

LESS Radical Nephrectomy for Renal Cell Cancer in High-Risk Patients: Results of an Initial Prospective Single-Surgeon Study and Analysis of Perioperative and Short-Term Outcomes

Introduction and Objective: Laparoendoscopic single-site (LESS) surgery represents the evolution of laparoscopy for the treatment of urologic diseases. The Objective was to investigate the safety and feasibility of LESS surgery in high-risk patients undergoing radical nephrectomy (LESS-RN) for renal cell carcinoma.

Material and Methods: A total of 20 high-risk patients were enrolled in this prospective study.

Patients who underwent LESS-RN were compared to 26 high-risk patients after multitrocar laparoscopic radical nephrectomy (LRN). Then the patients were divided into two groups: patients of high-anaesthetic risk (Group A: 7 after LESS-RN [Group A1] and 9 after LRN [Group A2]) and patients of high surgical risk (group B: 13 after LESS-RN [Group B1] and 17 after LRN [Group B2]).

Results: The mean operative time in the group A1 and A2 was 162.1 ± 34.3 min and 150.5 ± 126.5 min, respectively. The mean hospital stay was 6.8 ± 1.2 vs. 7.5 ± 2.4 days in the two groups, respectively.

The mean operative time in the group B1 and B2 was 153 ± 25.9 min and 122.5 ± 81.3 min, respectively. The mean hospital stay resulted to be 3.8 ± 0.8 vs. 4.2 ± 1.4 days in the two groups, respectively. All LESS-RN were performed successfully without conversion to an open procedure and all patients were very satisfied with the appearance of their scars.

Conclusion: LESS-RN can be performed safely in high-risk patients.