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PROGRESSION AND LONG-TERM SURVIVAL AFTER SIMPLE ENUCLEATION FOR THE ELECTIVE TREATMENT OF PT1A RENAL CELL CARCINOMA (RCC): OUR EXPERIENCE OVER 25 YEARS

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INTRODUCTION & OBJECTIVES: To present our findings in our series of pT1a RCC treated by elective simple enucleation and to specifically report on the incidence of local recurrence, progression-free and disease-specific survival rate.

MATERIAL & METHODS: 232 patients who had elective NSS performed by simple enucleation from January 1986 and September 2004 for sporadic, unilateral, pathologically confirmed, ≤ 4 cm RCC, were studied retrospectively. The patients' status was evaluated last in September 2005. The mean (median, range) follow up was 76 (61, 12-225) months.

RESULTS: Mean (SD, median, range) tumour greatest dimension was 2.8 (0.78, 2.85, 0.6-4) cm. On the basis of Fuhrman nuclear grading 32.3% (75/232) of tumours were G1, 51.3% (119/232) G2 and 16.4% (38/232) G3/G4. The histopathologic review according to the new classification (UICC and AJCC 1997) revealed 198 clear cell (85.3%), 18 papillary (7.8%), 15 chromophobe (6.5%) and 1/232 (0.4%) collecting system RCC. None of the patients died in the immediate postoperative period. Twelve patients (5.2%) developed postoperative bleeding requiring transfusions and 6 (2.6%) had postoperative prolonged urinary leakage from the drainage requiring double-J stent insertion. There were no major complications, such as prolonged acute tubular necrosis/chronic renal insufficiency and bleeding requiring reoperation. The 5- and 10-year cancer specific survival was 96.7% and 94.7%, respectively. The 5- and 10-year progression free survival was 96% and 94%, respectively. Overall,13 patients experienced progressive disease (5.6%) of whom 5 (2.1%) had local recurrence either alone or associated with distant metastases. Three of these had local recurrence alone, elsewhere in the kidney, showing a "kidney" recurrence rate of 1.3%.

CONCLUSIONS: We confirm on a larger series that simple tumour enucleation is a safe and acceptable approach for elective NSS, provides excellent long-term progression free and cancer specific survival rates and is not associated with an increased risk of local recurrence compared to partial nephrectomy.

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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 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±0,51 mg/dL. None of the pts presented metastasis at toraco-abdominal TC and total body bone scan. Twenty pts had surgical solitary kidney and 22 presented benign disease to the controlateral kidney.

RESULTS: Median operative time was 140 minutes (mns) (range:60-320 mns); median ischemic time was 20 mns; (range:4-44 mns), median blood loss was 350 mL (range:50-3900). Pathology: pT1a/pT1b: 188/49; G1/G2/G3: 74/140/23; clear cell RCC: 182pz.; oxyphile/cromophobe: 16; papillary: 34; other: 5. All patients had negative resection margins. Early complications (intraoperative or within 30 days of nephron-sparing surgery) requiring reiterative surgery happened in the 5% of cases (12/237): 4 acte 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 OS (median follow-up:60,7 months) 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 (82% *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=0,03) 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.

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SIMPLE ENUCLEATION FOR THE TREATMENT OF RENAL CELL CARCINOMA BETWEEN 4 AND 7 CM IN GREATEST DIMENSION: PROGRESSION AND LONG-TERM SURVIVAL

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INTRODUCTION & OBJECTIVES: We present our findings in a series of patients treated by simple enucleation for renal cell carcinoma (RCC) of 4-7 cm in greatest dimension and specifically report on the incidence of local and systemic recurrence and disease-specific survival rate.

MATERIAL & METHODS: We retrospectively reviewed the clinical and pathological data of 71 patients who underwent nephron sparing surgery (NSS) by simple enucleation between 1986 and 2004 for sporadic, unilateral, pathologically confirmed, 4-7 cm RCC. Patients with solitary kidney due to previous RCC treated by radical nephrectomy were excluded from the study. None of the patients had pre- or intra-operative suspicion of positive nodes. All patients were free from distant metastases before surgery (M0). The patients' status was evaluated last in May 2005. The mean (median, range) follow up was 74 (51, 12-225) months.

RESULTS: The pathologic review according to the 2002 TNM classification showed that 42% (30/71) tumours were pT1a, 44% (31/71) pT1b, and 14% (10/71) pT3a. The mean (SD, median, range) tumour greatest dimension was 4.7 (0.81, 4.5, 4.0-7.0) cm. None of the patients died within the first 30 days of surgery. There were no major complications such as bleeding and urinary leakage/urinoma requiring reoperation. The 5- and 8-year cancer specific survival was 85.1% and 81.6%, respectively and the 5-year cancer specific survival for pT1a (4 cm), pT1b and pT3a patients was 95.7%, 83.3% and 58.3%, respectively (pT1a vs. pT1b p=0.254; pT1a vs. pT3a p=0.006, pT1b vs. pT3a p=0.143). Overall,10 patients experienced progressive disease (14.9%) of whom three had local recurrence (4.5%) either alone or associated with distant metastases.

CONCLUSIONS: Simple tumour enucleation is a useful and acceptable approach for NSS for RCC of 4-7 cm, provides long-term cancer-specific survival rates similar to radical nephrectomy and is not associated with a greater risk of local recurrence than is partial nephrectomy for RCC of < 4 cm in greatest dimension.

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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=10) were excluded from survey, since only curative intention-to-treat was considered. Cancer specific survival was estimated by Kaplan-Meier. Log-Rank test was used to determinate factors, having impact on survival.

RESULTS: Mean tumour size was 3.8cm (median: 3.0). Histological findings showed that 400patients (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 (23.5%); 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, 27died 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.