

**Comparison of hospital stay after single dose antibiotic prophylaxis at different time interval in patients undergoing elective laparoscopic cholecystectomy**

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**Abstract**

**Background:** In this study we compare the hospital stay after single dose antibiotic prophylaxis at different time interval in patients undergoing elective laparoscopic cholecystectomy

**Methods:** The present study was conducted at Department of Surgery, Dr RPGMC Kangra at Tanda. The 50 patients admitted for elective laparoscopic cholecystectomy, aging less than 75 years of both the genders were included

**Results:** Median duration of hospital stay was 3 days in both group A and group B.

**Conclusion:** Our study we concluded that mean hospital stay was not statistically significant different between group A and group B.

**Keywords:** Hospital stay, Cholelithiasis, Cholecystectomy.

**Introduction**

Laparoscopic cholecystectomy has become the preferred procedure for cholelithiasis-related disease.<sup>1</sup> Population-based studies have found that the rate of cholecystectomy has increased since the

introduction of the laparoscopic approach.<sup>2</sup> Given this ubiquity, hospital utilization for laparoscopic cholecystectomy is an important area for study to better manage the care for patients requiring intervention for symptomatic gallbladder disease.

Results have been disparate when differences in hospital length of stay between laparoscopic and traditional small incision cholecystectomy have been analyzed, as well as when costs and charges between the 2 have been compared.<sup>3</sup> Several studies have demonstrated a shorter hospital stay but longer operative time for laparoscopic cholecystectomy compared with traditional small incision cholecystectomy.<sup>4</sup>

**Material And Methods**

**Study Area:** Department of Surgery, Dr RPGMC Kangra at Tanda

**Study Duration:** One Year Sample size fifty patients  
Preoperatively same antibiotic was given to all patients.

### **Inclusion Criteria**

The patients admitted for elective laparoscopic cholecystectomy, aging less than 75 years of both the genders were included.

### **Exclusion Criteria**

Patients were excluded on the following basis

- Day care surgery
- Contradictions for study drugs, in particular penicillin type I allergy
- Pre-existing antibiotics therapy within 14 days of surgery
- Indication for SAP other than cefuroxime
- Patients with co-morbid conditions like diabetes mellitus, jaundice, uraemia, neoplasia, immunosuppressed patients, pregnant or lactating women, patients on antibiotic therapy, cephalosporin allergy, conversion to open cholecystectomy, and patients with infective focus in the body

### **Randomization**

The study comprised of 50 patients admitted for elective laparoscopic cholecystectomy. The patients were randomized according to computer-based randomization.

Group A: Twenty-five patients undergoing elective laparoscopic cholecystectomy were given a single dose of injection cefuroxime 1.5 gm IV outside the operation theatre in the wards minimum 30 mins before surgery.

Group B: Twenty-five patients undergoing elective laparoscopic cholecystectomy were given a single dose of injection cefuroxime 1.5 gm IV after the test dose just before the induction of anaesthesia within 30 mins of surgery.

### **Method**

The surgical site was prepared inside the operation theatre. Three coats of 5% betadine paint were

applied to the abdominal skin. The standard aseptic precautions were followed at each step. Post-operatively, the wounds were examined on second day, at time of discharge, and at the day of sutures removal (8<sup>th</sup> day post-operatively), and on 30<sup>th</sup> day (hospital visit or telephonic interview).

Antibiotic prophylaxis was given:

- On OT table
- In pre-operative room/ward

### **Data Collection**

After admission, detailed history, examination and basic investigations were performed for all subjects. All the participants were asked to give their written informed consent after they had been made aware of the purpose of the study.

### **Statistical Analysis**

Statistical analysis was performed using SPSS v21. Data were presented as frequency, percentages, mean, and standard deviation. Student t-test was used to compare quantitative variables between two groups. Non-normally distributed data were compared using Mann Whitney U test. Categorical variables between 2 groups were compared using Chi square test with or without Yate's correction. P value <0.05 was considered statistically significant.

### **Results**

In the present study, mean age of the patients in group A and group B was  $43.52 \pm 12.37$  years and  $44.96 \pm 16.06$  years. Our study also observed that mean age was not statistically significant different between group A and group B ( $P=0.724$ ).

In the present study, median duration of hospital stay was 3 days in both group A and group B. Our study also observed that duration of hospital stay was comparable between group A and group B ( $P=0.626$ ).

Table 1: Comparison of duration of hospital stay

	Group A (n=25)	Group B (n=25)
Duration of hospital stay (days)	4.0 [2.0, 4.0]	3.0 [2.0, 4.0]
P value	0.626	

Data were expressed as median [Q1, Q3]

### Discussion

Antibiotic prophylaxis is recognized as one of the most important preventive measures to reduce the incidence of SSI. It is indicated in clean-contaminated and contaminated surgeries and in some special cases of clean surgery (e.g. implants, immunosuppression and risky operative location such as neurosurgery and cardiac surgery).<sup>6</sup>

The patients undergoing laparoscopic cholecystectomy have several factors that significantly contribute to postoperative length of stay. The factors that increase postoperative length of stay include nonelective status, ASA classification, biliary pancreatitis, white blood cell count, and fluids administered. The factor that decreased postoperative length of stay was BMI.

### Conclusion

Our study we concluded that mean hospital stay was not statistically significant different between group A and group B

### References

1. Soper NJ, Stockmann PT, Dunnegan DL, Ashley SW. Laparoscopic cholecystectomy: the new "gold standard"? Arch Surg. 1992;127(8):917-923
2. Legorreta AP, Silber JH, Costantino GN, et al. Increased cholecystectomy rate after the introduction of laparoscopic cholecystectomy. JAMA. 1993;270:1429-1432

3. Zacks SL, Sandler RS, Rutledge R, Brown RS., Jr A population-based cohort study comparing laparoscopic cholecystectomy and open cholecystectomy. Am J Gastroenterol. 2002;97:334-340
4. Csikesz NG, Tseng JF, Shah SA. Trends in surgical management of acute cholecystitis. Surgery. 2008. August;144(2):283-289
5. Hobbs MS, Mai Q, Fletcher DR, Ridout SC, Knuiman MW. Impact of laparoscopic cholecystectomy on hospital utilization. Aust NZ J Surg. 2004. April;74(4):222-228
6. Traverso LW, Lonborg R, Pettingell K, Fenster LF. Utilization of cholecystectomy-a prospective outcome analysis in 1325 patients. J Gastrointest Surg. 2000. Jan-Feb;4(1):1-5