

is associated with poor quality of life. Voiding and sleep patterns should be strictly evaluated in elderly patients to define which of urological disease or sleep disorder is primitive factor. Various medical options to control voiding and/or storage symptoms with sleep disorder have chosen as monotherapy or combination therapy including alpha-blockers, anticholinergics and antidiuretic hormone for urinary symptoms as well as good sleep hygiene practice of sleep disorder and hypnotics for insomnia. Therefore, to clarify underlying disease to cause patient's chief complaint is essential resulting to maximize therapeutic results. This lecture will provide pathogenesis, diagnostic approach, ideal pharmacologic treatment with underlying action mechanism and cognitive behavior therapy in elderly with simultaneous sleep disorder and urological disease.

**Keywords:** Sleep disorder; elderly patients; urological disease

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## AB022. New strategy for inflatable penile prosthesis reservoir placement and removal

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**Abstract:** Inflatable penile prostheses (IPP) have been utilized reliably as a definitive treatment for medically refractory erectile dysfunction (ED) over the last four decades. The device consists of two intra-corporal penile cylinders, a pump placed in the scrotum, and a fluid-containing reservoir. However, placement of an IPP reservoir in a patient with multiple lower abdominal/pelvic surgeries is technique challenge. The Conceal low

profile reservoir and Cloverleaf are designs to allow ectopic placement and to avoid potential bladder, bowel or vascular injury. Another rare but potentially devastating complication of IPP implantation is infection of the implant. In the event that an implant becomes infected, all components of the IPP need to be removed. Removal of reservoir has also been surgically challenging due to its location; either deep in the space of Retzius of the pelvis or high in the abdomen between the muscular fascia. This presentation will discuss new strategy for IPP reservoir placement and removal.

**Keywords:** Inflatable penile prostheses (IPP); erectile dysfunction (ED)

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## AB023. Scrotal exploration and microsurgical vasoepididymostomy in azoospermic patients due to non-vasectomy, non-traumatic etiologies

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**Background:** Non-iatrogenic, non-traumatic obstructive azoospermia (OA) includes causes like congenital bilateral absence of vas deferens (CBAVD), blockage at rete testis, or obstruction distal to internal inguinal rings. The blockage could be potentially identified at scrotal exploration and corrected with microsurgical vasoepididymostomy (VE). The

purpose of this study is to analyze patients with non-iatrogenic, non-traumatic OA who underwent scrotal exploration with or without VE anastomosis in our institution.

**Methods:** Retrospective chart review was done for patients treated from 2000 to 2015. Normal spermatogenesis confirmed by testis needle biopsy in all patients with OA. The operation method for VE anastomosis was two-stitch longitudinal intussusception technique. Patients who had prior vasectomy or history of vas deferens trauma/injury were excluded. The age, hormone profile, semen parameters, level of obstruction, semen quality at proximal epididymal cut-end and patency rates were analyzed.

**Results:** Totally 96 patients with mean age  $35.4 \pm 5.6$  y/o were collected. The obstruction level was at: bilateral rete testis blockage (n=17), bilateral epididymis (n=49), bilateral intra-abdominal blockage (n=7), CBAVD variants (n=3). There were 68 patients received VE anastomosis. The patency rates 6 months after operation for patients with bilateral epididymal blockage were 88%. They were 90.9% for blockage at both epididymal tails, 88.9% at epididymal body, and 83.3% at epididymal head. Motile sperm at proximal cut-end had patency rates at 80.6%, while they were 50% in cases showing only immotile sperm. The mean patency rates were 79.5% for all cases 6 months after operation. Twenty-eight percent of patients failed to proceed the correction procedure, including 25% with high or low blockage, and 3.1% with CBAVD variants. Patients with CBAVD variants showed lower semen pH ( $6.67 \pm 0.1$ ,  $P=0.001$ ).

**Conclusions:** For patients with non-iatrogenic non-traumatic OA receiving scrotal exploration, 28.1% are not eligible for correction. The mean patency rates for all patients 6 months after micro-anastomosis were 79.5%. They were 90.9% and 88% for cases with obstruction at bilateral epididymal tails and body respectively. Motile sperm in proximal end predicts higher patency rates.

**Keywords:** Microsurgical vasoepididymostomy (microsurgical VE); azoospermic; non-vasectomy; non-traumatic etiologies

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## AB024. Safety evaluation of low-energy extracorporeal shock wave therapy to rat testes

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**Background:** The purpose of the study is to determine the optimal energy frequency of LESWT to rat testes by comparing three different shock wave frequencies.

**Methods:** A total of 40 healthy Sprague-Dawley (SD) rats were randomly assigned to a blank group (C group) in which 5 rats received no treatment, a sham group (B group) in which 5 rats only exposed to shockwave, and LESWT groups (A group) in which 30 rats separately exposed to  $0.02 \text{ mJ/mm}^2$  (A1 group),  $0.04 \text{ mJ/mm}^2$  (A2 group), and  $0.06 \text{ mJ/mm}^2$  (A3 group). The changes of rat weight among these five groups were compared. Eenzyme-linked immunosorbent assay (ELISA) was performed to measure the concentrations of testosterone (T), luteinizing hormone (LH), and follicle-stimulating hormone (FSH). Testicular mass index (TMI) of rat bilateral testes was compared. A transmission electron microscopy (TEM) was used to observe the microstructure of testes in rats among five groups.

**Results:** After a 2-week period of low-energy extracorporeal shock wave therapy (LESWT), the rat weight changed significantly between A1 and A3 groups but did not differ among A1, A2, B, and C groups ( $P=0.09, 0.31, 0.47$ ); no significant difference in T, LH, and FSH concentrations was observed when the A1 group was respectively compared with other four groups ( $P=0.11, 0.33, 0.19, 0.47$ ); the TMI of rat testes in the A1 group was significantly different from that in the A3 group ( $P=0.04$ ). Observations from the TEM showed that rats exhibited normal microstructure of testes in A1, B, and C groups. Mitochondrial swelling, dissolution of cristae, and dilated intercellular space occurred in the A2 group. Mitochondrial vacuolization, nuclear perturbations, cytoplasmic segregation, and necrotic cells were observed in the A3 group.

**Conclusions:** Taken together, we conclude that  $0.02 \text{ mJ/mm}^2$  LESWT exerts no significant influence on rat weight, T, LH, FSH, TMI of testes, and microstructure, which may