

**A COMPARISON OF POST OPERATIVE PAIN SCORE IN ELECTIVE
LAPAROSCOPIC CHOLECYSTECTOMY WITH AND WITHOUT ANTIMICROBIAL
PROPHYLAXIS**Dr. Hitesh Kumar¹, Dr. Shivani Sharma² and Dr. Dharam Dev^{3*}¹M.D Radiology CH Sunni Shimla.²Medical Officer Health Block Bagsaid Mandi.³M.S General Surgery Health Block Bagsaid Mandi***Corresponding Author: Dr. Dharam Dev**

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Article Received on 10/05/2021

Article Revised on 31/05/2021

Article Accepted on 21/06/2021

ABSTRACT

Background: Laparoscopic cholecystectomy has become the gold standard treatment for gallstone disease. Aim of the study is to compare the laparoscopic cholecystectomy with and without antibiotic prophylaxis in term of post operative pain score. **Method:** This prospective study was carried out in the department of General Surgery Indira Gandhi Medical College Shimla (H.P) on patients admitted with diagnosis of cholelithiasis, over a period of 1 year from 1st August, 2018 to 31st July, 2019. total of 100 patients were included in the study, and were randomly divided into two groups. Group A was control group in which antibiotic was given and group B was case group in which no antibiotic was given. **Result:** The difference was statistically not significant with P value of 1. Both the groups were comparable in terms of post operative pain. **Conclusion:** In patients undergoing elective LC, antibiotic prophylaxis have no effect on post operative pain, it remain same in both the groups regardless of the use of antimicrobials.

KEYWORDS: Prophylactic Antibiotics, Laparoscopic Cholecystectomy, Surgical site Infections.**INTRODUCTION**

Approximately 10-15% of the adult population has gall stones. It is estimated that there are about one million newly diagnosed cases annually that are hospitalized. Gallstone is the most common disease of biliary system. Gall stones have higher prevalence in females and only those patients who develop symptoms or complications require the treatment. Prevalence increases with the age, from 4% in 3rd decade to 27% in 7th decade. This may be related to the changes in the biochemistry of the bile with age. Cholelithiasis is one of the commonest disease throughout the world. Its prevalence has geographical variations. The incidence of disease increases with age. In this era of minimal invasive surgery; laparoscopic cholecystectomy has become gold standard for the treatment of gall stone disease. Laparoscopic cholecystectomy has spread rapidly worldwide mainly because post operative pain is less, recovery is fast, cosmetic results are better, hospital stay is shorter, low morbidity and mortality, including low rate of post operative infection than with the open procedure.

AIM AND OBJECTIVES

Aim of the study is to compare the post operative pain in elective laparoscopic cholecystectomy with and without antibiotic prophylaxis.

MATERIAL AND METHOD

This prospective study was carried out in the department of General Surgery Indira Gandhi Medical College Shimla (H.P) on patients admitted with diagnosis of cholelithiasis, over a period of 1 year from 1st August, 2018 to 31st July, 2019.

Inclusion criteria

All patients with ultrasonographically proven cholelithiasis.

Exclusion criteria

Patients with acute cholecystitis, diabetes mellitus, immunocompromised status, intra-operative bile spillage/stone spillage, empyema gall bladder, gangrenous gall bladder, cholangitis, pancreatitis, choledocholithiasis, previous ERCP.

METHODS

Patients presented to General surgery OPD at I.G.M.C. Shimla with history of upper abdominal pain and subsequently diagnosed radiologically with cholelithiasis were included in this study after duly informed about the nature of study and taking informed consent.

In every case, detailed history was taken, thorough clinical examination was done and required

investigations were done including USG abdomen. Patients had undergone following investigations.

- ✓ CHG, RFT, S.Electrolytes, RBS, LFT, Viralmarker, Ultrasound Abdomen, Chest X-ray, ECG.

Total of 100 patients were included in the study, Patients were distributed into group A and B randomly.

Group A (With antibiotic prophylaxis):- patients were given single dose of antibiotic (Inj. Cefuroxime 1.5gm) at the time of induction of anaesthesia. Same antibiotic was given intravenously for two days postoperatively and then orally for next 5 days.

Group B (Without antibiotic prophylaxis):- In this group no antibiotic was given pre operatively, intra operatively and post operatively.

Laparoscopic Cholecystectomy was performed in routine operation theatres. Following parameters were recorded: Operation time, Callot’s triangle anatomy, Adhesions, Intraoperative bile/stone spillage, Whether empyema gall bladder, gangrenous gall bladder, Conversion to O/C from L/C, Need for drain and any other complications.

The collected data was analysed and incidence of post operative wound site infection was looked for in both groups of patients receiving antibiotic prophylaxis and not receiving antibiotic prophylaxis.

RESULTS AND ANALYSIS

The present study was a 1-year prospective study conducted in the department of general surgery, Indira Gandhi Medical College, Shimla, in a time period of 1 year from 1st August, 2018 to 30th July, 2019 which included a total of 100 patients aged between 16 to 75 years of age, divided into two groups, study group(group B) consisting of 50 patients in which no prophylactic antibiotic was given and control group(group A) consisting of another 50 patients in which prophylactic antibiotic was given. Patients of either sex having radiologically proven cholelithiasis and fulfilling the inclusion or exclusion criteria were enrolled in the plan of this study. In our study, youngest patient was 16 years of age and eldest was 75 years old. The mean age was 43 years.

Table 1: Gender wise distribution of patients in both the groups.

Gender	Control Group Number (%)	Case group Number (%)	Total Number (%)
Male	06(12%)	09(18%)	15(15%)
Female	44(88%)	41(82%)	85(85%)
Total	50	50	100

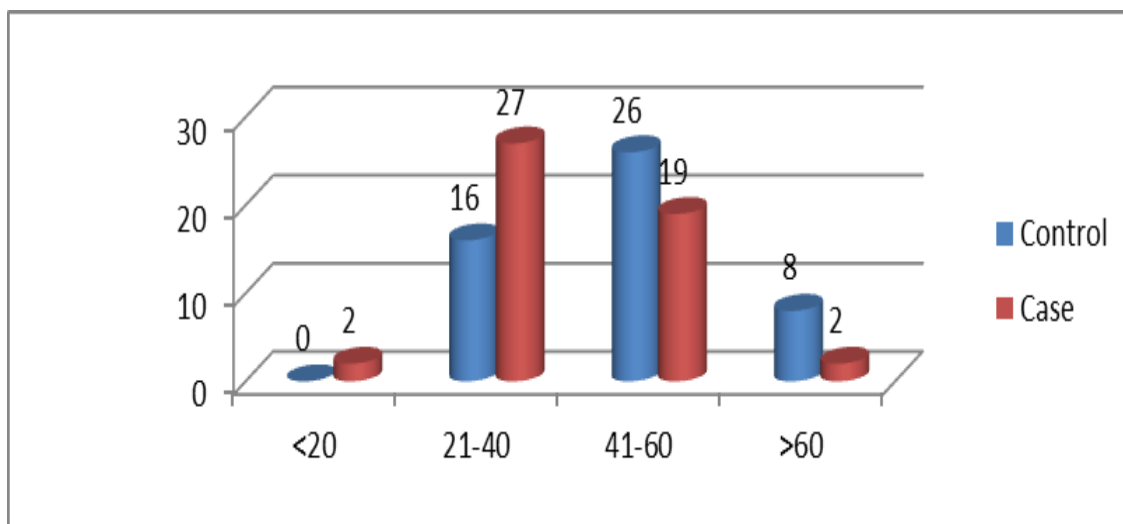


Table 2: Age Wise Distribution Of Patients In Both Groups

Post Operative Pain

In our study, post operative pain was similar (as assessed by Visual analogue scale), it was ‘hurts little bit, in both

the groups regardless of the use of antibiotics. (Figure 1 and table 3).

PAIN MEASUREMENT SCALE

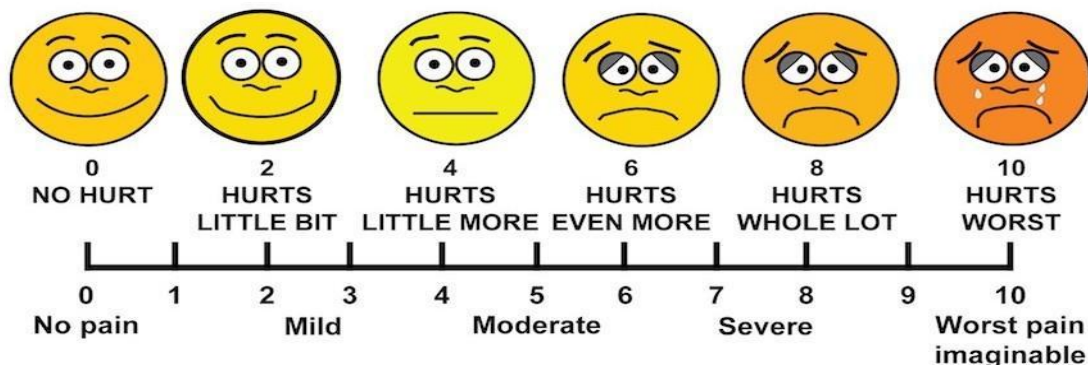


Fig 1: Shows Visual Analogue Scale.

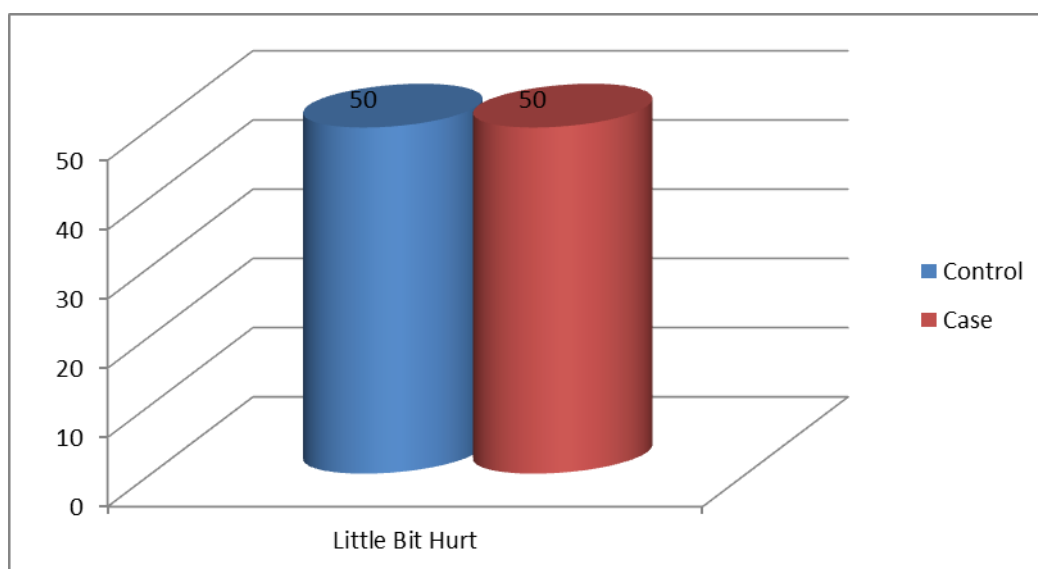


Table 3: Post Operative Pain Comparison In Patients Of Both Groups.

DISCUSSION

Cholelithiasis is a common disease having a incidence of 2-29%. As laparoscopic cholecystectomy is now the gold standard of management of patients with gallstones, evaluation of antibiotic prophylaxis and its indication for laparoscopic cholecystectomy is warranted.

Several prospective studies have concluded that the use of prophylactic antibiotic in low-risk patients undergoing LC is unnecessary, because the rate of postoperative infective complications is already low in such patients, and therefore the use of prophylactic antibiotics will not reduce the rate of postoperative SSIs and does not affect the post operative pain scoring.

Similarly Koc M et al. in 2003 studied the role of prophylactic antibiotics in elective laparoscopic cholecystectomy. There was no statistical difference between the two groups in terms of post operative pain and post operative SSIs.

In another study performed by Kutha SA et al. in 2006, there was no statistical difference between the two groups in terms of post operative pain and SSIs.

Nilay mandal et al. in 2015 performed a prospective randomized trial to study LC without prophylactic antibiotics. 102 patients with symptomatic gallstones were operated by laparoscopic technique without receiving preoperative antibiotics and studied over a period of 1.5 years. There was no wound infection in 99 patients, and superficial surgical site infection occurred in three patients (i.e., 2.94 %) out of a total of 102 patients, post operative pain was same in both the groups regardless of the use of antimicrobials which is acceptable and fulfills the aims and objectives of the study.

In the present study post operative pain was similar (as assessed by Visual analogue scale), it was ‘hurts little bit’, in both the groups regardless of the use of antibiotics.

CONCLUSION

Thus, in patients undergoing elective LC, antibiotic prophylaxis have no effect on post operative pain, it

remain same in both the group regardless of the use of antimicrobials. It seems justified only in high-risk patients such as patients with acute cholecystitis, diabetes mellitus, immunocompromised status, intra-operative bile spillage/stone spillage, empyema gall bladder, gangrenous gall bladder, cholangitis, choledocholithiasis, severe gall stone induced pancreatitis, previous ERCP to reduce the post operative infective complications.

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