

**PP-069**

## **Renal stone disease and laparoscopic surgery**

G. Kyriakou, A. Petrolekas

*Errikos Dynant Hospital, Athens, Greece*

**Purpose:** The aim of this abstract is the presentation of laparoscopic technique as an alternative minimally invasive surgical treatment of renal stone disease.

**Patients and Methods:** 10 patients suffering from renal pelvic stone disease with a diameter of > 2.5 cm have been submitted in laparoscopic transperitoneal pyelolithotomy. These patients either had previous ESWL treatment without success or they strongly desired being stone-free in one procedure. A double J stent has been placed in all patients preoperatively just before laparoscopy. 4 trocars have been used (1 of 10mm for the optic and 3 of 5mm). First step was the mobilization of the colon common for the 2 sides (left or right) and the upper third part of ureter has been dissected until an enough large part of the renal pelvis. Then, 2 guide-stiches have been placed on the upper edges of the pelvis followed by an anterior pelvic incision of about 1,5 cm with a curved cold knife held on a laparoscopic needle-holder. An atraumatic fenestrated grasper has been inserted and removed the stone and the renal pelvic cavity has been irrigated laparoscopically for possible residuals. Separated stitches with Monocryl 3/0 have been used for pelvis closure. Finally, a drain of 16 Ch without negative pressure has been placed.

**Results:** Mean operative time was 90 min (80-110). There was no conversion or blood transfusion. The Foley catheter and the drainage were removed on day 2 and 3, respectively. Mean hospital stay was 48 hours in all cases. The double J stent was removed 21 days postoperatively. All of the procedures were uneventful and there was no urine leakage after surgery. The first postoperative day a dramatic decrease for analgesic use has been observed. Stone-free rates was about 100% in all patients except one who had a residual of 8 mm and he was treated by ESWL.

**Conclusion:** Laparoscopy is a feasible minimally invasive surgery for the treatment of large renal pelvic stones or stones related with a congenital anomaly (ie. PUJ obstruction). It is a challenging and absolutely a preferable procedure vs open pyeloplasty with lithiasis or pyelolithotomy. But, it also remains an alternative treatment vs ESWL, PNL or ureterorenoscopy, especially in patients who wish an in one step surgical solution. Until now, laparoscopic treatment gains acceptance in stone disease with its widespread experience and might be a treatment of choice after unsuccessful endourological procedures. However, it is more invasive compared to endourologic methods, and it's the last solution in the years of modern endourology.

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