

(standard urodynamics). Mean pouch pressure during AUD was approximately 2 fold lower than SUD.

S12

Continental derivation of urine in children using the method of Mitrofanoff

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Introduction and Objectives: Specifying the operational methods and reporting the results of continental derivation of urine in children using the method of Mitrofanoff when appropriate indications exist.

Material and Methods: During a period of five years, six continental derivations of urine using the method of Mitrofanoff were executed in the Pediatric clinic of urology at UMHATEM "N.I. Pirogov". We performed appendicovesicostomy in four of them, where three reimplantations were done using the method of Politano-Laedbetter and one using the Le Duc's method. Due to the lack of appendix in two cases the continental derivation was performed using Monti modification.

Results: In four of the cases very easy self-catheterisation and good continens were achieved without any reported complications. In two of the cases, due to the leakage of urine from the bladder neck, a secondary execution was necessary.

Conclusions: We would like to recommend this method for continental derivation of urine when indications exist because of its relatively easy performance and good results obtained.

S13

Postirradiation vesicovaginal fistulas

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Introduction and Objectives: Post irradiation vesicovaginal fistulas (piVVF), with histological changes including fibrosing of exposed tissues and vasculitis (telangiectasies). Reconstructive surgery on devitalizing tissue is very complex. Extend of surgical reconstruction depends on changes of piVVF and its localization.

Material and Methods: In five years period (since 1999–2005) we treated surgically 39 pts with piVVF. Mean age are 47 years (36–68 years) Preoperative diagnosis including anamnesis, cystoscopically findings, intravenous urography, retrograde uereteropyelography, CT urography etc. Small trigonally and subtrigonally fistulas we treated conservatively with urethral catheter. Large, extensive retrotrigonal fistulas we treated immediately with transabdominal approach (TAA), because we have good exposure of anatomical structure involved in pathological postirradiation changes. TAA is good for reconstruction like ureteric reimplantation, omental interposition with omental wrap. In the situation with excessive fibrotic changes on surround tissues we have possibilities for pelvis exenteration and one of the methods of supravesical derivations.

Results: Fistulas excision with omenatal interposition in 25 pts (65%). Bilateral ureterocystostomy in 6 pts (15%) Ureterocutaneostomy in 2 pts (5%). Cystectomy with Brucker derivation, like method of choice in 4 pts (10%). Uretrosigmoidostomy in 1 pts (2%). Dysuric symptoms persist postoperatively in 60% of pts. (postirradiation cystitis), conservative treatments. Postoperative recidivs in 5% (pts with simple excisions).

Conclusions: Transabdominal approach with wide opening of bladder, good exposure of surround anatomical structure involved in piVVF, possibilities for reconstructive surgery made this approach superiorly than transvaginally approach (smaller

operating field and limited possibility for reconstructive surgery).

S14

Operative treatment of the bladder exstrophy by the method of Arap in childhood age

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Introduction and Objectives: We used the operation of Arap as a method of choice for treating the bladder exstrophy in childhood age.

Material and Methods: For a period of 6 years in the Clinic of pediatric urology we operated 10 children (6 girls and 4 boys) at an average age of 1 year by the method of Arap. We accepted as our modification the combination of 1st and 2nd act of the operation in one in all children. In one of the cases we used reconstruction of the sigma-conduit as we detubularised the sigma. In the 4th act of the method (forming the neourethra) in one of the children we used bucal mucosa for the plastic reconstruction of the urethra.

Results: We follow up the early and late results in children operated by this method. As a most common complication we observed stricture of the neourethra. The final results in terms with the capacity of the neovesica, continens and spontaneous miction are satisfactory. Postoperatively we did not observe vesicoureteral reflux and urostasis in the upper urinary tract.

Conclusions: In conclusion we recommend the use of the operation of Arap as a method of choice in the delayed (1 year of age) operative treatment of the bladder exstrophy.

S15

Percutaneous nephrostomy: a tool for treatment of obstruction and a source of infection. An interdisciplinary approach

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Introduction and Objectives: The basic aim of this study was to analyze the results from the percutaneous nephrostomies (PNS) inserted in our clinic and to assess their role in treating urinary tract obstruction and acute infection.

Material and Methods: We performed a retrospective chart review of 119 patients (65 males and 54 females, mean age 59 years) treated by percutaneous nephrostomy (PNS) for upper urinary tract obstruction in our Urology department for a period of 2 years. A total number of 147 PNS were inserted: 45% in the right kidney, 31% in the left one and bilateral in 24% of the cases. Pelvic malignancies caused the obstruction in 57% of the patients. We analyzed the indications for PNS, the surgical technique, the laboratory findings upon admission, and the effectiveness of the percutaneous drainage. A parallel analysis of 226 patients (95 males and 131 females, mean age 57 years) treated in the Nephrology unit for pyelonephritis over the same period was also done. Patients were divided according to complicated or non complicated urinary tract infections (UTI). Bacterial strains, laboratory findings and causes for complicated UTI were analyzed.

Results: Successful renal drainage was obtained in 100% of the cases. In 92% the nephrostomic tube was inserted only under ultrasound guidance. Only 12% of the patients required perioperative dialysis, while in the rest the kidney function was restored after the insertion of PNS. Pyonephrosis was found in 22% of the cases – in all these patients the procedure helped in healing the infection. The comparative analysis of the nephrological patients with UTI showed that PNS could effectively treat obstruction and acute UTI, but it could also be

a source (in around 15%) of complicated UTI. The main cause of complicated UTI remained kidney stone disease.

Conclusions: PNS is a safe and reliable procedure in everyday urological practice with low early complication rates. It can be performed under ultrasound guidance with a high rate of success and it is highly effective in restoring the kidney function, as well as in treating complicated UTI. As a late complication, the PNS itself can become a source for contamination with rare polyresistant bacterial strains, thus being a cause for complicated UTI.

Poster Session 2: BPH and prostate biopsy

Friday, 9 October 2009, 10:40-12:40

Room 2

S16

The influence of three different medications for benign prostatic hyperplasia on prostate parameters assessed by transabdominal ultrasound

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Introduction and Objectives: Benign prostatic hyperplasia (BPH) is the most common benign neoplasm in men and it is clinical condition closely related to aging. Clinically, BPH is manifested with lower urinary tract symptoms (LUTS), that undermine the quality of patients' life to different extent. The pharmacotherapy of BPH comprises the three groups of drugs: alpha 1-adrenergic antagonists, 5-alpha reductase inhibitors and different herbal extracts. **OBJECTIVE:** The aim of our study was to investigate the effect of three-month treatment of BPH with lipidosterolic extract of *Serenoa repens* (LESR) on prostate parameters assessed by transabdominal ultrasound and to compared attained results with standard drugs such as finasteride and doxazosin.

Material and Methods: Ninety patients with symptomatic, non-complicated BPH who accomplished inclusion criteria and endorsed the written consent were included in this prospective study. At random they were classified in three groups of thirty patients. The first group was treated with LESR (320 mg/day), the second group received finasteride (5 mg/day) and the third group was on doxazosin therapy (2 mg/day). Both at the beginning and after three-month treatment, following prostate parameters were assessed by transabdominal ultrasound: transversal diameter (TD), anteroposterior diameter (APD), the volume of prostate (VP) and the volume of residual urine (VRU). The results were analysed statistically.

Results: None treatment caused statistically significant alteration of TD, APD and VP ($p > 0.05$) assessed by transabdominal ultrasound, although all medications showed the tendency to decrease the beginning values, mostly finasteride. Analysing the results of volume of residual urine (VRU), we found that finasteride and LESR decreased basal values insignificantly ($p > 0.05$). Decrease of VRU achieved statistically significant difference in third group of patients who received alpha-adrenergic antagonist doxazosin ($p < 0.01$).

Conclusions: Our results are mostly in accordance with actual cognition related to effect of standard drugs such as finasteride and doxazosin on prostate parameters assessed by ultrasound. At the other side, our findings could be an evidence more in the elucidation of mechanism of action and clinical efficacy of LESR in patients with BPH.

S17

Autonomic nervous system activity in patients with lower urinary tract symptoms secondary to benign prostatic hyperplasia estimated by heart rate variability

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Introduction and Objectives: Aging induces autonomic nervous system (ANS) dysfunction with increased sympathetic drive. Benign Prostatic Hyperplasia (BPH) is responsible for lower urinary tract symptoms (LUTS). The probably cause of BPH and secondary LUTS is due to the overly active sympathetic ANS. The aim of our study was to estimate the ANS activity in BPH patients with LUTS using frequency domain analysis parameters of heart rate variability (HRV). Additionally, the relationship of ANS activity to the subjective measures of LUTS, and the objective measures of BPH, as well as the biochemical and biometrical variables, were investigated.

Material and Methods: The study was performed on 30 men with LUTS secondary to BPH. The cohort of patients was asked to complete IPSS and quality of life questionnaires. We performed biometrical measurements (waist, hip circumference and waist-to-hip circumference ratio, body mass index, body area surface), biochemical measurements (serum catecholamine levels) and urological estimations (measurements of the prostate and transition zone of gland, uroflowmetry with post void residual volume evaluation). Additionally, a serum sample was obtained for Prostate Specific Antigen - PSA (total, free, free/total ratio) and PSA derivatives (PSA density, PSA density of transition zone) analysis. ANS activity was assessed by HRV measurements in resting conditions, after simulation with deep breathing (DB test) and by the tilt up test (TUT). In the HRV recording, frequency domain analysis parameters were calculated according to fast Fourier transformation (FFT) and the correlation for ANS activity parameters vs. BPH variables were analyzed.

Results: All participants presented moderate LUTS with $Q_{ave} = 7.4$ ml/sec. and $PVR = 48 \pm 45$ ml. Normalized values of LF and HF were 60.86 ± 18.96 [%] and 39.14 ± 18.96 [%], respectively. LF/HF ratio and its normalized value were 2.97 ± 3.04 [1] and 1.57 ± 1.40 [1], respectively. In response to DB, significant increases of LF, LFnu, LF/HF, LF/HFnu and total power of HRV spectrum and a decrease of HFnu were observed. The E/I ratio was 1.12 ± 0.08 . During TUT, VLF, LFnu, LF/HF, and LF/HFnu were increased, while HFnu decreased. The 30/15 ratio was 0.98 ± 0.05 . The observed strong correlations are as follows: between

1. prostate enlargement and HFnu and LFnu power;
2. total PSA level and LFnu, HF, HFnu;
3. free/total PSA ratio and LF/HFnu;
4. PSA density of the transition zone and HF;
5. plasma noradrenalin level and HF;
6. age and LFnu, HFnu, LF/HF and LF/HFnu;
7. plasma adrenaline level and prostate enlargement: prostate length and transition zone height.

Conclusions: These results demonstrate the sympathetic overactivity of ANS at rest in patients with BPH and LUTS. It is also suggested that in the pathophysiology of BPH, the heighten activity of the sympathetic ANS, and parasympathetic drive are important.