Hand Assisted Laparoscopic Nephroureterectomy Cuff Excision for the Treatment of Upper Tract Urothelial Cancer

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摘要

Abstract

Objectives. Nephroureterectomy with removal of the bladder cuff is the standard of care for patients with upper tract transitional cell carcinoma. Historically, it has been performed using two separate incisions or one large incision extending from the lateral flank to the symphysis pubis. We describe an alternative technique using endoscopic and hand-assisted laparoscopic techniques and present our experience.

Methods. During the past 18 months, 22 patients at two institutions underwent hand-assisted laparoscopic nephroureterectomy. In 19 patients, the distal ureter and bladder cuff were managed endoscopically. In 3 patients, the distal ureter and the bladder cuff were removed by an extravesical, laparoscopic technique. The intraoperative parameters assessed included operative time, estimated blood loss, specimen weight, surgical margin status, pathologic grade and stage, and acute complications. Postoperative endpoints included the time to sustained fluid intake, parenteral narcotic requirement (milliequivalents of morphine sulfate), oral narcotic requirement (number of tablets), length of stay, time until return to normal activity, and rate of tumor recurrence.

Results. The average age of our patient population was 65 years (range 42 to 86), 10 patients were men and 12 were women, and the average American Society of Anesthesiologists classification was 2.2. All but 2 patients had their specimens removed en bloc. No intraoperative complications occurred. The average operative time was 272 minutes (range 190 to 440), and the average blood loss was 180 mL (range 50 to 400); no patient required a transfusion. The mean specimen weight was 457 g (range 190 to 1420). All 22 patients had negative surgical margins. Postoperatively, the time to sustained fluid intake averaged 2.1 days (range 1 to 7), the mean parenteral narcotic requirement was 55 mEq (range 12 to 107.8) of morphine sulfate, the mean oral narcotic requirement was 5.8

tablets (range 1 to 14), and the average length of stay was 4.1 days (range 3 to 14). One patient developed thrombophlebitis of the right external jugular vein from a central line and required 2 weeks of intravenous antibiotics. The mean time to return to normal activity was 19 days; the mean follow-up was 13 months. Six patients had disease recurrence: four low-grade, low-stage bladder tumors and two metastatic tumors. All patients were alive at 18 months.

Conclusions. Hand-assisted laparoscopic nephroureterectomy with endoscopic management of the bladder cuff is a viable and efficacious alternative to open nephroureterectomy. The technique allows the surgeon to perform an en bloc resection of the kidney, ureter, and bladder cuff without compromising oncologic principles. Patients benefit from a decrease in pain and hospital stay and quicker convalescence. Longer follow-up and comparative studies to standard open techniques are underway.