

## Assessment of cases of laparoscopic cholecystectomy- A clinical study

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**Abstract**

**Background:**Laparoscopic cholecystectomy (LC) has become so safe and easy that it can be performed with much ease and safety because of better magnification. The present study was conducted to assess the cases of laparoscopic cholecystectomy.**Materials & Methods:**60 cases aged <70 years of both sexes with a diagnosis of gall stones were divided into 2 groups of 30 each. Group I patients underwent uncomplicated LC with drainage and group II underwent uncomplicated LC without drainage. Outcome of the laparoscopic cholecystectomy was recorded in each group.**Results:** Group I had 17 males and 13 females and group II had 14 males and 16 females. The mean post-operative hospital stay was 2.4 days in group I and 1.0 day in group II, surgical site infection (SSI) was seen in 1 in group I and 2 in group II, bile leak was seen in 1 in group I and 3 in group II and re-admission was seen in 2 cases in group II. The difference was significant (P< 0.05).**Conclusion:**Outcome of patients undergoing laparoscopic cholecystectomy with drain or not drain was comparable in both groups.

**Key words:** Laparoscopic cholecystectomy, Gallstone disease, Outcome.

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**Introduction**

Gallstone disease (cholelithiasis) is one of the most common problem affecting digestive tract; in particular the hepatobiliary system encountered by surgeons. Obesity, pregnancy, dietary factors, Crohn's disease, terminal ileal resection, gastric surgery, hereditary spherocytosis, sickle cell disease and thalassemia are all associated with increased risk of gallstones[1]. Women are 3 times more likely to have cholelithiasis than men and first-degree relatives of patients with gall stones have two-fold greater prevalence. About two-third patients of cholelithiasis are presented with chronic cholecystitis, characterized by recurrent episodes of pain in right upper abdomen [2].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[3].Laparoscopic cholecy-ectomy (LC) has become so safe and easy that it can be performed with much ease and safety because of better magnification [4]. Although LC has shown clear benefits in terms of shortened hospital stay, less morbidity, mortality, a quicker return to work and with cosmetic advantage,some questions regarding this procedure remain unanswered, particularly relative to the cost benefit aspect and use in the rural setup[5].Newer, less invasive techniques, such as natural

orifice transluminal endoscopic surgery (NOTES) and single incision laparoscopic cholecystectomy (SILC), are currently being investigated as alternatives to the traditional 4-port laparoscopic removal [6].The present study was conducted to assess the cases of laparoscopic cholecystectomy.

**Materials & Methods**

The present study was conducted among 60 cases aged <70 years of both sexes with a diagnosis of gall in Department of Surgery, Dr RPGMC, Kangra at Tanda. The enrollment of patients was after explaining the purpose of the study and obtaining their written consent.Exclusion Criteria comprised of age >70 years, emergency cholecystectomy, jaundice, intra-operative injury to bowel, intra-operative hemorrhage and gangrenous or emphysematous cholecystitis.

Data such as name, age, gender etc. was recorded. Patients were divided into 2 groups of 30 each. Group I patients underwent uncomplicated LC with drainage and group II underwent uncomplicated LC without drainage. Outcome of the laparoscopic cholecystectomy was recorded in each group and compared using chi- square test. P value less than 0.05 was considered significant.

**Table 1: Distribution of patients**

Groups	Group I	Group II
Procedure	Uncomplicated LC with drainage	Uncomplicated LC without drainage
M:F	17:13	14:16

Table 1, Fig 1 shows that group I had 17 males and 13 females and group II had 14 males and 16 females.

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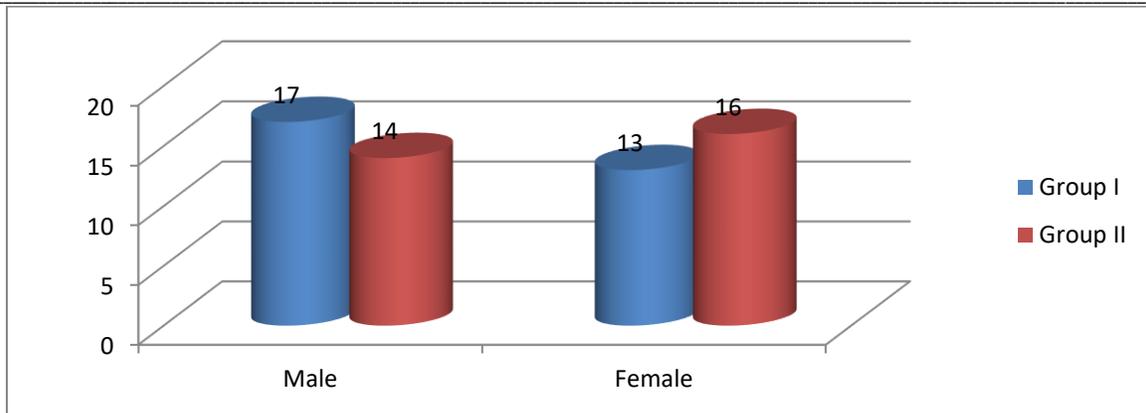


Fig 1:Distribution of patients

Table 2: Assessment of parameters

Parameters	Group I	Group II	P value
Post-operative hospital stay (Days)	2.4	1.0	0.01
SSI	1	2	0.14
Bile leak	1	3	0.05
Re-admission	0	2	0.01

Table 2, Fig 2 shows that mean post-operative hospital stay was 2.4 days in group I and 1.0 day in group II, surgical site infection (SSI) was seen in 1 in group I and 2 in group II, bile leak was seen in 1 in group I and 3 in group II and re-admission was seen in 2 cases in group II. The difference was significant (P< 0.05).

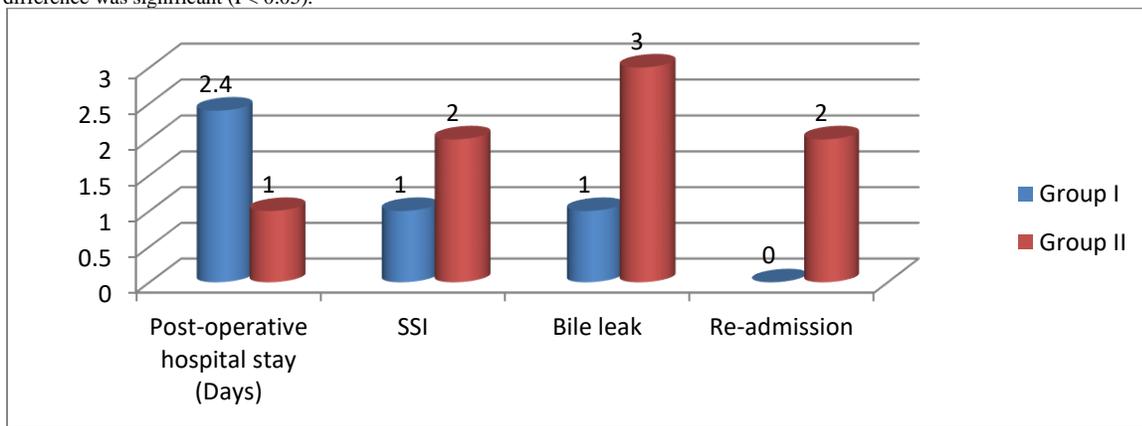


Fig 2:Assessment of parameters

**Discussion**

Gall stones are one of the major causes of morbidity and mortality all over the world. Until the end of 1980's, open Cholecystectomy was the gold standard for treatment of stones in gall bladder. First Cholecystectomy performed in 1882 by Karl Langenbuch[7]. 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[8]. 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 [9]. 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 [1]. The present study was conducted to assess the cases of laparoscopic cholecystectomy.

In present study, group I had 17 males and 13 females and group II had 14 males and 16 females. El-labbanet al[11] assessed the value of drains in elective LC. During a two-year period (from April 2008 to January 2010), 80 patients were simply randomized to have a drain placed (group A), an 8-mm pentose tube drain was retained below the liver bed, whereas 80 patients were randomized not to have a drain (group B) placed in the subhepatic space. End points of this trial were to detect any differences in morbidity, postoperative pain, wound infection and hospital stay between the two groups. There was no mortality in either group and no statistically significant difference in postoperative pain, nausea and vomiting, wound infection or abdominal collection between the two groups. However, hospital stay was longer in the drain group than in group without drain and it is appearing that the use of drain delays hospital discharge. They concluded that the routine use of a drain in non-complicated LC has nothing to offer; in contrast, it is associated with longer hospital

stay. We observed that mean post-operative hospital stay was 2.4 days in group I and 1.0 day in group II, surgical site infection (SSI) was seen in 1 in group I and 2 in group II, bile leak was seen in 1 in group I and 3 in group II and re-admission was seen in 2 cases in group II. Gurer et al [12] retrospectively evaluated the benefits of drain use after LC for non-acute and non-inflamed GBs. Two hundred and fifty patients who underwent LC for cholestasis were included in the study. Drains were placed in 51 patients (20.4%). The mean duration of drain placement was  $3.1 \pm 1.9$  (range 1–16) days. Fluid collection was detected in the GB area in 67 patients (26.8%). The mean volume of collected fluid was  $8.8 \pm 5.2$  ml. There were no significant effects of age, gender, and previous cholecystitis attacks on the presence or volume of the fluid collection ( $P > 0.05$  for all). With regard to the relationship between fluid collection and drains, 52 of 199 (26.1%) patients without drains had postoperative fluid collection, compared to 15 of 51 (29.4%) patients with drains ( $P > 0.05$ ). In conclusion, there was no relationship between the presence of a drain after LC and the presence of postoperative fluid collection. Thus, in patients without complications, it is not necessary to place a drain to prevent fluid collection.

#### Conclusion

Authors found that the outcome of patients undergoing laparoscopic cholecystectomy with drain or not drain was comparable in both groups.

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