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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

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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,

so with the endothelial and smooth muscle contents and apoptosis index.
Conclusions: Insulin could partially restore the erectile functions and pathology changes in the streptozotocin-induced diabetes rat model. Further studies are needed to investigate the underlying mechanisms in the processes of diabetic erectile dysfunction.
Keywords: Erectile dysfunction (ED); diabetes mellitus (DM); insulin

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AB141. Removal of numerous vesical magnetic balls with a self-made magnetic sheath

Huizhen Li, Chuanliang Xu, Shuxiong Zeng, Zhensheng Zhang, Xin Lu, Rongchao Wei, Junjie Zhao, Bo Yang, Yinghao Sun

Department of Urology, Changhai Hospital, The Second Military Medical University, Shanghai 200433, China

Introduction: Sexual curiosity and the quest for sexual excitement are the most frequent reasons for patients to introduce foreign bodies into the urethral or the bladder. Imagination and surgical skill are essential for an urologist to retrieve such vesical foreign bodies.
Aims: To describe a novel method for retrieving vesical magnetic balls, which was used for autoeroticism by an adolescent, by utilizing a self-made "magnetic sheath".
Patients and methods: A 21-year-old inserted more than one hundred small magnetic balls into his urethra for sexual excitement, which lately causing symptoms of gross hematuria, frequent urination and acute lower abdominal pain when walking or urination. We invented a "magnetic sheath" by fixing a magnetic ball on the tip of a F9.5 ureteral access sheath to remove the foreign bodies in a minimally invasive way.
Results: Under direct visualization of a F8/9.8 ureteroscopy, the "magnetic sheath" could easily firmly attach to the magnetic ball inside the bladder, which could pull out 5 to 15 balls each time. It took about 5 minutes to remove all of the 125 magnetic balls by utilizing our "magnetic sheath".
Conclusions: The self-made "magnetic sheath" can make the task of removal of magnetic foreign body easy to urologist, which requires less time and surgical skills. The new equipment provides a new method for urologist to deal with some challenging task of removing metal vesical foreign bodies which was self-inserted for masturbation.
Keywords: Removal of numerous vesical magnetic balls; self-made magnetic sheath; sexual curiosity

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AB142. The characteristics and therapeutic applications of low-intensity pulsed ultrasound

Hongen Lei, Yongde Xu, Ruili Guan, Huixi Li, Wenjie Tian, Lin Wang, Zhezhu Gao, Zhongcheng Xin

Andrology Center, Peking University First Hospital, Peking University, Beijing 100034, China; Knuppe Molecular Urology Laboratory, Department of Urology, School of Medicine, University of California, San Francisco, CA, USA; Department of Urology, China-Japan Union Hospital of Jilin University, Jilin University, Jilin 130033, China

Abstract: Ultrasound is a form of mechanical energy with its acoustic pressure wave at frequencies range from 20 to 20,000 Hz. To date, ultrasound waves are not only used in imaging medicine for diagnosis, but also are performed in physical therapy (PT) medicine for the purpose of preventing and curing disease due to its thermal and non-thermal effects, and the ultrasound frequencies used in

