese), in which a lack of association has been found between T102C polymorphism and the onset of schizophrenia.