EARLY OUTCOMES OF LESS NEPHRECTOMY EXPERIENCE
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OBJECTIVE: To present experience with LESS partial nephrectomy (PN) and LESS radical nephrectomy (RN) in comparison to the corresponding conventional laparoscopic (CL) approach.

PATIENTS AND METHODS: A head-to-head comparison of 22 LESS nephrectomies (15 RN/7 PN) with a control group of 22 CL nephrectomies (15 RN/7 PN) performed between January 2009 to October 2010. Classic laparoscopy and LESS: transperitoneal transumbilical approach with keyhole trocar placement and Gelpoint (Applied Medical) for access. A 5mm 30°-endoscope, CL instruments and SonoSurg ultrasonic scissors (Olympus*) were utilized; comparisons regarding preoperative, peri-operative and immediate postoperative parameters.

RESULTS: With the RN analyses, LESS and CL cohorts were similar in age (71vs.68y, p=0.53) and tumor size (56vs.65.3mm, p=0.30). Intraoperative blood loss (133cc-LESS vs. 72cc CL, p=0.58) and OR time (LESS: 120.5min vs; CL: 120min, p=0.19) were comparable. Morphine use (LESS: 29 mg vs; CL: 32mg, p=0.85) and length of hospital stay (LESS: 5.2d vs; CL: 6.2d, p=0.37) were similar. In the PN subgroup, no difference was noted in age (59.3y LESS vs.58.6y CL, p=0.93) and tumor size (28mm LESS vs. 32.3mm CL, p=0.56). In 2/7 LESS-PN, a vascular clamping mean time of 32.5min was recorded compared with 23.8min for 6/7 CL-PN (p=0.35). Blood loss was similar (185.7cc LESS vs. 172.9cc CL, p=0.91). There was no difference when comparing operative time (109.3min LESS vs. 172.9min CL, p=0.91). Morphine requirement (LESS 32.8mg vs; CL 58.9mg, p=0.29) and length of hospital stay (LESS 4.7d vs. 5.7d, p=0.16) were comparable. We verified 2 post-operative complications in LESS arm. One conversion to open surgery in the LESS arm was performed in one patient due to vascular stapling malfunctioning. No tumor recurrence has occurred in any of the patients in both arms.

CONCLUSION: LESS approach is feasible for RN and in highly selected patients for PN.