

## Selected Abstracts of Articles Published Elsewhere by Authors in Kuwait

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### Injuries to the Major Airway after Blunt Thoracic Trauma in Children: Review of 2 Cases

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Tracheobronchial injuries in children occur rarely. Their diagnosis is often very difficult and needs a high degree of suspicion, with in-depth knowledge of the anatomy of and radiological findings for the chest. With proper surgical management, even a delayed diagnosis can result in normal lung function. We discuss 2 cases of major airway injuries with successful outcomes and present some interesting surgical maneuvers.

### Relative Contribution of Digital Rectal Examination and Transrectal Ultrasonography in Interpreting Serum Prostate-Specific Antigen Values for Screening Prostate Cancer in Arab Men

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**Background:** This study was conducted to determine the utility of digital rectal examination (DRE), transrectal ultrasonography (TRUS) and serum prostate-specific antigen (PSA) in the diagnosis of prostate cancer in men in Arabia, an area of the world with a relatively low incidence of this disease. **Patients And Methods:** 329 patients suspected of having prostate cancer on account of raised serum PSA level (>4 ng/ml), DRE or TRUS findings, underwent TRUS-guided prostate biopsy. Raised PSA individually as well as combined, or a lesion suspicious of carcinoma on DRE or TRUS was recorded as PSA(+), DRE(+) or TRUS(+), respectively. The contribution of DRE, TRUS and serum PSA to the diagnosis of prostate cancer was analysed.

**Results:** Of the 329 patients who had prostate biopsies 109 cases (33.1%) had PCa. Of these 109 patients 56 (51%) had DRE(+), 77 (42%) had TRUS(+) and 49 (66%) had both DRE(+) and TRUS(+). Statistical analysis revealed that DRE(+) tripled the probability for cancer. PSA over a range of 10-50 ng/mL demonstrated an increasing cancer probability ranging from 2 to 3 fold. TRUS(+) was only significantly associated with cancer risk if PSA was elevated. The presence of all three factors increased the cancer probability by 6 to 7 fold.

**Conclusion:** TRUS findings are dependent on PSA for interpretation while DRE(+) with elevated PSA makes PCa more likely.

## Different Responses to Angiotensin-(1-7) in Young, Aged and Diabetic Rabbit Corpus Cavernosum

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We evaluated the ability of angiotensin-(1-7) [Ang-(1-7)] to produce relaxation of the corpus cavernosum of New Zealand White rabbits. The reactivity of corpus cavernosal strips isolated from young rabbits (8-10 months old) was assessed in organ-bath chambers. Cumulative concentration response curves for Ang-(1-7), angiotensin II (Ang II), carbachol and sodium nitroprusside (SNP) were established. Ang-(1-7) (10(-12) to 10(-5)M) produced a concentration-dependent relaxation of the corpus cavernosal strips with a pD(2) value of 9.8+/-0.3. Ang-(1-7)-induced maximal relaxant response was reduced by 48+/-2%, 57+/-3% and 76+/-2% in the presence of A-779 (10(-6)M), a selective Ang-(1-7) receptor (AT(1-7)) antagonist, nitro-l-arginine methyl ester (l-NAME) (10(-4)M), an inhibitor of nitric oxide (NO) synthase, or iberiotoxin (5x10(-8)M), an inhibitor of calcium-activated potassium (BK) channels, respectively. In contrast, Ang II-induced contraction was increased in the presence of A-779. Carbachol-, SNP- and Ang-(1-7)-induced relaxations were significantly reduced whereas Ang-II induced contraction was significantly increased in the cavernosum strips from older (18-24 months old) and diabetic rabbits compared to the young. Pre-incubation of the cavernosum strips obtained from young, older or diabetic rabbits with Ang-(1-7) resulted in a significant attenuation of Ang II-induced contraction. In conclusion, these results demonstrate that Ang-(1-7) can produce nitric oxide-dependent relaxation of the corpus cavernosum through activation of AT(1-7) and BK channels. Older and diabetic animals showed impaired Ang-(1-7)-mediated relaxation suggesting that aging and diabetes related erectile dysfunction (ED) may be partly due to decreased Ang-(1-7)-mediated relaxation of the corpus cavernosum. Acute pre-incubation with Ang-(1-7) was effective in attenuating Ang II-induced contraction of rabbit corpus cavernosum suggesting that the possible role of Ang-(1-7) in treatment of ED should be investigated.

## Factors Influencing Engraftment in Autologous Pperipheral Stem Cell Transplantation. The experience of a Local Kuwaiti Transplantation Center

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**Objective:** To assess factors affecting engraftment among patients with lymphoproliferative disorders treated with high dose-chemotherapy and autologous peripheral blood stem cell transplantation.

**Methods:** Fifty-four patients with lymphoproliferative disorders were treated from March 2000 to April 2006, at the Hamid Al-Essa Multiorgan Transplant Center, Kuwait. There were 37 males and 17 females, with a median age of 43 years (range 12-60). The cohort included 13 Hodgkin's lymphoma, 31 non-Hodgkin's lymphoma, and 10 multiple myeloma cases.

**Results:** The median number of infused CD34+ cells was 1.7x10(6) per kg (0.38-15). The medians for absolute neutrophil count (ANC) and platelet (PLT) engraftment were 12 days (10-15) and 11 days (6-33). The CD34+ cell dose and timing of granulocyte-colony stimulating growth factor administration had no significant influence on ANC engraftment (p=0.3 and p=0.05).

**Conclusion:** The results imply that the CD34+ cell dose is the most important predictor of hematopoietic engraftment, namely PLT engraftment. The other factors studied had no clear influence on engraftment kinetics in this cohort.