

Conclusions: The portion of myeloid and plasmocytoid dendritic cells in the peripheral blood corresponds to healthy population. We observed partial maturation of DCs in tumors, however, the presence of higher number of regulatory T-lymphocytes point to the possibility of the suppression of local immune response aimed at tumor cells. All these findings will contribute to the preparation of DC vaccination protocol for patients with renal cell carcinoma. Supported by Grant Agency of Charles University no.7753/2007.

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Histological finding of the tumor necrosis in the renal cancer specimen as a negative prognostic factor

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Introduction and Objectives: Histological finding correlates with tumor grow, biological activity and could be essential for the patient future. We have tried to confirm relationship between the histological presence of the tumor necrosis and patient's prognosis.

Material and Methods: Retrospective analysis of the histological finding of the renal cancers removed by total or partial nephrectomies since 2001 to 2005 was carried out. Histological type, tumor necrosis presence, tumor size, signs of the sarcomatoid transformation and nuclear grade according to the Fuhrman's grade were focuses of our interest. The follow-up was 4 to 8 years. We have evaluated progression disease rate and censored death due to cancer generalization.

Results: Overall 228 renal cancers were removed, tumor necrosis was found in 61 patients (26.8%) – 53 patients with clear cell cancer (86.9%), 8 patients with papillary cancer (13.1%). Tumor size in this group was from 30 mm to 170 mm, median 70 mm. Tumor stage: pT1a in 5 pts (8.3%), pT1b in 16 pts (26.3%), pT2 in 11 pts (18%), pT3a in 14 pts (22.9%), pT3b in 14 pts (22.9%), pT3c in 1 pt (1.6%), pT4 in 0 pts.(0%). N+ was found in 20 pts (32.8%), N0 in 41 pts (67.2%), M+ was confirmed in 17 pts (27.9%), M0 in 44 pts (72.1%). Nuclear grade GI was in 0 pts, GII in 6 pts (9.8%), GIII in 33pts (54.1%), GIV in 22 pts (36.1%). Overall 39 pts (63.9%) from these 61 pts have died in median 8 months after nephrectomy. Simultaneous presence of the tumor necrosis and sarcomatoid transformation were confirmed in 6 pts, all of them have died in median 6.5 months after surgery.

Conclusions: Tumor necrosis is serious negative prognostic factor. Tumor necrosis can be found even in small asymptomatic tumors. It is always indicator of the fast and aggressive tumor grow. Simultaneous presence of the tumor necrosis and sarcomatoid transformation are always signs of the high malignant potency of the renal cancer.

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Spontaneous rupture of the renal pelvis

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Introduction and Objectives: The aim of our study was to evaluate the etiology, diagnosis and treatment of the spontaneous rupture of the renal pelvis.

Material and Methods: From 1999–2008, we evaluated and treated 11 patients (6 women and 5 men) with spontaneous rupture of the renal pelvis. The diagnosis was confirmed by abdominopelvic CT with contrast agent or by intravenous urography and by retrograde ureteropyelography. The cause of

spontaneous rupture of the renal pelvis was a ureteral stone in 8 cases and ureteral stricture in 3 cases.

Results: Four patients with ureterolithiasis in lower ureter underwent primary ureteroscopic lithotripsy and stenting and no auxiliary treatment was required. Four patients with ureterolithiasis in upper ureter we treated with sole stenting and the secondary intervention was performed 28 – 60 days (average 37 days) after initial procedure. The patients with ureteral stricture were primarily treated with stent placement. One patient underwent endoluminal incision 45 days after initial procedure and two seriously ill patients were managed with chronic ureteral stent changes. All rupture of renal pelvis recovered without complication.

Conclusions: Spontaneous rupture of the renal pelvis is a rare complication of the obstructive uropathy. Sole stenting of the ureter is reserved for ureteral stricture and for stones of the upper ureter or pelvic ureteric junction. Ureteroscopic lithotripsy followed by double-J stenting of the ureter is a treatment of choice for stones of the lower ureter with rupture of renal pelvis.

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Image fractal analysis in retroperitoneal fibrosis – 5 years of experience with 19 patients

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Introduction and Objectives: To evaluate effective prognostic factors in the evolution of patients with retroperitoneal fibrosis and to establish the validity of fractal analysis in determining the disease severity in these patients.

Material and Methods: The study included 19 pts (M/F: 5/14) with a median age of 56, 4 yrs treated for idiopathic retroperitoneal fibrosis and bilateral obstructive renal failure between Jan 2004-Dec 2008. The data were evaluated about medical history, physical examination findings, laboratory tests, imaging methods (abdominal CT-scan, MRI), surgical treatment performed. All the patients had ureterolysis and omental wrapping. Parameters assessed on helical CT were: fibrosis width, interureteric distance, maximal cranio-caudal length in sagittal section and fibrosis surface area – using fractal analysis. The patients were followed up postoperatively at 3 and 6 mts. Assessment of renal function was based on the clearance of creatinine and helical CT scan at 6 mts. Positive outcome was considered an increase of clearance of creatinine and a decrease of hydronephrosis level.

Results: All patients had at admission high BUN levels, with a median creatinine level 10.2 (range 6.5–18.7 mg/dl), median clearance of creatinine = 27 mL/min/1.73 m². They were initially stented (17-bilateral/2-unilateral), but after 2 days, 16(84.2%) underwent bilateral nephrostomy for further decreasing of BUN levels or for oligoanuria. Preoperative median serum creatinine was 2.3 (range 3.7–1) median clearance of creatinine=70 mL/min/1.73 m². Median imaging parameters preop. were: 3.8 cm (range 6–2.2 cm) fibrosis width, interureteric distance at intervertebral disc L4-L5= 6.8 cm (range 5.6–9.2 cm), fractal dimension of the fibrosis surface area=1,67788, maximal cranio-caudal length in sagittal section 10.8 cm (range: 7.9–13.4 cm). Postoperative, at 3 mts, the median clearance of creatinine had an increase of 10% (range:60–80 mL/min/1.73 m²) and at 6 mts the median clearance of creatinine had an increase of 21% (range:75–98 mL/min/1.73 m²). 6 of 19 pts had a stable GFR