

Selected Abstracts of Articles Published Elsewhere by Authors in Kuwait

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Putative Role of Serum Insulin-Like Growth Factor-1 (IGF-1) and IGF Binding Protein-3 (IGFBP-3) Levels in the Development of Prostate Cancer in Arab Men

Kehinde EO, Akanji AO, Mojiminiyi OA, Bashir AA, Daar AS, Varghese R

Department of Surgery (Division of Urology), Faculty of Medicine, PO Box 24923, Kuwait University, 13110 Safat, Kuwait. E-mail: ekehinde@hsc.edu.kw

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Introduction: The incidence of clinical prostate cancer in the Arab population is among the lowest in the world. High serum IGF-1 level has been implicated as a possible risk factor for the development of prostate cancer in Caucasians. The purpose of this study was to determine serum IGF-1 and IGFBP-3 levels in healthy Arab men and in Arab men with newly diagnosed benign prostatic hyperplasia (BPH) and prostate cancer, and to compare these values with values reported in Caucasians.

Patients And Methods: Subjects were recruited in two groups: (a) indigenous, healthy Arab men aged 15-90 y (n = 383); (b) Arab men with newly diagnosed prostate cancer (n = 30) or BPH (n = 40). Blood was obtained from fasting patients and volunteers, between 8:00 a.m. and 12:00 noon. The serum concentrations of IGF-1 and IGFBP-3 were determined using Immunoradiometric assay (IRMA) kits.

Results: As in Caucasians, serum IGF-1 and IGFBP-3 levels declined with age in Arab men. The mean +/- s.d. of serum IGF-1 levels in healthy Arab men in the age group 15-20, 51-60, 61-70 y were lower (376.2 +/- 153.2, 134.9 +/- 105.7 and 89.6 +/- 48.4 ng/ml, respectively), compared to values reported for similarly aged Caucasians. Arab men with newly diagnosed prostate cancer had significantly higher serum IGF-1 level (P < 0.01) and lower IGFBP-3 levels (P < 0.01) compared to age-matched Arabs without the disease.

Conclusions: Arab men have lower serum IGF-1 levels compared to Caucasians and this may be an important factor in the explanation of the low incidence of prostate cancer in the Arab population.

First Report of Supraventricular Tachycardia after Intravenous Pulse Methylprednisolone Therapy, with a Brief Review of the Literature

Kumari R, Uppal SS

Rheumatology Division, Department of Medicine, Mubarak Al Kabeer Hospital, Kuwait

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The occurrence of supraventricular tachycardia after high-dose intravenous methylprednisolone pulse therapy (HIVMPT) in a patient with active rheumatoid arthritis is described for the first time. This case report further expands the range of arrhythmias that can occur with HIVMPT. Other arrhythmias previously reported to occur after HIVMPT include atrial fibrillation, atrial flutter, junctional rhythm, and ventricular tachycardia. To the best of our knowledge, supraventricular tachycardia has not been reported previously, although severe bradycardia, hypotension, asystole, cardiovascular collapse, and sudden death have been documented. A review of the literature indicates that these case reports notwithstanding, HIVMPT is generally safe, and cardiovascular toxicity is rare. However, close supervision with repeated measurements of blood pressure, electrocardiogram, and blood electrolytes is mandatory during and immediately after HIVMPT, especially for patients with pre-existing cardiovascular disease, and the lowest effective dose of methylprednisolone should be infused at a slow rate.

Large-scale Evaluation of A Single-Tube Nested PCR for the Laboratory Diagnosis of Human Brucellosis in Kuwait

Al-Nakkas A, Mustafa AS, Wright SG

Department of Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, Keppel Street, London WC1E 7HT, UK

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A single-tube nested PCR assay identifying a 52 bp fragment from the genus-specific *Brucella* IS711 gene was used prospectively in clinical practice for the diagnosis of human brucellosis in Kuwait. Patients with suspected brucellosis and with other infections were investigated as clinically indicated but in all of them culture, serology and PCR for *Brucella* were carried out. Out of 263 suspected cases of brucellosis, diagnostic tests were positive in 199, serology was positive in 199 and culture in 89, while the *Brucella* PCR was positive in 193 (sensitivity 96.98 %, 95 % confidence interval 94.5-99.5 %). Chronic brucellosis, involving symptoms for more than 1 year, was diagnosed in 49 out of these 193 patients. Diagnoses in four out of the six patients with positive serology but negative PCR and culture were non-*Brucella* bacterial meningitis and viral meningitis. False-negative PCR results were possible in the remaining two; both had been on long-term antibiotics for previously diagnosed brucellosis but their adherence may have been questionable, allowing a relapse. The PCR was negative in 244 patients with other infections (specificity 100 %) and in 180 control subjects with negative *Brucella* culture and serology. PCR results were available within 24 h of sample receipt, providing diagnostic information rapidly. The PCR is expensive and technically demanding and may not be appropriate for all cases. Future studies will help define how it may best be used. For example *Brucella* and tuberculous meningitides can be very similar, *Brucella* PCR may allow prompt distinction between the two, avoiding the need for prolonged empirical treatment for both.

Factors Associated with Implant Recommendation for Single-Tooth Replacement

Al-Shammari KF, Al-Ansari JM, Al-Khabbaz AK, Nociti FH Jr, Wang HL

Specialized Center for the Advancement of Dental Services, Ministry of Health, Salmiyah, Kuwait.

E-mail: khalsham@hotmail.com

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The use of dental implants for single-tooth replacement has been established as a predictable treatment option; yet, limited data are available as to how frequently this option is recommended to patients. The aim of the present study was to examine the frequency of implant recommendation by general dental practitioners after single-tooth extraction and factors influencing their decision to recommend an implant. All single-tooth extractions performed in 26 general dental practice clinics in Kuwait over a 30-day period were examined. Dentists in these centers used the study form to record demographic data, the type of tooth extracted, reason for extraction, and replacement options presented to the patients. Univariate and logistic regression analyses were used to examine associations between background factors and decisions to recommend implant therapy. A total of 1367 patients (mean age, 37.9 +/- 11.8 years) had an extraction of one tooth during the study period. Forty-three patients were offered implants as a replacement option (3.3% of the total sample; 8.6% of patients who were offered tooth replacement options). Factors associated significantly with the recommendation of an implant by Kuwaiti dentists to their patients included younger age, regular dental maintenance visits, and adequate oral hygiene practices ($P < 0.05$; binary logistic regression). Dental implant recommendation for single-tooth replacement in the present sample of dentists was low. Factors associated significantly with dentist recommendation of an implant for single-tooth replacement included age, history of dental maintenance, and oral hygiene practices.

Unique Endemicity of Cryptosporidiosis in Children in Kuwait

Sulaiman IM, Hira PR, Zhou L, Al-Ali FM, Al-Shelahi FA, Shweiki HM, Iqbal J, Khalid N, Xiao L
Division of Parasitic Diseases, National Center for Infectious Diseases, Centers for Disease Control and Prevention,
Building 22, Mail Stop F-12, 4770 Buford Highway, Atlanta, GA30341-3717, USA

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To understand the transmission of *Cryptosporidium* infection in children, fecal specimens from 62 Kuwaiti children with gastrointestinal symptoms found to be positive by microscopy were genotyped and subtyped with a small subunit rRNA-based PCR-restriction fragment length polymorphism analysis and a 60-kDa glycoprotein-based DNasequencing tool. The median age of infected children was 4.5 years, and 77% of infections occurred during the cool season of November to April. Fifty-eight of the children (94%) had *Cryptosporidium parvum*, three (5%) had *Cryptosporidium hominis*, and one (1%) had both *C. parvum* and *C. hominis*. Altogether, 13 subtypes of *C. parvum* (belonging to four subtype allele families) and *C. hominis* (belonging to three subtype allele families) were observed, with 92% of specimens belonging to the common allele family Ila and the unusual allele family IId. Thus, the transmission of cryptosporidiosis in Kuwaiti children differed significantly from other tropical countries. hira@hsc.edu.kw

Characterization of Trichosporon Species Isolated from Clinical Specimens in Kuwait

Ahmad S, Al-Mahmeed M, Khan ZU

Department of Microbiology, Faculty of Medicine, Kuwait University, PO Box 24923, Safat 13110, Kuwait.
E-mail: ziauddin@hsc.edu.kw

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Invasive trichosporonosis is an emerging infection of severely immunocompromised patients. It is principally caused by *Trichosporon asahii*, although some other species of the genus have also been implicated in the aetiology. In this work, 29 clinical isolates of *Trichosporon* species recovered from 29 different patients over a 6-year period were studied for phenotypic and genotypic characteristics. Two morphotypes were recognized on the basis of colony characteristics. The colonies of 25 isolates appeared flat and centrally wrinkled, while the other four isolates appeared dry and irregularly folded or verrucosed. Based on substrate assimilation profiles, all 29 isolates were identified as *T. asahii* using the Vitek 2 system. However, PCR amplification of rRNA gene sequences identified only 25 of the 29 isolates as *T. asahii*. The identity of the remaining four isolates was established as *Trichosporon asteroides* by direct DNA sequencing of the internally transcribed spacer (ITS)-1 and ITS-2 regions in the rRNA gene fragment amplified by PCR using panfungal primers. Fingerprinting carried out by randomly amplified polymorphic DNA analysis showed genotypic heterogeneity among the 25 *T. asahii* and four *T. asteroides* isolates. These data suggest that *T. asahii* is the major species associated with clinical specimens in Kuwait.