

## TO EVALUATE COMPLICATION OF LAPAROSCOPIC TRANSPERITONEAL PYELOLITHOTOMY FOR MANAGEMENT OF RENAL PELVIC STONES

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### Abstract

**Background:** To evaluate complication of laparoscopic transperitoneal pyelolithotomy for management of renal pelvic stones

**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:** There were no major postoperative complications. Two patient developed mild low grade fever which subsided on oral antipyretic medication. One patient had a cough and one patient had ileus.

**Conclusion:** We concluded that there were no major intraoperative or postoperative complications were seen in our study.

**Keywords:** Laparoscopic Transperitoneal Pyelolithotomy, Pelvic stone, Complication

### Introduction

PCNL is the treatment of choice for large stone. PCNL attains stone free rates of upto 95%. AUA guidelines recommend PCNL as a treatment of choice for staghorn calculi. Larger stones in the lower pole are best managed by PCNL as the first treatment option. Data from metaanalysis suggests that larger lower polar stones have lower clearance rates and higher retreatment rates. PCNL is considered to be a gold standard in management of calyceal diverticular stones. In comparison to ESWL, PCNL has higher stone free rates with similar recurrence rates and complication rates. The stone free rates for PCNL range in between 85 and 93% added advantage of PCNL include it provides excellent access for obliteration of the diverticular sac.<sup>1-3</sup>

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%

There were no major postoperative complications. Two patient developed mild low grade fever which subsided on oral antipyretic medication. One patient had a cough and one patient had ileus.

**Table 2: Post-operative complications**

Postoperative complications	No of patients	Percentage distribution
Fever	2	50 %
Cough	1	
Ileus	1	
Wound sepsis	nil	
Pulmonary thromboembolism	Nil	

#### Discussion

There were no major intraoperative or postoperative complications. In the postoperative period, 2 patients developed mild fever which subsided on oral antipyretic medication on 2<sup>nd</sup> day. Prolonged ileus was observed in 1 patient which was converted to open and 1 patient developed cough due to URTI which was managed conservatively on oral medication.

In a study by Meria.et.al. 12.5% patients had Urinary leakage 6.25 % had Parietal hematoma and 6.26% developed Urinary infection. <sup>3</sup>None of the patients in present study had any of these complications. A. Al Hunayan et. al. <sup>4</sup>observed 11.1% patients undergoing TLP had prolonged ileus, 7.4% had urinary tract infection and 3.7% (1 patient) had peritonitis which was secondary to a stone that slipped into the abdominal cavity, which was not recognized at the time of surgery. The patient underwent exploratory laparotomy for the same.

#### Conclusion

We concluded that there were no major intraoperative or postoperative complications were seen in our study.

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