

NEPHRON SPARING TECHNIQUES INDEPENDENTLY REDUCE THE RISK OF CARDIOVASCULAR EVENTS AFTER SURGERY IN PATIENTS WITH A SMALL RENAL MASS AND A NORMAL PREOPERATIVE RENAL FUNCTION

R. Bertini, U. Capitani, C. Terrone, A. Antonelli, A. Minervini, A. Volpe, C. Fiori, F. Porpiglia, M. Furlan, R. Matloob, F. Regis, M. Zaccaro, L. Maseri, E. Di Trapani, A. Salonia, M. Carini, C. Simeone, F. Montorsi (Milan)

Scopo del lavoro

Some reports suggested that nephron sparing surgery (NSS) may protect against cardiovascular events (CE) when compared with radical nephrectomy (RN) in patients with small renal masses. However, the majority of those studies could not adjust their results for potential selection bias secondary to clinical baseline cardiovascular risk of the patients. In the current study, we aimed to test the effect of treatment type (NSS vs. RN) on prevalence of CE after accounting for clinical characteristics, comorbidities and individual cardiovascular risk.

Materiali e metodi

A multi-institutional collaboration among four European Tertiary Care Centers allowed collecting 1331 patients with a clinical T1a-T1b N0 M0 renal mass and complete cardiovascular event follow-up data. Patients underwent RN (n=462, 34.7%) or NSS (n=869, 65.3%) and showed normal estimated glomerular filtration rates (eGFR) before surgery (defined as a pre-operative eGFR \geq 60 ml/hiters per minute per 1.73 m²). CE was defined as the onset of coronary artery disease, cardiomyopathy, hypertensive heart disease, heart failure, cardiac dysrhythmias or cerebrovascular disease. Univariable and multivariable Cox regression analyses predicting CE were performed. To adjust for inherent baseline differences among patients, we relied on multivariable analyses adjusting for age, clinical tumor size, gender, presence of hypertension or diabetes at diagnosis, baseline Charlson comorbidity index (CCI) and smoker status.

Risultati

Mean patient age resulted 60.6 years (median 62). Overall, 14.7% and 11% of the patients had uncontrolled hypertension or diabetes, respectively. CCI resulted 0-1 in 70.8% of the patients. At a mean follow up period of 71 months, 197 patients (14.8%) developed a CE. When stratifying for treatment type, 10.5 vs. 22.9% patients developed CE (p

Discussione

The risk of cardiovascular event after renal surgery is not negligible. Patients treated with NSS have half of the risk to develop CE relative to RN counterparts.

Conclusioni

Also after accounting for clinical characteristics, comorbidities and cardiovascular risk at diagnosis, NSS independently decrease the risk of CE relative to RN.

PARTIAL NEPHRECTOMY FOR PATIENTS WITH A SOLITARY KIDNEY: ONCOLOGICAL AND FUNCTIONAL LONG TERM FOLLOW UP

M. Seveso, M. Seveso, L. Castaldo, G. Taverna, R. Hurle, G. Giusto, A. Benetti, L. Pasini, S. Zandegiacomo De Zorzi, R. Peschechera, S. Proietti, P. Graziotti (Rozzano)

Scopo del lavoro

The most critical indication for partial nephrectomy remains a patient with a solitary kidney containing a renal cortical tumour preserving renal parenchyma is imperative and must be weighed against the risk of compromising oncological efficacy. Partial nephrectomy (PN) is still a challenging technique and there have been only a few reports from a limited number of institutions concerning PN for patients with a solitary kidney that provide favourable outcomes for renal function and oncological control.

Materiali e metodi

Medical records of 483 consecutive patients who underwent OPN(369 pts) and LPN(114 pts) from January 1997 to June 2013 were retrospectively analyzed. Patients presenting with a solitary kidney were identified and their outcomes assessed. A total of 63 patients with a solitary kidney were identified and included in the analysis. Median preoperative radiologic tumour size was 4.1 cm along with a R.E.N.A.L. score of 6. All of the tumors scored below 9 points according to the R.E.N.A.L. Nephrometry score. Renal function was measured by serum creatinine level on postoperative day 1, 3, 4, 7, 30, 6 and 12 months.

Risultati

The median operative time was 121 min(121-243). No remarkable bleeding occurred during surgery. Mean percent of parenchyma resected had been 30 \pm 20%. In 36 patients, the pathological examination revealed renal cell carcinoma, in 12 papillary, 8 chromofobe, 7 oncocytoma. Negative surgical margins were achieved in all patients. Post operative stage was characterized by 5 urinary fistulae treated by the placing of urethral stent, 2 arteriovenous fistulae appeared during the 5th and 15th post-operative day which were treated with embolization, 4 patients required blood transfusion due to anemia. Overall, 2.1% of the patients didn't experience any increase of serum creatinine, while 41% experienced a significant worsening in serum creatinine values. In 38% of the patients was recorded a not-significant worsening of serum creatinine. In 35% of the patients, a worsening of the renal function was recorded, with an increase greater than 50% with respect to the pre-operative values, 70% of these patients had a pre-operative serum creatinine greater than 1.5 mg/dl, a percentage of resected parenchyma of 40% and an average ischemic time >30 minutes. In the long run follow up, 95.5% of patients preserved a normal renal function. Our oncologic results in the long run were consistent with what was reported in other studies: 22% of patients 14 had a tumor recurrence with a 3.5% of local recurrence, 12% metastases, 6.5% both local and distant masses, 8 patients died, 5 for renal tumor, 2 for cardiovascular problems and 1 for unknown cause.

Discussione

Nephron sparing surgery is an absolute indication in patients with a solitary kidney or renal deterioration. The procedure results safe with low complication rate. After an initial decrease of renal function, it stabilizes in the first post-operative year.

Conclusioni

The results in the long run show also the validity of the procedure with great oncological results.