ENUCLEORESECTION FOR RENAL CELL CARCINOMA: PROGNOSTIC FACTORS AND LONG-TERM RESULTS IN PATHOLOGICAL T1-STAGE PATIENTS

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INTRODUCTION & OBJECTIVES: During the last decade, open nephron-sparing surgery has been accepted as a safe and effective alternative to radical nephrectomy, in elective situations also, for tumours less than 5 cm. The aim of this study is to retrospectively investigate the overall survival (OS) and cause-specific survival (CSS) in patients (pts) submitted to enucleoresection of renal cell carcinoma (RCC) in pathologic stage T1 (pT1-TNM 2002). We further analysed which factors should be independently predictive of survival.

MATERIAL & METHODS: From 1988 to 2004, 237 pts (mean age: 60 yrs; range: 25-86 yrs) underwent enucleoresection of renal cell carcinoma for pT1 tumours (mean diameter: 3.1 cm; range: 0.4-7.0 cm).

Patient characteristics: M/F: 172/65; Right/Left: Bilateral: 118/108/11; upper/medium/inferior third: 69/77/91; pre-operative creatinine: 1.05±0.31 mg/dL. None of the pts presented metastasis at toraco-abdominal CT and total body bone scan. Twenty pts had surgical solitary kidney and 22 presented benign disease to the contralateral kidney.

RESULTS: Median operative time was 140 minutes (min): range=60-320 minutes; median ischemic time was 20 minutes; range=4-44 minutes; median blood loss was 550 mL; range=30-3900 mL. Pathology: pT1a/pT1b: 188/49; G1/G2/G3: 74/14/6; clear cell RCC: 182p.; oncocytome/carcinome: 16.; papillari: 34; other: 5. All patients had negative resection margins. Early complications (intraoperative and within 30 days of nephron-sparing surgery) requiring reiterative surgery happened in the 5% of cases (12/237): 4 acute haemorrhage, 1 splenectomy, 2 wound dehiscence, 5 urine leakage (treated by ureteral double-J positioning). Median post-operative stay was 6 days (range=3-34). The 5-year GFR (mean:low<60,60-70,70-80,80-90,90-100,100+) was 89.7%, while CSS was 94.1%. Univariate analysis failed to show statistically significant differences in terms of 5-year CSS between pT1a and pT1b pts. Pts with G3 tumour had 5-year CSS significantly lower than pts with G1 tumour (87% vs. 100%; p<0.01), while no differences resulted between patients with G2 and G3 tumours. Multivariate analysis showed that older age (p<0.004), preoperative creatinine (p<0.005) and Grading (p<0.003) were independently predictive of OS. Age (p=0.003) and Grading (p=0.04) were also independently predictive of CSS. Pathologic stage (pT1a vs. pT1b) did not result as a prognostic factor at multivariate analysis.

CONCLUSIONS: Enucleoresection of renal tumour is a safe and effective procedure and represents the gold standard for small renal cancer (pT1 stage). Multivariate analysis showed that age and grading are independently predictive of OS and CSS, while no difference seemed to emerge between pT1a and pT1b (TNM 2002) groups of pts. Surprisingly, the pre-operative creatinine also emerged as an independent prognostic factor of OS.

30 YEARS' EXPERIENCE IN NEPHRON-SPARING SURGERY: LONG-TERM SURVIVAL AND COMPARISON OF RESULTS AFTER ELECTIVE AND IMPERATIVE SURGERY

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INTRODUCTION & OBJECTIVES: Nephron sparing surgery (NSS) has become an established method in the treatment of renal cell carcinoma (RCC). Main object is a comparative monocentric retrospective survey after NSS, depending on indications (elective vs. imperative) and regarding long term survival.

MATERIAL & METHODS: We analysed 501 patients who underwent NSS at our institution between 1975 and 2005. Patients' data could be obtained in 90.1% through follow up. Patients with metastatic disease at surgery (n=16) were excluded from survey, since only curative intentions-to-treat was considered. Cancer specific survival was estimated by Kaplan-Meier. Log-Rank test was used to determine factors, having impact on survival.

RESULTS: Mean tumour size was 3.8cm (median: 3.0). Histological findings showed that 409 patients (79.8%) had renal cell carcinoma. After a mean follow up time of 54.1 months (median: 36.8 months), 11.5% patients (n=46) died; 1.5% of them (n=6) tumour related. Tumour recurrence occurred in 5.5% (n=22). Local tumour recurrence after nephron sparing surgery was detected in 5cases (1.25%). 94 Patients were treated with imperative indications (25.5%); 20.2% of them (n=19) died during follow up, 3 of them (3.2%) tumour related. The remaining 306 patients (76.5%) underwent elective NSS. Among them, 27 died during follow up (8.8%), 3 tumour related (1.0%). Cancer specific survival of all patients after 5, 10 and 15 years was 98.2%, 96.3% and 96.3%, respectively. In univariate log rank analysis, no statistically significant factors had impact on survival.

Patients after elective NSS showed significant better survival than patients treated with imperative indications (15-year-survival: 97.4% vs. 91.7%; p=0.044).

CONCLUSIONS: Our series shows excellent long term survival rates after NSS. Patients treated with elective NSS had significant better survival than patients with imperative NSS. NSS, nowadays routinely performed in imperative indications, should also become gold standard in case of well respectable solitary tumours and healthy collateral kidney (elective indications). Considering these results, we regularly perform elective NSS in peripheral tumours larger than 4 cm, if technically feasible.