

Cigarette Smoking Impairs Sperm Bioenergetics

The January – February 2010 issue of the International Braz J Urol presents original contributions and editorials from many different countries, such as USA, Japan, Greece, Turkey, Egypt, Sweden, Brazil, Germany, Norway, Taiwan, Kuwait, Italy, India, etc., and as usual, the editor's comment highlights some papers.

Doctor Chohan and co-workers, from Upstate Medical University, Syracuse, NY, USA, compared on page 60 the rate of sperm respiration in smokers and non-smokers. They evaluated semen samples from 20 smokers and 58 non-smokers. A phosphorescence analyzer that measures O₂ concentration in sperm suspensions as function of time was used to determine the rate of respiration. The authors did not find differences between smokers and non-smokers for ejaculate volume, motility, concentration, normal morphology, viability and hypo-osmotic swelling test. The rate of sperm mitochondrial O₂ consumption in the smokers was 0.96 ± 0.58 and in the non-smokers 1.39 ± 0.67 ($p = 0.004$). The authors concluded that the rate of sperm respiration was significantly lower in smokers. This negative impact of cigarette smoking on sperm aerobic metabolism may, in part, explain the lower rate of fertility in smokers.

Doctor Nishizawa and colleagues, from Nagano Municipal Hospital, Japan, evaluated on page 18 the capability and reliability of diffusion-weighted magnetic resonance imaging (DWI) in the evaluation of upper urinary tract urothelial tumors. DWI was performed in 17 patients with upper urinary tract urothelial tumor, previously diagnosed by either CT or retrograde pyelography. A histological evaluation was performed after surgical resection. In 9 patients with renal pelvis tumors and 7 patients with ureteral tumors, the lesions were shown as high-signal intensity in the corresponding region on DWI. In one patient with carcinoma in situ (CIS) of the ureter, the lesion was not depicted with DWI. In this study, the renal pelvic and ureteral tumors except CIS were shown clearly with DWI. Whenever available, DWI may take the place of invasive retrograde urography for detecting tumors of the upper urinary tract.

Doctor El-Nahas and associates, from Mansoura University, Egypt, compared on page 29 the results of percutaneous and open drainage for perinephric abscess. Eighty-six patients who underwent drainage for perinephric abscesses were evaluated. Percutaneous tube drain (PCD) was used for drainage of the abscess in 43 patients (group 1), while the other 43 patients were managed with open drainage (group 2). The authors found that open drainage of perinephric abscesses resulted in a statistically significant higher cure rate (98% versus 69%, $p < 0.001$) and shorter hospital stay than PCD (3.6 versus 6 days, $p < 0.001$). Failure of complete drainage of multilocular abscess was observed in 8 of 13 cases (61.5%) in group 1 and one of 38 cases (2.6%) in group 2 ($P < 0.001$). Complications were observed in 7% of group 1 and 11.5% in group 2 ($P = 0.45$). After mean follow-up of 19 months, 9 of 46 patients (19.6%) had recurrence; 7 of them were in group 1. It was concluded that percutaneous drainage of perinephric abscess is an effective minimally

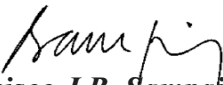
EDITOR'S COMMENT - *continued*

invasive treatment. However, PCD is not the optimal method for drainage of multilocular abscess because open surgical drainage provided higher cure rates and shorter hospitalization than PCD. Dr. Mazzucchi, from University of Sao Paulo, SP, Brazil and Dr. Kehinde from Kuwait University, Safat, Kuwait, provided balanced editorial comments on this article.

Doctor Altunoluk and co-authors, from Sutcu Imam University, Kahramanmaras, Turkey, reported on page 55 their results with microsurgical subinguinal varicocele ligation to treat pain. They analyzed 284 men who underwent subinguinal microsurgical varicocele ligation for scrotal pain. The median patient age at the time surgery was 23.7 years (range 16-38 years) and the average duration of pain before presentation was 11.2 months (range 1 month to 40 months). In 85.6% of patients there was complete resolution of pain and 6.3% had partial resolution. Pain persisted postoperatively in 19 cases (8.1%). A significant difference was observed in postoperative success between patients who had long period and those who had short period of pain. The authors concluded that sub-inguinal microsurgical varicocele ligation is an effective treatment for painful varicocele. The duration of pain preoperatively may predict outcomes in selected patients.

Doctor Gomes and colleagues, from University of Sao Paulo School of Medicine, Sao Paulo, Brazil, reported on page 66 their experience with the use of botulinum toxin-A (BoNT/A) formulations Botox® and Prosigne® in the treatment of neurogenic detrusor overactivity (NDO). Forty-five consecutive patients with refractory urinary incontinence due to NDO received a single intradetrusor (excluding the trigone) treatment with botulinum toxin type A. Botox was used for the first 22 patients, and Prosigne for the subsequent 23 patients. Significant improvements from baseline in maximum cystometric capacity (MCC), maximum detrusor pressure during bladder contraction, and compliance were observed in both groups ($P < 0.05$). Improvement in MCC was significantly greater with Botox versus Prosigne (+103.3% vs. +42.2%; $P = 0.019$). Continence was achieved by week 12 in 16 Botox recipients (76.2%) and 10 Prosigne recipients (47.6%; $P = 0.057$). No severe adverse events were observed. The authors concluded that Botox and Prosigne produce distinct effects in patients with NDO, with a greater increase in MCC with Botox.

Doctor Koritsiadis and colleagues from Athens University Medical School, Greece, determined on page 86 whether alpha1-blocker treatment, in chronic bladder outlet obstruction (BOO), influences bladder tissue ischemia. They performed a prospective study including 60 patients with BOO, of which 40 were under alpha1-blocker medication and 20 without treatment. Patients underwent transurethral resection of the prostate (TURP) or suprapubic prostatectomy (SPP). Tissue specimens were immunohistochemically stained for hypoxia inducible factor-1alpha (HIF-1alpha). They found that bladder tissue from obstructed subjects showed high immunoreactivity to HIF-1alpha. The specimens from the control group, showed no or weak, mainly cytoplasmic immunoreactivity to HIF-1alpha. Patients under α -blocker treatment did not differ in the number of HIF-1alpha positive cells compared to subjects with no treatment. It was concluded that treatment with alpha-blockers in obstructed patients considered as non-responders, does not result in HIF-1alpha down regulation, thus bladder continues to be under chronic stress.


Francisco J.B. Sampaio, M.D.
Editor-in-Chief