

Abstracts of Articles Published Elsewhere by Authors in Kuwait

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Over-the-counter use of oral contraceptives in Kuwait

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Oral contraceptive pills (OCPs) are available over-the-counter (OTC) in Kuwait, and constitute a leading method for spacing and limiting children. Data from a nationally representative survey of Kuwaiti women are used to examine OTC use of OCPs. One-fourth of the women initiated use without consulting a doctor, and 50% bought OCPs from the pharmacy. No socioeconomic or demographic differences were found between those who consulted a physician, implying that women of different background have similar accessibility to the physician. Using multivariate analysis, the odds of consulting a physician were found to be significantly lower for women who first bought OCPs directly from the commercial pharmacy. The duration of first time OCP use did not differ according to physician consultation. It is concluded that OTC availability of OCPs has many advantages and prevents unwanted pregnancy. However, there is a need for better packaging and instructions that would enable high-risk women to identify themselves and to use OCPs under physician supervision.

Thrombolytic therapy in acute myocardial infarction: Practice pattern at an Arab Middle Eastern centre

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Objective: We studied the use of thrombolytic treatment at a major hospital in Kuwait. There were three aims to our study. First, to document the rates of use and shortfall of thrombolytic therapy. Secondly, to identify the reasons for the shortfall. Thirdly, to study the influence of age and gender on the shortfall.

Methods and Results: We retrospectively examined the use of thrombolytic treatment in 983 consecutive patients with the diagnosis of acute myocardial infarction (AMI) during a three-year period, from June 1994 to May 1997. The term "shortfall" refers to the number of patients who were eligible for thrombolytic treatment but did not receive it. Patients were relatively young (59% were < 55 years old). There was a high prevalence of diabetes (39%). We identified 669 patients who were eligible to receive thrombolytic therapy (68% of the total AMI population). Of the eligible population, 625 patients (93.4%) received thrombolytic therapy while 44 patients did not (a shortfall of 6.6% among the eligible population). The reasons for the shortfall were: unknown reasons, retinopathy, and others. The shortfall was higher in women than in men (13% vs. 6%, respectively; $p=0.02$). The shortfall was higher in older patients than in younger patients (18% vs. 5%, respectively; $p=0.0002$).

Conclusions: Our thrombolysis rate is one of the highest, and the shortfall is one of the lowest reported rates in the literature. Many eligible women and older patients are not receiving thrombolytic therapy. Changes to thrombolytic therapy use should be implemented to avoid unnecessary shortfall and potential gender and age bias.

Infection after laparoscopic cholecystectomy: effect of infected bile and infected gallbladder wall

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Objective: To assess the incidence of infected bile and gallbladder wall infection at the time of laparoscopic cholecystectomy, and find out if they influenced the rate of postoperative infective complications.

Design: Prospective study.

Setting: District hospital, Kuwait.

Subjects: All 279 patients who had their gallbladders removed laparoscopically for gallbladder disease between September 1995 and August 1998.

Interventions: Samples of bile and gallbladder wall were taken from all patients and cultured separately for aerobic and anaerobic bacteria. Patients with complicated gallbladder disease (n = 80) were given preoperative therapeutic antibiotics for five days (cephalosporin plus metronidazole), and other high-risk patients (n = 138) were given prophylactic ceftriaxone either 1 g x 3 starting at induction of anaesthesia (n = 42), or a single dose at induction (n = 96).

Main outcome measures: Incidence of infected cultures, and infective morbidity. Results: 26 specimens of bile (9%) and 56 specimens of gallbladder wall (20%) were infected. Two patients in whom neither specimen had shown any growth developed minor infections at the umbilical port. No patient in whom either specimen was infected developed an infective complication.

Conclusions: The overall rate of infective complications was negligible, and did not correlate with the presence of bacteria in the bile or gallbladder wall. This is probably a reflection of our aggressive antibiotic regimen in the management of high-risk patients.

Influence of consanguinity and IgE receptor genotypes on clinical manifestations of asthma in Kuwaiti children

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An association between IgE receptor FcepsilonRIbeta polymorphism and atopy has been reported and proposed to be maternally transmitted. In a previous communication we reported high prevalence of the IgE receptor FcepsilonRIbeta variant (Leu 181/Leu 183) in Kuwaiti Arabs with asthma. This study investigates the association of this variant with parental consanguinity, maternal vs paternal inheritance, gender, and severity of asthma in 52 Kuwaiti families in whom at least one person had asthma. Using an allele refractory mutation screening (ARMS) test, blood (from 212 subjects, including asthmatic children, their parents and siblings) was tested for the presence of the normal and variant sequence of the IgE receptor FcepsilonRIbeta [homozygous normal sequence (Ile 181/Val 183, NN), the variant sequence (Leu 181/Leu 183, LL) and the heterozygous state NL]. In the 52 families 99 subjects were asthmatic.

The consanguinity rate was 42 per cent which is similar to the 54 per cent reported for the Kuwaiti population as a whole. There were slightly more asthmatic fathers (27 per cent) than mothers (21 per cent) but this difference is not significant. The male to female ratio amongst the asthmatics was 1.5:1 and there was no gender effect on the frequency of the homozygous variant.

Fifty-eight subjects (59 per cent) had severe and 41 (41 per cent) moderate asthma. Significantly more patients with severe asthma (58 per cent) were homozygous for the variant (Leu 181/Leu 183)

than those with moderate disease (33 per cent) ($p < 0.018$). Our data suggest an equal maternal and paternal contribution to the inheritance of asthma and an association of the homozygous variant (Leu 181/Leu 183) of the IgE receptor FcepsilonR1beta with disease severity.

Prevalence of penicillin-resistant *Streptococcus pneumoniae* in Kuwait

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The worldwide incidence of penicillin-resistant *Streptococcus pneumoniae* has increased at an alarming rate during the past decade. However, there has been little published data about the extent of this problem in Kuwait. The present study was undertaken to ascertain the preponderance of *S. pneumoniae*, either resistant or intermediate-resistant to penicillin, other beta-lactams and non-beta-lactam antimicrobials in Kuwait. Two hundred and fifty fresh isolates from as many patients suffering from different clinical conditions were collected from all clinics and hospitals in Kuwait. Optochin sensitivity and bile solubility tests reconfirmed these. Susceptibility testing to penicillin, ampicillin, cefuroxime, ceftriaxone, cefotaxime, imipenem, erythromycin, chloramphenicol, ciprofloxacin and vancomycin was done using E-test strips and to oxacillin, tetracycline, trimethoprim and amoxicillin-clavulanate by disc diffusion technique.

Full and intermediate resistance to penicillin was observed in 1.6% and 52.8% of the isolates respectively. Full resistance to third-generation cephalosporins ranged from 0.4% to 3.2%, however, intermediate resistance to these antibiotics varied between 18.8% and 21.2%. Ampicillin resistance was noted in 0.8%, but 40.4% of isolates were intermediately resistant. However, only 0.4% of the isolates showed either intermediate or full resistance to amoxicillin-clavulanate. Resistance to imipenem was observed in 0.4% and intermediate to 13.6% of the organisms. The rates of *S. pneumoniae* resistant to chloramphenicol, erythromycin, tetracycline and trimethoprim were between 8.4% and 37.6% and intermediate resistance between 1.2% and 17.6% while only 0.4% showed resistance to ciprofloxacin and none to vancomycin. Multiresistance to both beta-lactam and non-beta-lactam antibiotics was observed in 52% of the penicillin-resistant isolates.

Childhood lichen planus: a report of 23 cases

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Lichen planus (LP) in children is a rare entity. We report 23 cases of childhood LP seen over a period of 7 years. Ninety-six percent of the children were of Arab ancestry. There were 52% boys and 48% girls. Classic LP was the most common clinical variant (70%), followed by eruptive generalized LP (13%). A majority of the patients had mild, localized disease. Oral involvement was seen in 39% of patients. Topical steroids were the mainstay of treatment in most of the cases. Children with chronic and recurrent disease responded to dapsone therapy, whereas in those with eruptive and widespread disease, UVB phototherapy was found to be safe and effective. The present report highlights the salient clinical features, treatment, and course of LP in children in Kuwait compared to those reported in children of other countries as well as those of adults.

Gene deletion patterns in spinal muscular atrophy patients with different clinical phenotypes

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Spinal muscular atrophy (SMA) is an autosomal recessive disorder characterized by degeneration of lower motor neurons. We have assayed deletions in two candidate genes, the survival motor neuron (SMN) and neuronal apoptosis inhibitory protein (NAIP) genes, in 108 samples, of which 46 were from SMA patients, and 62 were from unaffected subjects. The SMA patients included 3 from Bahrain, 9 from South Africa, 2 from India, 5 from Oman, 1 from Saudi Arabia, and 26 from Kuwait. SMN gene exons 7 and 8 were deleted in all type I SMA patients. NAIP gene exons 5 and 6 were deleted in 22 of 23 type I SMA patients. SMN gene exon 7 was deleted in all type II SMA patients while exon 8 was deleted in 19 of 21 type II patients. In 1 type II SMA patient, both centromeric and telomeric copies of SMN exon 8 were deleted. NAIP gene exons 5 and 6 were deleted in only 1 type II SMA patient. In 1 of the 2 type III SMA patients, SMN gene exons 7 and 8 were deleted with no deletion in the NAIP gene, while in the second patient, deletions were detected in both SMN and NAIP genes. None of the 62 unaffected subjects had deletions in either the SMN or NAIP gene. The incidence of biallelic polymorphism in SMN gene exon 7 (BsmAI) was found to be similar (97%) to that (98%) reported in a Spanish population but was significantly different from that reported from Taiwan (0%).

The incidence of a second polymorphism in SMN gene exon 8 (presence of the sequence ATGGCCT) was markedly different in our population (97%) and those reported from Spain (50%) and Taiwan (0%). Copyright 2001 National Science Council, ROC and S. Karger AG, Basel.

Frequency of the 677 C-->T mutation of the methylenetetrahydrofolate reductase gene among Kuwaiti sickle cell disease patients

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Sickle cell disease (SCD) is relatively mild among Kuwaiti Arabs. However, an atypical subset of patients exists with frequent, severe vaso-occlusive crisis and osteonecrosis. The thermolabile variant of MTHFR, resulting from a C-->T mutation at nucleotide 677, has been shown to be associated with hyperhomocysteinemia, which is an important risk factor for premature vascular disease. We have screened an unselected group of 41 Kuwaiti SCD patients (33 SS and 8 Sbeta(0)-thal) attending the Hematology Clinic of Kuwait University Teaching Hospital for the MTHFR mutation, using a PCR-RFLP method. The patients were aged 2-41 years (mean of 12.8 +/- 8.6). One (2.4%) individual was homozygous for the mutation while 15 (36.6%) were heterozygous, giving an allele frequency of 20.7%. Twenty-one patients (14 SS and 7 Sbeta(0)-thal) were screened for osteonecrosis using MRI of the hip (spin-echo T1- and T2-weighted images). Seven (33.3%) had varying degrees of osteonecrosis, among whom the frequency of the 677 C-->T allele was 21.4%. The frequency was identical among those without osteonecrosis. Although the allele frequency is higher among our patients compared to American SS patients, our results do not suggest an association with osteonecrosis. Copyright 2001 Wiley-Liss, Inc.