

TO EVALUATE EFFICACY OF LAPAROSCOPIC TRANSPERITONEAL PYELOLITHOTOMY FOR MANAGEMENT OF RENAL PELVIC STONES IN TERM OF POSTOPERATIVE HOSPITAL STAY

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Abstract

Background: To evaluate efficacy of laparoscopic transperitoneal pyelolithotomy for management of renal pelvic stones in term of postoperative hospital stay

Methods: This study has been conducted in the Department of General surgery, Indira Gandhi Medical College, Shimla on selected patients of Renal pelvis stones admitted in institution

Results: Mean hospital stay was 6.66 days in laparoscopic group and it was 8 days in laparoscopic completed by open method. Maximum no. of patients was discharged within 5 days. 6 (75 %) patients returned to normal activity in less than 30 days which included only successful laparoscopic group and 2 patients returned to normal activity in 40 days which included lap completed by open group.

Conclusion: In the present study of Laparoscopic Transperitoneal Pyelolithotomy at Indira Gandhi Medical College, Shimla, the procedure showed a definite decrease hospital stay, early return to activity than who have undergone open surgery

Keywords: Laparoscopic Transperitoneal Pyelolithotomy, Pelvic stone, Hospital stay.

Introduction

PCNL is accepted as the gold standard surgery for most patients suffering from large or complex renal calculi. Despite its advantage in percutaneous approach with high stone free rate (SFR), some concerns still remain about its complications such as immediate or late hemorrhage (due to arteriovenous fistula or pseudo aneurysm), parenchymal loss and injury to the adjacent organs.¹The ideal procedure for large or complex renal stones would be the one that achieve complete stone free status with minimal morbidity and with the least number of procedures. The traditional standard procedure was open nephrolithotomy, which evolved into PCNL or RIRS.²

Laparoscopic pyelolithotomy is assumed to preserve functional renal parenchyma, and there is a minimal risk for immediate or late complications. Therefore, it might be an alternative for the patients in whom maximal preservation of renal parenchyma is necessary.

Laparoscopic Ureterolithotomy and laparoscopic Nephrectomy are regularly being done in the institution. Laparoscopic Transperitoneal Pyelolithotomy can be an alternative to PCNL for the treatment of pelvic stones in selected cases.

Materials and Methods

Source of Data

This study has been conducted in the Department of General surgery, Indira Gandhi Medical College, Shimla on selected patients of Renal pelvis stones admitted in institution. Preoperatively all patients has been evaluated in terms of history, clinical, laboratory and radiological findings.

Methods of Collection of Data

Patients with large renal pelvic stones were assessed clinically, hematologically and radiologically and were taken for Laparoscopic Transperitoneal Pyelolithotomy. The various parameters were studied intraoperatively and post operatively as per the proforma attached.

Inclusion Criteria

The following patients with renal pelvic stones were included in the study:

- Patients of all age groups and both sex were included in the study

- Stone disease with stones in the renal pelvis with urine culture negative
- Patients already with DJ Stent in situ were also included

Exclusion Criteria

The patients with the following conditions were excluded from the study

- With underlying bleeding disorders
- With chronic cardiac and renal diseases
- With concomitant malignant diseases and COPD
- With uncontrolled Diabetes and Hypertension

- With Morbid Obesity
- With pregnancy and sepsis
- With history of previous pyonephrosis / renal abscess
- With h/o previous percutaneous renal intervention or open surgery
- With h/o previous abdominal surgery

Observations

The Age of the patient in the present study ranged from 25 years to 60 years. There were 4 (50%) females and 4 (50%) male patients.

Table 1: General characteristics

Age	No of patients	Percentage
< 25 Yrs	1	12.5%
25-50 Yrs	5	62.5%
>51 Yrs	2	25%
Male	4	50.00%
Female	4	50.00%

The duration of postoperative hospital stay in present study ranged from 5-9 days. Majority (62.5%) of the patient were discharged within 6-8 days of surgery and 2 patients which were completed by open surgery were discharged on 9th day.

Table 2: Postoperative hospital stay

Days	No of Patients	Percentage
<6	1	12.5%
6-8	5	62.5%
>8	2	25%

6 (75 %) patients, of successful lap surgery returned to normal activity in less than 30 days and 2(25%) patients, which were completed by open surgery returned to normal activity in 40 days.

Table 3: Return to normal activity after surgery in days

Return to normal activity	<30 days	31-40 days	>40 days
Lap group	6	2	nil
Lap to Open	0	0	2

Discussion

The duration of hospital stay in the present study was ranged from 5 days to 9 days including converted patients. Mean hospital stay in a successful laproscopic group was 6.66 days and in lap completed by open it was 8 days.

Mujeeburahiman M. and Vipin C.³ observed Mean time of postoperative hospital stay was 4 ±0.8 days. Meria P. et. al. observed mean hospital stay of days 6.5 days (4–16) and median hospital stay of 6 days.⁴ A. Al Hunayan et. al. observed Mean hospital stay of 5.2±1.6 days⁵. Mean hospital stay was more in present study as compared to literature. The patients though were fit to be discharged, remained in the hospital waiting for the drain to be removed first before they go to home.

In the present study, 6 (75 %) patients returned to normal activity in less than 30 days which included only successful laproscopic group and 2 patients returned to normal

activity in 40 days which included lap completed by open group. Meria P. et. al. observed return to normal activity in mean 13.2 days (4–30) in successful laparoscopic surgery.⁴ A. Al Hunayan et. al. observed Mean convalescence period of 9.7days.⁵

In the present study, time taken to return to normal activity was more due to the psychological factors and hesitancy of the patient to return to work. It was concluded that early return to normal activity is due to less post-operative pain, early ambulation, a shorter period of hospital stay and a small incision.

Conclusion

In the present study of Laparoscopic Transperitoneal Pyelolithotomy at Indira Gandhi Medical College, Shimla, the procedure showed a definite decrease hospital stay, early return to activity than who have undergone open surgery

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