

## VID-22

### Laparoscopic anatomic nephrolithotomy for management of complete staghorn renal stone: Clinical efficacy and intermediate-term functional outcome

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**Objectives:** To report the clinical efficacy and intermediate-term functional outcome after laparoscopic anatomic nephrolithotomy (LAN) as an alternative treatment modality for complete staghorn renal stone.

**Patients and Methods:** The demographic and perioperative parameters as well as the intermediate outcome of 10 adults (9 men) who underwent transperitoneal LAN for complete staghorn renal stone were analyzed. Functional imaging studies consisted of intravenous urography and technetium-99 dimercaptosuccinic acid scintigraphy (99Tc-DMSA) renal scan done before the operation and at the last follow-up visit.

**Results:** Mean age of patients was 48.7 years (range: 37-64 years). Mean stone size was 67.3 mm (50-90 mm). All procedures were completed laparoscopically without the need for open conversion. Mean operative time was 192 minutes (110-240 minutes) and mean warm ischemia time was 32.8 minutes (15-40 minutes). On the discharge day, we detected an 8 mm lower caliceal stone and a 25 mm mid-caliceal stone in 1 patient each (stone free rate: 80%). After a mean follow up of 11.9 months (6-19 months), 85.5% of corresponding renal unit function was preserved; however, there was a significant mean decrease in 99Tc-DMSA uptake from  $48.4\% \pm 8.83$  before surgery to  $41.4\% \pm 13.98$  afterwards ( $-7\% \pm 6.53$ ;  $P=0.008$ ). Nevertheless, renal units were completely functional at follow-up IVU with a significant improvement in obstruction in all patients.

**Conclusion:** LAN is a rewarding alternative minimally invasive approach for one-session management of patients with complete staghorn renal stone. It offers an acceptable rate of stone clearance and operative complications but does incur a minimal loss of function in the affected kidney.

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