obstructive azoospermia who were treated by MVE and had previously undergone surgical sperm recovery and ICSI. The patients were divided into two groups according to the sperm retrieval method used in their ICSI attempt: percutaneous epididymal sperm aspiration (PESA) (41.2%, 28/68) and testicular sperm extraction (TESE) (58.8%, 40/68). We evaluated the obstructive causes, patency, pregnancy and live birth rates and the effect of sperm retrieval methods on the outcome of MVE.

Main results and the role of chance: In total, 62 patients (91.2%) showed epididymal obstruction, 2 (2.9%) intratesticular obstruction and 4 (5.9%) vasal obstruction. The mean age was 30.4±5.3 years (range: 22-48 years). We followed up 53 (85.5%) at a mean follow-up of 19.8±9.1 months (range: 6-43 months). The total patency and natural pregnancy rates were 79.2% (n=42) and 35.8% (n=19), respectively. The overall live birth rate was 28.3%. The results of MVE did not differ between the two groups: PESA and TESE.

Limitations, reasons for caution: A randomized controlled trial comparing pregnancy rates, live birth rates, risks and medical costs of MVE and IVF/ICSI is needed. The size of our sample was limited, so we did not reveal significantly different patency, pregnancy and live birth rates between PESA and TESE. A larger sample size is needed to evaluate the effect of sperm retrieval on patency, pregnancy and live birth rates.

Wider implications of the findings: Epididymal obstruction is the most common obstructive cause in non-vasectomized patients. Data from this study have shown that MVE is an effective therapy for such azoospermic patients with epididymal obstruction and prior failed ICSI for pregnancy. Obstructive causes should be differentiated to select optimal therapy for patients with obstructive azoospermia in reproductive centers.

Keywords: Microsurgical vasoepididymostomy (MVE); epididymal obstruction; ICSI

doi: 10.3978/j.issn.2223-4683.2014.s137

Cite this abstract as: Peng J, Yuan Y, Zhang Z, Cui W, Song W, Gao B. Microsurgical vasoepididymostomy is an effective treatment for azoospermic patients with epididymal obstruction and prior failure to achieve pregnancy by sperm retrieval with intracytoplasmic sperm injection. Transl Androl Urol 2014;3(S1):AB137. doi: 10.3978/j.issn.2223-4683.2014.s137

AB138. The varicocele anatomy during subinguinal microsurgical varicocelectomy in Chinese men

KunLong Lv, Jintao Zhuang, Liang Zhao, Zi Wan, Yadong Zhang, Yong Gao, Xiangzhou Sun, Shaopeng Qiu, Chunhua Deng, Xiangan Tu

Department of Urology, The First Affiliated Hospital of Sun Yat-Sen University, Guangzhou 510080, China

Introduction and objectives: Knowledge of during subinguinal microsurgical varicocelectomy is of fundamental importance to ensure that varicocele is resolved and testicular function is preserved. Our study aimed to describe the number of veins, arteries and lymphatics in the subinguinal spermatic cord and to clarify their differences between two sides, between patients with different complaints and between varicoceles with different clinical grades.

Materials and methods: A total of 102 consecutive patients underwent 162 primary subinguinal microsurgical varicocelectomies, during which the number of vessels with different diameters was recorded.

Results: A mean number of 12.9 internal spermatic veins, 0.9 external spermatic veins, 1.8 internal spermatic arteries and 2.9 lymphatics were identified per cord. A total of 88.2% of the internal spermatic arteries were surrounded by a dense complex of adherent veins. The external spermatic vein or veins were found in 49.4% of the cases. The mean number of medium (1-3 mm in diameter) internal spermatic veins on the left was larger than that on the right (P<0.001). The mean number of medium internal spermatic veins in grade III varicocele was larger than that in grade I or grade II (P<0.015). There was no significant anatomic difference between the men presenting for infertility, chronic testicular pain and both the two complaints.

Conclusions: The results suggest that differences and correlations exist in the microanatomy of the right and left spermatic cords. Higher clinical varicocele grade may predict the presentation of a greater proportion of larger internal spermatic veins in spermatic cord.

Keywords: Subinguinal microsurgical varicocelectomy; varicocele anatomy; Chinese men

doi: 10.3978/j.issn.2223-4683.2014.s138

Cite this abstract as: Lv K, Zhuang J, Zhao L, Wan Z, Zhang Y, Gao Y, Sun X, Qiu S, Deng C, Tu X. The varicocele anatomy during subinguinal microsurgical varicocelectomy in Chinese men. Transl Androl Urol 2014;3(S1):AB138. doi: 10.3978/j.issn.2223-4683.2014.s138

AB139. Studies on the mechanism of testicular dysfunction in the early stage of a streptozotocin induced diabetic rat model

Yongde Xu, Hongen Lei, Ruili Guan, Zhezhu Gao, Huixi Li, Lin Wang, Weidong Song, Bing Gao, Zhongcheng Xing

Andrology Center, Peking University First Hospital, Peking University, Beijing 100034, China; Department of Urology, Peking University First Hospital and the Institute of Urology, Peking University, Beijing 100034, China

Abstract: Streptozotocin (STZ) induced diabetic model has been widely used to study the effects of diabetes mellitus (DM) on male infertility, but it remains unclear whether the responses in this model are due to hyperglycemia or STZ per se. This study was designed to investigate the mechanism of STZ on testicular dysfunction. In the present study, sperm characteristics, serum testosterone, steroidogenic enzymes (StAR and 3β-HSD), and the vimentin apical extension of sertoli cells decreased significantly in the STZ group compared with those in the normal controls (P<0.05), while Johnsen's score, testicular lipid peroxidation, spermatogenic cell apoptosis, and the expressions of NF-κB and Wnt4 significantly increased (P<0.05). Insulin replacement mainly restored the decreased serum testosterone and steroidogenic enzymes, but not other parameters. The results indicated that spermatogenic dysfunction in the earlystage of STZ-induced diabetic rats was due to direct STZ cytotoxity to sertoli cells, which could be regulated by Wnt4 and NF-κB, while steroidogenic dysfunction might be a direct or indirect consequence of insulin deficiency. The results suggested that STZ-induced diabetic model, at least in the early stage, is not suitable to study the diabetes-related spermatogenic dysfunction.

Keywords: Streptozotocin (STZ); diabetes mellitus (DM); male; infertility; model

doi: 10.3978/j.issn.2223-4683.2014.s139

Cite this abstract as: Xu Y, Lei H, Guan R, Gao Z, Li H, Wang L, Song W, Gao B, Xing Z. Studies on the mechanism of testicular dysfunction in the early stage of a streptozotocin induced diabetic rat model. Transl Androl Urol 2014;3(S1):AB139. doi: 10.3978/j.issn.2223-4683.2014.s139

AB140. Protective effects of insulin on erectile function in rats with streptozotocin-induced diabetes

Wenjie Tian, Wanli Na, Lin Wang, Huixi Li, Hongen Lei, Ruili Guan, Yongde Xu, Zhongcheng Xin

Department of Urology, China-Japan Union Hospital of Jilin University, Jilin University, Jilin 130033, China; Andrology Center, Department of Urology, Peking University First Hospital, Peking University, Beijing 100034, China

Objective: To investigate the therapeutic effects of insulin on erectile dysfunction (ED) in a rat model with streptozotocin-induced diabetes.
Materials and methods: The diabetic erectile dysfunction (DMED) rat model was made by injecting the male 8-week-old Sprague-Dawley rats intraperitoneally with vehicle or freshly prepared 60 mg/kg streptozocin, and blood glucose level was measured in the later experiments. Then the rats were divided into three groups: the normal control group (N), the diabetes group (DM) and the diabetes plus insulin therapy group (DM + insulin). Eight weeks after STZ injection, the DM + insulin group were treated with 2-6 units of neutral protamine Hagedorn twice a day for 4 weeks through subcutaneous injection. After the final treatment, all rats were tested for erectile function by measuring the intracavernous pressure and mean arterial pressure (ICP/MAP), and the penile was harvested for histology study.
Results: Although the glycemic level was tightly controlled by insulin in the therapy group, ICP/MAP level was partially restored compared to the normal control group,

