Methods: Eighteen18 patients treated by TURED operation in CSEA, 17 of them need cut-through verumontanum to find the openings of ejaculatory duct by 22# resectoscope, then take a bit of seminal fluid by using seminal vesicle mirror, and find semens in microscope. Three of them need use holmium laser to enlarge enlarge. All of them were required indwelling 14# catheter 2 days after operation, and encourage them to have sex soon.
Results: The 18 patients within about 1 week after operation. Fourteen of them can find semens in seminal fluid, one of them make a successful conception. Nine patients need to take medicine to improve the quality of semens.
Conclusions: Combined tiny operational trauma and rapid recovery, TURED is a valid approach to cure obstructive azoospermia and worth using widely.
Keywords: Obstructive azoospermia; seminal vesicle mirror; operation

doi: 10.3978/j.issn.2223-4683.2015.s069

Cite this abstract as: Wang J, Wang D, Xu J, Yang H, Li Z. The observation on affection of TURED on obstructive azoospermia. Transl Androl Urol 2015;4(S1):AB069. doi: 10.3978/j.issn.2223-4683.2015.s069

AB070. The current status of sperm bank in Korea

Nam Cheol Park

Department of Urology, Pusan National University School of Medicine, Busan, Korea

Abstract: Sperm banking is an important option to maintain or induce the male fertilization even though under the era of *in vitro* fertilization. The medical indications for sperm banking are generally consisted of three categories. There are cases on planning the permanent contraception like vasectomy or cancer patients to be scheduled the chemotherapy or radiotherapy as first category, male infertile patients with severe oligozoospermia or artificially harvested sperm i.e., from MESA or TESE etc. for the artificial insemination with husband sperm as second category, and the therapeutic artificial insemination with donated sperm as third category. Of these three categories, the sperm donation programme accompanies various complicated practical, ethical and legal issues. Therefore, highly regulated statements are mandatory in order to secure safety and perfect practice for voluntary sperm donors and infertile couples both. In aspect of administrative structure of sperm bank, there are two types that are public based in the most of European countries and China, and commercially available in the USA. Additionally, each country has different standard guideline, regulation statement, act and law to control the sperm donation programmes. Nevertheless, we need a consensus document to operate the sperm bank with the standard guidelines to be well revised according to each country's ethical perspectives as well as contemporary scientific evolution. This lecture will present the Korean experience in the sperm bank in comparison with different situation in various countries.
Keywords: Sperm bank; sperm donation; guideline

doi: 10.3978/j.issn.2223-4683.2015.s070

Cite this abstract as: Park NC. The current status of sperm bank in Korea. Transl Androl Urol 2015;4(S1):AB070. doi: 10.3978/j.issn.2223-4683.2015.s070

AB071. The molecular mechanism of acrosome formation and globozoospermia

Yaoting Gui

The Laboratory of Male Reproductive Medicine and Genetics, Peking University Shenzhen Hospital, Shenzhen 518036, China

Objective: The acrosome is a specialized organelle that covers the anterior part of the sperm nucleus and plays an essential role in the process of fertilization. The present study is to review the molecular mechanism of acrosome formation and explore its relationship with globozoospermia
Methods: We reviewed the published papers from

PubMed, and also report some research progress of acrosome formation in our laboratory.

Results: Acrosome formation can be divided into four stages: Golgi-phase, cap-phase, acrosome-phase and maturation-phase. In the past 10 years, with gene targeting technology, more than ten genes were identified to be related acrosome formation in mice. Those genes include Casein kinase II α´ catalytic subunit (*Csnk2a2*), HIV-1 Rev-binding protein (*Hrb*), Golgi-associated PDZ- and coiled-coil motif-containing protein (*Gopc*), Beta-glucosidase 2 (*Gba2*), Zona pellucida binding protein 1 (*Zpbp1*), protein interacting with C kinase 1 (*Pick1*), heat shock protein 90kDa beta member 1 (*Hsp90β1*), autophagy-related gene 7 (*Atg7*), sperm acrosome associated 1 (*Spaca1*), Dpy-19-like protein 2 (*Dpy19l2*) and stromal membrane-associated protein 2 (*Smap2*). Recently, we generated a *Ccdc62* knockout mouse model with CRISPR-Cas9 system. A preliminary data showed that the male mice with *Ccdc62* knockout were infertile, and 98% of sperm showed abnormal head with very lower motility, which suggested that *Ccdc62* played a very important role in mouse acrosome formation. Globozoospermia is a rare type of teratozoospermia accounting for <0.1% of male infertility. It has reported that the mutation of *SPATA16*, *PICK1* and *DPY19L2* were related to clinical globozoospermia.

Conclusions: The process of acrosome formation is regulated by multiple genes and its disorder will results in globozoospermia.

Keywords: Acrosome formation; globozoospermia; gene targeting

doi: 10.3978/j.issn.2223-4683.2015.s071

Cite this abstract as: Gui Y. The molecular mechanism of acrosome formation and globozoospermia. Transl Androl Urol 2015;4(S1):AB071. doi: 10.3978/j.issn.2223-4683.2015.s071

AB072. Annexin A5 regulates Leydig cell testosterone production via ERK1/2 pathway

Ze He, Qin Sun, Yuan-Jiao Liang, Li Chen, Yi-Feng Ge, Shi-Feng Yun, Bing Yao

The Reproductive Medical Center, Nanjing Jinling Hospital, Nanjing University School of Medicine, Nanjing 210002, China

Objective: This study was to investigate the effect of annexin A5 on testosterone secretion from primary rat Leydig cells and the underlying mechanisms.

Methods: Isolated rat Leydig cells were treated with annexin A5. Testosterone production was detected by chemiluminescence assay. The protein and mRNA of steroidogenic acute regulatory (StAR), P450scc, 3β-hydroxysteroid dehydrogenase (3β-HSD), 17β-hydroxysteroid dehydrogenase (17β-HSD) and 17α-hydroxylase were examined by western blotting and RT-PCR, respectively.

Results: Annexin A5 significantly stimulated testosterone secretion from rat Leydig cells in dose- and time-dependent manners and increased mRNA and protein expression of StAR, P450scc, 3β-HSD and 17β-HSD but not 17α-hydroxylase. Annexin A5 knockdown by siRNA significantly decreased the level of testosterone and protein expression of P450scc, 3β-HSD and 17β-HSD. The significant activation of ERK1/2 signaling was observed at 5, 10, and 30 min after annexin A5 treatment. After the pretreatment of Leydig cells with ERK inhibitor PD98059 (50 μmol/L) for 20 min, the effects of annexin A5 on promoting testosterone secretion and increasing the expression of P450scc, 3β-HSD and 17β- HSD were completely abrogated (P<0.05).

Conclusions: Thus, ERK1/2 signaling is involved in the roles of annexin A5 in mediating testosterone production and the expression of P450scc, 3β-HSD and 17β-HSD in Leydig cells.

Keywords: Annexin A5; testosterone; steroidogenic acute regulatory (StAR); P450scc; 3β-hydroxysteroid dehydrogenase (3β-HSD); 17β-hydroxysteroid dehydrogenase (17β-HSD)

doi: 10.3978/j.issn.2223-4683.2015.s072

Cite this abstract as: He Z, Sun Q, Liang YJ, Chen L, Ge YF, Yun SF, Yao B. Annexin A5 regulates Leydig cell testosterone production via ERK1/2 pathway. Transl Androl Urol 2015;4(S1):AB072. doi: 10.3978/j.issn.2223-4683.2015.s072