

complications. This shows that with careful selection of patients even in small volume centers a PCNL can be offered as valid treatment option.

C84

Destruction of stones in the kidney, bladder and ureter without harming catheter and basket material using an innovative low-energy laser shockwave mode

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Introduction and Objectives: Using conventional systems for stone destruction such as Lithotripters, Ho:YAG lasers and alike is proven to have significant disadvantages regarding efficacy and intra-operative complications. Regarding lasers, in particular the negative effect of induced energy on sensitive material such as metal baskets or catheters are to be mentioned. Our aim was to demonstrate the first effective and flexible method of stone destruction without such side effects in the OR.

Material and Methods: This study included a total of 10 patients that have undergone treatment of stones in kidney, bladder and ureter. For intraoperative fixation of the stones, regular metal baskets were used. In two cases, the destruction of stones sticking to a catheter was required. Depending on the stone consistency, the multi-disciplinary laser DIOLAS LFD 3000 was switched between a set of programs for effectively destroying the targeted material.

Results: Highly interesting results were achieved in particular using a newly developed low-energy treatment program that has proven to induce no negative effect on sensitive material such as metal baskets or catheters. Even a direct contact with aforementioned elements did not have destructive impact. Still, the targeted stones were destroyed successfully.

Conclusions: The new treatment method enabled by the laser DIOLAS LFD 3000 opens up a whole range of future improvements in the destruction of stones. Further results will be published in the following months.

C85

Biological effects of extracorporeal shock wave lithotripsy

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Introduction and Objectives: The present study was designed to prove if changes of glomerular Filtration rate (GFR) measured by dynamic Inulin-, as well as, creatinine-clearance (crea-Cl), lipid peroxidation assessed by plasma malondialdehyde (MDA) level And antioxidant system substantiated by plasma total antioxidant status (TAS) And serum total thiols (RSH) can be observed after ESWL-treatment of kidney Stones.

Material and Methods: Eleven patients (2 females/9 males), 51 years of age as average, (range: 25 to 69), having non-symptomatic kidney stones and no ESWL-therapy within One year, were eligible for inclusion. All patients underwent a single unilateral treatment By Dornier Doli S Lithotripter. The average number of shocks (sh) was 4000 (3000 to 4060sh) with an energy of 70%. For the evaluation sampling of blood and urine was undertaken three hours before SWL treatment, 1 hour, and 24 hours after SWL treatment.

Results: Eleven patients undergoing (their) first unilateral lithotripsy, for kidney Stones showed a decrease of GFR ($p < 0.001$) immediately after therapy, Which normalised to baseline level during 24 hours, while the values of crea-Cl remained unchanged ($p < 0.46$). Moreover, levels of RSH measured one hour After ESWL showed a decrease ($p < 0.01$), the levels of MDA demonstrated Statistically significant changes

at the same time ($p < 0,058$), while levels of TAS remained unchanged ($p < 0.17$). Another important finding were increased Levels of MDA ($p < 0.05$) and reduced levels of TAS ($p < 0.17$) and RSH ($p < 0.017$) at baseline.

Conclusions: Our results suggest that patients with renal stones suffer from Increased oxidative stress, compared to healthy population. ESWL induces the Production of shock wave generated free radicals determined by the Consumption of antioxidant substances. The measurement of GFR showed a Temporary decrease in renal function after lithotripsy but restitution to baseline Values until the next day.

C86

Digital semirigid ureteroscopy: a new standard in endoscopic imaging

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Introduction and Objectives: Introduction of digital endoscopes provided a new standard for image quality in endourology. Our study aimed to analyze the performances of digital ureteroscopy, performed for the first time in Romania.

Material and Methods: We evaluated 47 digital semirigid ureteroscopies for ureteral lithiasis performed in the Urological Department of "Saint John" Emergency Clinical Hospital: 31 as primary interventions (Group I) and 16 after previous JJ ureteral stenting (Group II). An Olympus Endoeye semirigid digital ureteroscope was used in all cases. Maneuverability and image quality were noted by the same urologist with 1 to 5 points. A similar analysis was performed during 47 ureteroscopies using a Storz conventional ureteroscope (Group III).

Results: The success rate was 83.9% (26/31 cases) in Group I, 100% (16/16 cases) in Group II and 97.9% (46/47 cases) in Group III. In 5 cases of Group II, the larger diameter of the digital ureteroscope (12F at the tip) impeded the calculus approach, imposing conventional semirigid ureteroscopy. In 1 case of Group III, pyelocaliceal migration of a large stone fragment imposed flexible ureteroscopic approach. The scores noted in the 3 groups were 4.48, 4.50 and 3.53 for visibility and 3.93, 4.38 and 4.57 for maneuverability.

Conclusions: The new digital ureteroscopes offer an image of superior quality by comparison to the conventional ones. Although the large caliber at the tip of the semirigid video-ureteroscopes may reduce their maneuverability and accessibility, the method proved to be safe and efficient.

Poster session 6: Prostate cancer

Friday, 23 October 2009, 14:30-16:30

Poster room 3

C87

Balance between apoptotic and proliferative tissue markers in prostate cancer needle biopsies correlates with stage and Gleason score

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Introduction and Objectives: Tumor growth depends on balance between cellular growth (proliferation) and cellular death (apoptosis). Both processes are reflected in changes of tissue markers expression. Identifying a model which would take into account opposing nature of both processes and relate

it to cancer stage and grade would be a useful adjunct for study of disease behavior.

Material and Methods: Retrospective pilot study on formalin fixed paraffin embedded needle biopsy tissue samples from prostate cancer patients was performed. Patient age was 59 – 86 years, median 72, Gleason score 6 – 9, median 7. Apoptotic markers studied were p53 and fragmented DNA (TUNEL), expressed as apoptotic index. Proliferative markers studied were Bcl-2, Ki-67, AgNOR. Immunohistological staining results of cancerous tissue were determined. Individual markers and models which considered opposing nature of apoptosis and proliferation were consecutively correlated to patient and disease characteristics. Parametric or non-parametric correlations were calculated according to variables distributions.

Results: Among individual markers, p53 staining inversely correlated with age of patients ($p=0.022$) and Bcl-2 staining correlated with disease stage ($r=0.65$, $p=0.004$). Model which incorporated coded staining intensity of Bcl-2 and AgNOR on proliferative side and p53 on apoptotic side was significantly related to Gleason score ($r=0.57$, $p=0.018$) and disease stage ($r=0.54$, $p=0.026$).

Conclusions: Individual histological markers, studied here, were previously related to prostate cancer with mixed results. We believe their incorporation into models which account for opposing roles of biological processes involved (apoptosis and proliferation), should provide better insight and finally better disease behavior prediction and control.

C88

Active surveillance in prostate cancer – save option when knowing postoperative staging and grading? Single institution experience from 2003–2009

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Introduction and Objectives: Active surveillance (AS) is a very promising approach to prostate cancer treatment which is based on understanding to biologic behaviour of prostate cancer. Criteria for AS are very well known – staging $\leq T2$, Gleason score $\leq 3+3a$ PSA ≤ 10 ng/ml. Aim of our study was to reveal the risk of presence of aggressive prostate cancer on the strength of available data from bioptic and postprostatectomy staging and grading when indicating active surveillance.

Material and Methods: During January 2003 to June 2009 we gathered clinical data from 560 consecutive patients who underwent radical prostatectomy. We evaluated preoperative PSA, bioptic and postoperative Gleason score and clinical and pathological staging. All the specimens were assessed by experienced pathologist from our Teaching Hospital to minimize interindividual variability of evaluating.

Results: Preoperative conditions for enrolling the patients to active surveillance, i.e. staging $\leq T2$, Gleason score $\leq 3+3a$ PSA ≤ 10 ng/ml fulfilled 83 patients. Comparing the postoperative grading and staging worsening of one or both parameters occurred in total in 59% of patients – upgrading in 42 patients (50.6%), upstaging in 1 patient (1.2%) and both parameters worsened in 6 patients (7.2%). On the other hand 41% of patients according to final pathological report would still fulfill conditions for active surveillance.

Conclusions: At the time of detecting more and more insignificant prostate carcinomas active surveillance belongs to options how to prevent the patients or postpone potential serious adverse events resulting from the treatment with curative intent. Preoperatively in 59% of patients we supposed the patients were in low risk group. When knowing the

histology after radical prostatectomy these patients were put in intermediate or high risk group. Despite these results we apprehend active surveillance as a very promising options for carefully selected group of patients with regard to PSA kinetics, Gleason sum in prostate rebiopsy and clinical course of the disease. Both the patient and the urologist must understand that choosing active surveillance does not necessarily mean avoiding active radical therapy in the future.

C89

Hormone naive patients with advanced prostate cancer have lower initial BMD than healthy controls

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Introduction and Objectives: Androgen deprivation therapy (ADT) for advanced prostate cancer is considered the standard therapy over the last half of century. ADT is known to decrease bone mass density (BMD) which may lead into skeletal morbidity. Little is known about BMD of hormone naive patients with prostate cancer who are subjects of subsequent ADT. The aim of the study was to measure initial BMD of patients with prostate cancer prior to ADT and to compare their initial BMD to healthy control.

Material and Methods: Femoral neck and lumbar spine (L1–L4) were determined by dual-x-ray absorciometry (DXA) in 97 men (mean age 75.4 yrs) prior to ADT. These measurements were also made on control group of 89 patients (mean age 73.6 yrs).

Results: Patients with prostate cancer had significantly lower initial total BMD ($p=0.022$) than healthy control. This should be taken into consideration before the start of ADT which leads into further loss of BMD

Conclusions: DXA should be advised to all patients before the initiation of ADT and thereafter every 12 months to detect patients at high-risk of skeletal morbidity. This enables early diagnosis of osteoporosis, its treatment and may reduce skeletal morbidity.

C90

Influence of the operative technique on the incidence of incidental prostatic carcinoma

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Introduction and Objectives: The aim of this study was to compare the incidence of incidental prostatic carcinoma in two hospitals in Croatia according to the procedure of choice, together with incidence and its clinical characteristics.

Material and Methods: The hospital medical records of all patients who have undergone prostatectomy for BPH in two hospitals, namely University Hospital Osijek and General Hospital Varazdin, in the period between January 2002 and December 2006 were reviewed. In 202 cases retropubic prostatectomy was performed and in 842 transurethral resection was done.

Results: The histopathology reports obtained from 1044 patients who presented with BPH were available. Incidental carcinoma was found in 71 specimens (representing 6.80% of all patients). The mean age was 70.6 years (44 to 90). Gleason score ranged between 3 and 6 with a mean value of 4.1. In 43 cases (60.56%) postoperative PSA values were stable and ranged between 0.0 to 0.5 ng/ml. In 28 cases after the postoperative rise in the PSA levels patients underwent bilateral orchiectomy and in 13 of those patients after the further rise in the PSA levels we decided to include flutamid in the therapy. Five of those