

News note:

HAND-ASSISTED LAPAROSCOPIC NEPHROURETERECTOMY: INITIAL CASE REPORT

XIE Li-ping(谢立平), LOU Guo-Guang(楼国光)

(Dept. of Urology, First Affiliated Hospital, College of Medicine College, Zhejiang University, Hangzhou 310003, China)

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Abstract: Nephroureterectomy with removal of a bladder cuff was performed successfully on a 47-year-old man for transitional cell carcinoma of the right renal pelvis using hand-assisted laparoscopy. The results showed that hand-assisted laparoscopic nephroureterectomy is an efficacious alternative to open surgery and provides the urologist new to laparoscopy a shorter learning curve compared with standard laparoscopy.

Key words: hand-assisted laparoscopy, nephroureterectomy, renal pelvis, transitional cell carcinoma

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Case Report: A 47-year-old man had with an intermittent gross hematuria for more than one year. On physical examination the kidneys were not palpable and there were no bilateral costovertebral angle tenderness. Laboratory investigation results were normal except for hematuria. Suspected cancer cells were found in urine cytology studies. An intravenous urography revealed a 2.0 × 2.0 cm filling defect in the right renal pelvis. On the CT scan there was no evidence of renal hilar lymphadenopathy.

The patient was placed in the left lateral flank position. Hand port and trocar access were obtained in the positions described by Stifelman (Stifelman et al. 2001). The left hand was placed into the operative field and the right hand was used to work the laparoscopic instruments. The right lobe of the liver was released for the body sidewall by incising the triangular ligament. The anterior and posterior divisions of the coronary ligaments were divided. A liver retractor was placed through the right upper quadrant port. The colon and hepatic flexure were mobilized medially. Gerota's fascia was incised and freed from all attachments. The renal artery and vein were divided with a 45 mm endoscopic linear cutter. The ureter was freed to the level of the bladder using a combination of blunt dissection, clips, and electrocautery. The kidney, ureter, and bladder cuff were retrieved through the hand port site(about 5cm in length).

The total operating time was 155 minutes. The estimated blood loss was 30ml with no blood transfusion. The specimen weighed 310gm. Pathological evaluation revealed a TCC of the right renal pelvis(grade II). There was no positive margin. There were no intraoperative com-

plications. Throughout the postoperative period the temperature ranged from 37.0 to 37.5 °C. The patient was placed on patient-controlled anesthesia for the first 24 hours and began oral intake in 48 hours. There were no postoperative complications. The patient was discharged on postoperative day 6.

Discussion: For patients with upper tract TCC, nephroureterectomy with removal of a bladder cuff is the standard of care. Traditionally, it has been performed using two incisions or one large incision extending from the lateral flank to the symphysis pubis (Stifelman et al., 2001). Standard laparoscopy was introduced to perform nephroureterectomy with some disadvantages such as long operating time and steep learning curves(McDougall et al., 1995). From the experience of our initial case we found that the benefits with HAL include shorter operative time, shorter hospital stay, less pain, faster recovery and shorter learning curve. The HAL operation allows the urologist to place a hand into the operative field and avoids some problems associated with standard laparoscopy including loss of proprioception, tactile sensation, and three-dimensional orientation. HAL also allows an intact removal of the specimen.

References

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