264 Open versus laparoscopic partial nephrectomy for clinical T1a renal tumors: A prospective multicenter comparative study (RECORd project)

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INTRODUCTION & OBJECTIVES: Aim of this study is to evaluate surgical and postoperative outcomes of open partial nephrectomy (OPN) and laparoscopic partial nephrectomy (LPN) for clinical T1a renal masses in a prospective multicenter dataset.

MATERIAL & METHODS: The RECORd Project is a 4-Year prospective observational multicenter study promoted by SIU (Italian Society of Urology). The study includes all patients who underwent open or laparoscopic nephron-sparing surgical treatment for kidney cancers between January 2009 and January 2011 at 19 Italian centers. Approval of the study protocol by the local ethical committee was obtained at each centre. Conservative surgery was performed in the form of standard enucleoresection and tumor enucleation (SE) according to center's and surgeon's preference. The OPN group and the LPN group were compared regarding clinical, surgical, and pathologic outcome variables. Multivariable logistic regression models were applied to analyse predictors of WIT > 20 minutes, and surgical complications.

RESULTS: In our study, 450 patients were the subject of the final analysis. Overall, 301 had OPN and 149 LPN. LPN was performed by SE in a significantly larger set of patients (p=0.001) and was associated with a significantly longer WIT (19.9 min vs 15.1 min, p 50% exophytic) were independent predictors of a WIT >20 minutes. The incidence of PSM was not significantly different between the OPN and LPN (4.2% vs 2.2%). Overall, 86 postoperative complications were recorded (19.1%). Surgical and medical complications were 68 (15.1%) and 24 (5.3%). Surgical complication rate was higher after OPN versus LPN but this difference did not reach the statistical significance (17.7% vs 10.9%) and at multivariate analysis the factors independently associated with surgical complications were clinical tumor size and indication for surgery (relative/absolute vs elective).

CONCLUSIONS: The laparoscopic surgical approach is an independent predictors of a WIT >20 minutes after

conservative surgery for kidney cancer. In our series of T1a RCC the incidence of positive surgical margins was similar in patients treated with LPN and OPN. Surgical complication rate was higher after OPN versus LPN but this difference did not reach the statistical significance.