

Ureter was incised by cold knife in 5, scissor in 16, j-hook in 3, monopolar-bipolar cut in 17 patients. In 6 patients, double-j stent was inserted while in 1 operation was converted to open. Mean operation time was 124 minutes. Mean amount of drainage was 220 cc. Mean hospitalization time was 4.8 days. In 5 (12.5%) of 7, persistent drainage was detected as a major complication treated via insertion d-j stent. All patients were discharged as a stone free status.

Conclusions: Laparoscopic ureterolithotomy is a feasible and effective procedure especially for stones that could not treat easily with ureteroscopic approach. Increased hospitalization and operation time could be related with difficulties of stone removal while success was achieved in each patient.

S114

Frequency of urolithiasis in primary gout

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Introduction and Objectives: The prevalence of urolithiasis in primary gout patients has been increased for the past few decades. In earlier studies frequency of primary gout urolithiasis was 20% and now we have data that 37 to 50% patients with gout develop uric acid-related stones. The objective of this study was to assess the frequency and risk factors for urolithiasis in primary gout

Material and Methods: Fifty-five patients with diagnosed primary gout were studied. Urolithiasis was defined as previous history of urolithiasis in clinical records of observed patients or as ultrasonographic findings of nephrolithiasis. Next step was to compare chosen risk factors: patient age, duration of gout, high blood pressure, diabetes and hyperlipidemia between patients with and without urolithiasis.

Results: In observed group we have 50 (90.90%) males, average age of 56.55 (min 22.00, max 83.00, SD 13.06.). Duration of gout was 6.23 years in average (min 1.00, max 35.00). We found 23 patients (41.8%) with urolithiasis. Ten of them (18.18%) was diagnosed by clinical history and additional 13 (23.63%) by ultrasonography. In our group 35 (63.6%) patient had hyperlipidemia, 26 (47.3%) were with regularly cured high blood pressure, and 14 (25.5%) were diabetics. After statistic evaluation we did not find statistically significant correlation of presents of urolithiasis in gout patients, and their age, hyperlipidemia, high blood pressure and diabetes but we find statically significant correlation between urolithiasis and duration of gout ($p < 0.001$).

Conclusions: Frequency of urolithiasis in primary gout in our sample was 41.8%, and 23.63% were patients with silent kidney stone diagnosed by ultrasound. Ultrasonography increased the probability of diagnosing urolithiasis and the most important risk factor is duration of gout.

Poster Session 8: Trauma and reconstruction

Saturday, 10 October 2009, 09:40–11:40

Room 2

S115

Use of urinary beta-2 microglobulin (B2MG) as renal injury index

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Introduction and Objectives: Human Beta-2 Microglobulin (B2MG) is a protein filtered by the glomeruli and reabsorbed

by the proximal tubular cells where it is metabolized. B2MG is expressed on nucleated cells, and is found at low levels in the serum and urine of normal individuals and is considered as sensitive means for diagnosing tubular dysfunction. The aim of this study was to elucidate the relationship between urinary levels of B2MG and renal injuries and to correlate them with clinicopathological parameters. Our objective was to point out the value of urinary levels of B2MG as a cost effective, non-invasive diagnostic approach of diagnosis and evaluation of renal injuries.

Material and Methods: Urine samples of 85 patients with renal injuries were collected after 24 h, 2 days and 7 days for measuring B2MG. The control group consisted of 10 health subjects (< 300 ng/ml). Exclusion criteria's were diseases that decrease renal function, such as inflammatory, viral and autoimmune diseases. The patients underwent clinical and laboratory tests and were also subject to image study by U/S and CT. Patients' age ranged from 18 to 70 years (mean age = 42 years). Their diagnoses were reported as follows: 13 (15.3%) had Grade I, 21 (24.7%) had Grade II, 16 (18.8%) Grade III, 8 (9.4%) Grade IV and 12 (14.1%) Grade V. 15 patients (17.7%) with renal injury, microscopic hematuria and negative U/S and CT findings has been concluded in our study. All patients with Grade IV and V underwent nephrectomy due to hemodynamic instability. Relationship between B2MG and Grade of renal injury was evaluated with Kruskal-Wallis and confirmed by the Cochran-Armitage test for trend. Furthermore, we applied multivariate linear mixed effects models with B2MG as outcome, and age as an independent variable.

Results: In the urine sample of 15 patients with negative image study for renal injury, we detected B2MG with median value 524 ng/ml. A statistically significant negative relationship was found between levels of B2MG across the early period after renal injury ($r_s = -0.31$, p -value = 0.004), meaning that when patients go to 7th day, this is followed by a decrease in B2MG. We observed that B2MG was associated with Grade (p -value < 0.001). Patients with Grade IV have 2579.7 ng/ml with 95% CI greater B2MG compared to patients in Grade 0 and subjects with Grade V have a 4956.5 ng/ml with 95% CI greater B2MG compared to patients in Grade 0, meaning that the level of B2MG is increased. We further observed that levels of B2MG of patients with Grade IV–V, who underwent nephrectomy were normalized in 2nd and 7th day postoperatively. No statistically significant association was obtained when correlating B2MG and age.

Conclusions: B2MG constitutes reliable index for renal injury and it can be used when the image study is not available or not diagnostic for renal injury and the suspicion is placed by the existence microscopic or macroscopic hematuria.

S116

Urethral injury. Can mechanism of injury prejudice partial or total urethral rupture?

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Introduction and Objectives: Urethral injury may be due to a variety of causes. Key point in the management is to diagnose a total or partial rupture. Our aim is to study if the mechanism of injury can prejudice partial or total urethral rupture. Urethral injury may cause complications, short-term (acute urinary retention) or longterm (strictures, incontinence, erectile dysfunction)

Material and Methods: A retrospective study of 83 patients presented with traumatic urethral rupture from January 2005 until June 2008. All patients underwent retrograde urethrography after clinical, laboratory and radiographic

examination. In case of diagnosis of contusion or partial rupture, a gentle effort to pass a urethral catheter was done. In all patients with total rupture and in these with partial rupture that the urethral catheterization attempt was unsuccessful, a suprapubic catheterization was performed followed by simultaneous cystography and retrograde urethrography. Delayed urethroplasty was performed in patients with total rupture. The mechanism of injury was correlated with total or partial rupture of the urethra.

Results: In 28 patients with injury of the posterior urethra with coexistent pelvic ring fractures, total rupture occurred in sixteen (16) while partial rupture in twelve (12). In 55 patients with injury of the anterior urethra we diagnosed:

Mechanism of injury	Total rupture of urethra	Partial rupture of urethra
Iatrogenic injuries	2	32
Blunt trauma	4	6
Penetrating injuries	4	3
Penile fractures	0	4

Conclusions: From our experience, mechanism of injury cannot prejudice partial or total urethral rupture, except in the case of iatrogenic injuries. Each patient should be assessed and managed according to the basic diagnostic algorithm.

S117

In-vivo haemostatic effect of Ankaferd Bloodstopper in rat major renal trauma model: controlled trial of novel haemostatic agent

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Introduction and Objectives: Major renal trauma is one of the most mortal condition which could cause death. Bleeding is the main reason of mortality. We used Ankaferd Bloodstopper (ABS) which is a medicinal product has been approved in the control of hemorrhage externally and dental surgery bleedings in Turkey to control the bleeding in renal trauma model and evaluated the efficacy of ABS.

Material and Methods: Twelve Wistar rats were divided into two groups. Group I (GI), control, Group II (GII), study group. Under general anesthesia, following the exposure of right kidney, 1 cm. deep incision was performed at the lower pole of kidney and 1 cm² tissue was resected. ABS solution was applied to resected area and compressed at least two minutes. Afterthat, bleeding control was evaluated. Time of bleeding control, number of ABS gout, live condition of rats following surgery were evaluated, at first month, sacrifice was performed, macroscopic and microscopic features were determined.

Results: Mean time of bleeding control was 3.2±0.8 (2-4) min in GII, no difference with GI (p<0.05). In each kidney, active haemostasis was provided with observing the aggregation unit of ABS onto the renal resected surface. In GII, active hemostasis was provided. Mean number of ABS gout was 6.0±1.1 (5-8). Glomerular necrosis was detected with higher rate in GI compared with GII. Erythrocyte aggregation was confirmed in GII. Calcification was formed significantly in GI compared GII (p<0.05). ABS kidneys were all in a good shape especially nearly to resected area, however, gelatinous, redness and wealthy tissue were observed in a macroviews at transected kidney. There were no hematomas, urinomas and urine leakage. In microscopic evaluation (H.E.), giant cell reaction, acute inflammation, fibrosis, adhesion, tiroidization,

fibroblast activation, calcification, fibrosis, glomerular necrosis, adhesion to adjacent organ were not detected while erythrocyte aggregation, cydherophage and microvascular proliferation were shown in each kidney.

Conclusions: ABS is an effective agent to stop active major bleeding in renal trauma model. The effect of ABS to renal histopathology shows positive clues without inflammation, fibrosis and tissue damage, and erythrocyte aggregation, bleeding control mechanism of ABS, are also shown in kidney histopathologically.

S118

Testicular injuries, consequences and medicolegal significance

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Introduction and Objectives: To analyze testicular injuries, causes and consequences, especially threes influence on fertility and to asses threes medico legal significance.

Material and Methods: 57 patients, hospitalized and surgically treated, from January 1999 to December 2008, on urological department of KCS Belgrade. During hospitalization patients were physically examined, lab. Work and scrotal ultrasound were performed. On evident rupture or suspected rupture, we performed surgical exploration. Dependent on the findings, we performed orchyectomy or conservation of the testis. Procedure independently, every patient interested in his fertility was check out on 1, 3, 6 and 12 months, examined physically, scrotal ultrasound and spermogram. Results were statistically analyzed and schematically displayed.

Results: Patients age was between 14 and 74 years (X=35; DS=14.45) closed injury we found in 40 (70%) patients and opened injury we found in 17 (30%) patients. Causes of closed injuries were sport activities, fights, occupational injuries 50%, 42.5% and 7.5% respectively Causes of opened injuries were shot guns 6 (35%)self injuries, castration were found in 3 (17.5%) in psychological patients. In the rest of 8 (47.5%)opened injuries we found different accidents, motorbike accidents, dog bites, occupational injuries, fall on spiky object, jumping over the fence etc. 28 patients under the age of 40, childless or interested in having more children were interested in regular checkups during the following year on 1, 3, 6 and 12 months. 15 of which (no matter what kind of injury they suffered) had a good spermogram results. 13 patients, initially having a spermogram results below the usual finding, the number of spermatozoids, their shape and motility, during next 6 check ups, 3 and 6 months, have improved there sprmogram results so that on 12-th months examination, they had normal findings. The rest of 7 patients, unfortunately, suffered a bad spermogram finding, even when we performed other tests, hormonal analysis (FSH, LH, PL, and T0 so to exclude other possible causes of these findings

Conclusions: testicular injuries, leading to loss of testis or surgically repaired, conserving tests, may lead to male infertility. This condition may be transient but may have a long term consequences. Since great number of these injuries were fight afflicted, guns afflicted, sport injuries and occupational hazardous, these consequences have a medico legal significance. Problem arising in this case is to display that the patient left with permanently afflicted fertility had a good fertility prior to injury.