



**ORIGINAL RESEARCH PAPER**

**General Surgery**

**A STUDY TO ASSESS THE DIFFERENT METHODS OF SURGICALLY TREATING CHOLECYSTITIS DUE TO CHOLELITHIASIS**

**KEY WORDS:** open cholecystectomy , Laparoscopic cholecystectomy , Cholelithiasis

**Dr Jaswant Jain** Asst Professor , Dept of General Surgery , Raipur Institute of Medical Sciences, Raipur, CG , India

**Dr Suphal Kumar Gajbhiye\*** Asst Professor , Dept of General Surgery , Raipur Institute of Medical Sciences, Raipur, CG , India \*Corresponding Author

**ABSTRACT**

**Introduction:** New Innovations are coming in surgery to remove gall bladder. Laparoscopic cholecystectomy has rapidly become established as the popular alternative to open cholecystectomy, but it should have a safety profile better than of open procedure. Our study compares conventional cholecystectomy and laparoscopic cholecystectomy with respect to duration of procedure, complications, postoperative pain, analgesic requirement.

**Methods:** Cross Sectional Analytical study design with randomization was used . In method 50 patients below 80 years presenting with cholecystitis complicated by gall bladder stones were randomized to undergo open and laparoscopic cholecystectomy.

**Results:** In results the duration of pain, rate of complications, bleeding , time of operation & and hospital stay were significantly lower in laparoscopic group when compared with open cholecystectomy

**Conclusion:** The main advantages of Laparoscopy were reduced postoperative pain with less duration of analgesic intake, less bleeding , more rapid recovery, reduced hospital stay and early return to normal work. Hence this study

**INTRODUCTION**

Open Cholecystectomy was the gold standard for treatment of stones in gall bladder. First Cholecystectomy performed in 1882 by Karl Langenbuch <sup>1</sup>. In the early 1990s, the laparoscopic approach rapidly replaced open surgery as the standard procedure. The laparoscopic procedure was found to cause less scarring, shorter hospital stay and faster recovery than the open procedure, but probably at the expense of a higher rate of bile duct injuries<sup>2</sup>. We live in an era of surgical innovation that has seen the development and expansion of various types of laparoscopic surgery in which the incisions made are increasingly small. It is well established that laparoscopic surgery, in comparison with more traditional methods, results in fewer post-operative complications and leads to earlier patient mobility and recovery of the normal activities of daily life . The safety of laparoscopic cholecystectomy for the elderly has also been confirmed in many studies as an acceptable procedure and is now the preferred method for cholecystectomy <sup>3</sup>. The major complications are significantly less in laparoscopic cholecystectomy and it has become the mainstay of management of uncomplicated gallstone disease. However 20 years after its inception, uncertainty persists about the application of laparoscopic techniques to the management of patients with complicated gallstone disease <sup>4</sup>. Post operative pain, cosmesis and later complication like incisional hernia, intestinal obstruction should help to decide which technique are better <sup>5</sup>.

Our study wanted to compare the conventional cholecystectomy and laparoscopic cholecystectomy with respect to duration of procedure, complications, postoperative pain, analgesic requirement.

**METHODOLOGY**

Ethical approval was taken and consent from the patients was duly taken . Patients who have undergone gallbladder removal in a Tertiary Health centre were included in the study . 25 patients who have undergone laparoscopic cholecystectomy and 25 patients who have undergone open cholecystectomy for a study period of 7 months were taken into the study

Only those patients with gall bladder stones proved by USG with symptoms consistent with cholelithiasis fit for elective cholecystectomy were included in the study.

Patients who were above 80 years and previous history of

major surgeries were excluded from the study P value of 0.05 and less was considered as statistically significant. Data were analyzed using a computer software Epi Info version 6.2 (Atlanta, Georgia, USA) and Microsoft Excel for Windows.

**RESULTS**

The time taken was generally lesser in laparoscopy surgery than in open cholecystectomy. 27% of patients who underwent open surgery had complications and 16% of patients who underwent laparoscopic surgery had complications. The overall percentage of complications is lesser in laparoscopic surgery than open surgery.

The VAS was median grade 2 in LC group as compared to median grade 4 in OC group. The NSAID'S were used for more days in OC group compared to LC group

Patients who underwent laparoscopic surgery had analgesics only for a maximum of 5 days whereas all patients who underwent open surgery had analgesics for >5 days

Patients who underwent laparoscopic cholecystectomy were discharged before 5 days. All patients who underwent OC stayed >5 days in hospital

**DISCUSSION**

The time taken for laparoscopic surgery was found to be more than open cholecystectomy according to Supe AN et al.; <sup>6</sup>According to Waldner H et al.; there was no significant time difference between both the procedures <sup>7</sup>. According to the author's study the overall time taken for laparoscopic surgery was found to be less than for open surgery. 12% of patients according to author's study, who had undergone laparoscopic cholecystectomy only had minimal bleeding (< 50ml), whereas only 8 % of patients who underwent open surgery had about 50-200 ml of bleeding and 4 % in the open cholecystectomy group had more than 200ml of blood loss. Patients who underwent open cholecystectomy need antibiotics coverage for at least 4 to 5 days more than the patients who undergo laparoscopic cholecystectomy according to Supe AN et al <sup>7</sup>. Antibiotic requirement was found to be less in laparoscopic surgery according to Foster D.S et al and Phillips E et al<sup>8,9</sup>. In the author's study 92% of patients who underwent laparoscopic surgery required antibiotic for a maximum of 5 days whereas all patients who underwent open surgery required antibiotic for more than 5 days.

In Carbajo Caballero et al's study the rate of complications was more in the open procedure than in laparoscopic cholecystectomy<sup>11</sup>. Complication rate is higher in open than in laparoscopic surgery [6, 12]. In the author's study 12% of patients who underwent open cholecystectomy had excessive bleeding, 16% had wound infection. In laparoscopic surgery the rate of complications was found to be 12% for bleeding which was minimal, 4% for wound infection.

Patients who underwent open cholecystectomy had longer in hospital stay than those who underwent laparoscopic cholecystectomy. According to Verma G et al;<sup>12</sup> 96% of patients in the authors study had an hospital stay of less than 5 days but all patients who underwent open surgery were hospitalized postoperatively for more than 5 days.

### CONCLUSION

Laparoscopic cholecystectomy is a considerable advancement in the treatment of gallbladder disease. The advantages of laparoscopic cholecystectomy are several. In results the duration of pain, rate of complications, bleeding, time of operation & and hospital stay were significantly lower in laparoscopic group when compared with open cholecystectomy.

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