

Initial Operative Experience: Single-Port Retroperitoneal Laparoendoscopic Urological Surgery

Introduction and Objective: This paper reports our early experience with single-port laparoscopic nephrectomy via the retroperitoneal approach.

Materials and Methods: Since April 2010, 23 patients have undergone single-port laparoscopic surgery for nephrectomy in 11 patients and standard nephrectomy in 12 patients by an experienced laparoscopic surgeon.

Results: The mean operative time for patients undergoing single-port laparoscopic nephrectomy was 265.2 minutes. The mean estimated blood loss was 96.7 mL. Retroperitoneal laparoscopic single-site surgery was completed in all patients without conversion to standard laparoscopy or open surgery. No intraoperative or acute postoperative complications occurred. When the single-port retroperitoneal laparoscopic nephrectomy group was retrospectively compared with the group who had undergone standard retroperitoneal laparoscopic nephrectomy, no significant difference was noted with respect to age, body mass index, operation time, time to eat, catheter removal, or length of hospitalization ($p > 0.05$). A significant difference in favor of the single-port retroperitoneal laparoscopic nephrectomy group was noted with respect to the estimated blood loss ($p = 0.027$) and the visual analog pain scale score at discharge ($p = 0.016$).

Conclusion: Although our results of retroperitoneal single-port laparoscopic nephrectomy demonstrate that the technique is feasible with advanced techniques and optimal instrumentation, further study is needed to determine the future direction of the technique and the extent of its clinical application.