TO COMPARE THE TYPE OF WOUND INFECTION OF SINGLE DOSE VERSUS CONVENTIONAL (MULTIPLE DOSES) ANTIBIOTIC USE IN LAPAROSCOPIC CHOLECYSTECTOMY IN TERMS OF TYPE OF SSI (SUPERFICIAL INCISIONAL SSI OR DEEP INCISIONAL SSI)

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Abstract

Background: To compare the type of wound infection of single dose versus conventional (multiple doses) antibiotic use in laparoscopic cholecystectomy in terms of SSI

Methods: This study was carried out in the department of General Surgery Indira Gandhi Medical College Shimla (H.P.) on patients admitted with radiologically proven cholelithiasis.

Results: In SD group out of 03 patients who developed wound sepsis all were having Superficial incisional SSI and in C group also all patients (02) who developed wound sepsis had superficial incisional SSI.

Conclusion: The type of infection wise difference in both groups was found insignificants.

Keywords: Superficial, Deep, Gallstone, Wound sepsis

Introduction

Laparoscopic cholecystectomy (LC) is one of the mutual elective laparoscopic procedures implemented. Whereas a few years ago, patients remained in the hospital for 1 or 2 days after uncomplicated laparoscopic cholecystectomy, progressively this procedure is being performed on an outpatient basis. Improved primary care support and increasing financial pressures have likewise, reduced the postoperative follow-up of these patients by the operating surgeon. Basically, the operating surgeon is no longer involved in the post discharge care and follow-up of patients undergoing laparoscopic cholecystectomy.¹⁻²

Though major complications after LC are well recognized, data about the process of patients' short term recovery after hospital discharge, perceptions of health, and the load of postoperative care prerequisite in the community are not documented. Awareness of this unnoticed recovery phase is not only vital to organizing a community care package and improving service delivery and patient satisfaction, but also is very relevant feedback, which the operating surgeon misses in today's world.³⁻⁴

Material and Method

Study Setting:

This study was carried out in the department of General Surgery Indira Gandhi Medical College Shimla (H.P.) on patients admitted with radiologically proven cholelithiasis.

Study Design:

This was prospective study in which comparison of outcome in the form of wound sepsis between two groups was done. 1st was SD group (Received Single dose of pre-operative antibiotic) and 2nd was C group (Received Single dose Pre-operative antibiotic followed by post-operative antibiotic for 5days). Laparoscopic cholecystectomy was done and Comparison of outcome in the form of wound sepsis was done between two groups.

Sample Size:

A total of 100 patients randomly selected with ultrasound proven symptomatic cholelithiasis and admitted for elective laparoscopic cholecystectomy were included in the study.

Study Population

Inclusion criteria

All patients with radiologically proven cholelithiasis.

Exclusion criteria

- ☐ Patients with acute cholecystitis.
- ☐ Patients with diabetes mellitus.
- ☐ Patient with immunosuppression.
- ☐ Patients with intra-operative bile spillage.

- Patients with intra-operative stone spillage.
- Patients with empyema gall bladder.
- Patients not willing to give consent.
- Patient unfit for general anaesthesia.
- Pregnant woman with cholelithiasis.
- Patients with underlying bleeding diathesis.
- Patients who had intra-operative complications or were converted to open cholecystectomy.

Method

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

Subsequently patients were divided into two groups

Group-1 [SD (Single Dose)]:- Patients who were given single dose of antibiotic (Inj. Cefuroxime 1.5gm) 30 to 60 min before giving skin incision.

Group-2 [C (Conventional)]:- Patients who were given single dose of antibiotic (Inj. Cefuroxime 1.5gm) 30 to 60 min before giving skin incision followed by same antibiotic for five post-operative days.

Laparoscopic Cholecystectomy was performed.

Statistical Analysis

All data were expressed as mean $\pm$ standard deviation. Data was analysed for comparison of outcome in the form wound sepsis occurring in two groups and P value was calculated. P value less than 0.05 was considered to be statistically significant.

Results

Total number of patients in our study was 100, 50 in each SD and C group. Out of 100 patients, 13 patients were male and 87 were female.

In SD group out of 03 patients who developed wound sepsis all were having Superficial incisional SSI and in C group also all patients (02) who developed wound sepsis had superficial incisional SSI.

Table 1:

Group	Total Pt. with wound sepsis	No. of Pt. with superficial incisional SSI	No. of Pt. with Deep incisional SSI
SD	03	03	0
C	02	02	0

Discussion

There have been no studies in Indira Gandhi Medical College Shimla comparing the efficacy of single dose of antibiotic and conventional use (multiple doses) of antibiotics in patients undergoing laparoscopic cholecystectomy.

In SD group out of 03 patients all three had superficial incisional SSI and in C group out of 02 patients all of them had superficial incisional SSI. In a study performed by **Matsui Y et al.** titled "Antibiotic Prophylaxis in Laparoscopic Cholecystectomy: A Randomized Controlled Trial" published in 2014 in patients receiving antibiotic prophylaxis, 05 patients out of 504 patients developed wound sepsis. Out of these 05 patients, 04 developed superficial incisional SSI. Results of our study are comparable to this study.⁵

Conclusion

The type of infection wise difference in both groups was found insignificant.

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