

**ANALYSIS OF CLINICAL PREDICTIVE FACTORS OF THE TRIFECTA OUTCOME AFTER PARTIAL NEPHRECTOMY. AN AGILE STUDY**

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**Scopo del lavoro**

The trifecta is an accepted index of the excellent surgical outcome after partial nephrectomy. Aim of this study was to assess which clinical variables may be an independent predictors of the trifecta outcome in patients candidates to partial nephrectomy.

**Materiali e metodi**

The data of 440 patients treated with open partial nephrectomy for T1 RCC were reviewed in our multi-center prospectively maintained database. Warm ischemia time (WIT) > 25 min, complications, and postoperative acute kidney dysfunction (AKD), separately. The perioperative clinical variables associated with the Trifecta outcome, defined as warm ischemia time (WIT)

**Risultati**

The trifecta outcome was achieved in 315 (71.6%) patients; 7.5% of patients had WIT  $\geq$  25 min, 3.5% had PSM and 21.2% had perioperative complications. Reoperation rate for Clavien  $\geq$  3 complication was 6.7%. On univariate analysis the trifecta was significantly associated with patients gender (p

**Discussione**

In our analysis the clarity of the surgical field, associated to the containment of intraoperative bleeding and a favorable tumor nephrometry, resulted of critical importance for the achievement of the excellent surgical outcome.

**Conclusioni**

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**NEPHRON SPARING SURGERY DOES NOT ALWAYS DECREASE OTHER-CAUSES MORTALITY RELATIVE TO RADICAL NEPHRECTOMY IN PATIENTS WITH NORMAL PREOPERATIVE RENAL FUNCTION**

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**Scopo del lavoro**

Some reports suggested that nephron sparing surgery (NSS) may better protect against other-cause mortality (OCM) 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 characteristics of patients. In the current study, we aimed to test the effect of treatment type (NSS vs. RN) 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 2685 patients with a clinical T1a-T1b N0 M0 renal mass. Patients underwent RN (n=1059, 39.4%) or NSS (n=1626, 60.6%) and showed normal estimated glomerular filtration rates (eGFR) before surgery (defined as a pre-operative eGFR  $\geq$  60 milliliters per minute per 1.73 m<sup>2</sup>). Descriptive, univariable and multivariable Cox regression analyses were used to predict the risk of OCM. To adjust for inherent baseline differences among patients, we included as covariates: age, clinical tumor size, gender, presence of hypertension at diagnosis, baseline Charlson comorbidity index (CCI), body mass index and smoker status.

**Risultati**

Mean follow up period was 76 months (median 61). Mean patient age resulted 60 years (median 62). Mean body mass index resulted 25 kg/m<sup>2</sup>. Overall, 37.2% and 9.4% of the patients had hypertension or diabetes, respectively. CCI resulted 0-1 in 73.2% of the patients. The 5- and 10-yr OCM rates after nephrectomy were 5.2% and 13.2% for NSS versus 7.4% and 15.1% for RN, respectively (p=0.3). At multivariable analyses, patients who underwent PN showed similar risk to die for OCM compared with their RN-treated counterparts (hazard ratio [HR]: 0.77; 95% confidence interval, 0.48-1.25; p=0.3). Increasing age (HR: 1.12, p

**Discussione**

Controversies exist whether nephron sparing surgery (NSS) may better protect against other-cause mortality (OCM) and renal function impairment (RFI) when compared with radical nephrectomy (RN) in the surgical treatment of patients with kidney cancer. Such uncertainty derives from the apparent contrast between the negative findings of the European Organization for Research and Treatment of Cancer (EORTC) randomized trial 30904 demonstrating no benefit in performing NSS and the majority of retrospective studies showing, conversely, an evident advantage in terms of overall survival and better postoperative renal function.

**Conclusioni**

After correcting for clinical characteristics, comorbidities and cardiovascular risk at diagnosis, NSS does not decrease other-causes mortality relative to RN in patients with clinical T1a-T1b renal masses and a normal kidney function before surgery.