

## **Initial Experience of Laparoscopic Nephrectomy at the Armed Forces Hospital: Southern Region, KSA**

**Introduction and Objectives:** More than 140 years have passed since the first documented open nephrectomy. Surgical methods remained the same for several decades till the introduction of laparoscopic approach as a method for the performance of nephrectomy. Aim of Study: to demonstrate our preliminary experience on laparoscopic nephrectomy at the Urology Department of the Armed Forces Hospital-Southern Region (AFH-SR).

**Materials and Methods:** During the period from April 2011 to March 2012, a total of 25 patients with renal pathology such as non-functioning kidney and renal tumor underwent laparoscopic trans-peritoneal nephrectomy. Laparoscopic nephrectomy has been performed by a specialized in laparoscopy surgeon for the first time at the AFH-SR in Khamis Mushayt. Data regarding individual characteristics, associated co-morbidities, duration of operation, hospital stay, intra-operative and postoperative complications were recorded. Patients were followed up for one month after surgery.

**Results:** A total of 25 patients underwent laparoscopic nephrectomy, 16 (64%) were males and 9 (36%) were females. Average age of these patients was 43 years (range 7-59). The main indications for nephrectomy were non-functioning kidney in 15 cases (60%) and renal mass in 6 cases (24%). End-stage renal disease was diagnosed in 16 cases (64%). The tumors cases included 4 cases of renal cell carcinoma and 2 cases of oncocytoma. Eleven patients were hypertensive (44%) while five were diabetic (20%). Duration of operation ranged from 2 to 3 hours (average 2.5 hours). Average hospital stay was 4.5 days ranging between 3 and 5 days. Intraoperative blood transfusion was performed in three patients (12%). Postoperative complications were encountered in one patient (4%), who suffered from retroperitoneal hematoma and incisional hernia. Conversion to open surgery was never deemed necessary in any case. During the follow-up period none of the patients died.

**Conclusions:** Laparoscopic nephrectomy is a minimally invasive procedure. It seems to offer improved cosmetic outcome to the patients. Our initial experience is associated with promising results. The establishment of a fully equipped special unit with highly trained laparoscopic surgeon as well as personnel contributed to the safe and effective performance of laparoscopic nephrectomy. The accumulation of experience would eventually almost completely replace open nephrectomy at AFH-SR and would introduce the benefits of minimal invasive surgery.