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INTRODUCTION & OBJECTIVES: The aim of this study is to compare simple tumor enucleation (STE) and standard partial nephrectomy (SPN) in terms of perioperative results and trifecta outcome in a multicentre Italian dataset (RECORD Project).

MATERIAL & METHODS: 1075 patients treated with nephron sparing surgery (NSS) between January 2009 and December 2012 were evaluated. Overall, 200 patients who underwent STE were retrospectively matched with 200 patients treated with SPN through a propensity score analysis based on preoperative variables. An intraoperative, early post-operative and Trifecta comparison was performed between the two groups. Trifecta was defined as simultaneous ischemia < 25 min, no surgical complication and negative surgical margin. Multivariable analysis was applied to predict factors independently associated with negative trifecta outcome.

RESULTS: STE and SPN presented similar WIT (18 vs 17 min) and intraoperative blood loss (200 vs 196 cc). STE and SPN were also associated with similar surgical complication (11% vs 7.5%), surgical Clavien 3 (3% in both groups) and Trifecta outcome (74% vs 73.5%) rate. The incidence of PSM was significantly lower in patients treated with STE (1% vs 5%; p=0.02). Clinical diameter was significantly higher in patients with negative trifecta outcome (3.5 vs 3 cm, p 0.01), but at the multivariable analysis, only <50% exophytic tumor growth pattern (OR 1.96, IC95 1.2-3.2, p 0.01) was independently associated with negative Trifecta outcome.

CONCLUSIONS:



To our knowledge this is the first multicenter matched-pair comparison of patients treated by STE and SPN. The two techniques seems to have similar perioperative and trifecta outcomes. STE have lower rate of PSM, but it needs further confirmation in a prospective study with central pathological revision. Endophytic growth pattern remains an important predictive factor of negative trifecta outcome.