

ORIGINAL RESEARCH

Assessment Of Interval And Early Cholecystectomy In Acute Cholecystitis

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ABSTRACT

Background: Acute cholecystitis is a common emergency surgical condition that is characterized by inflammation of the gallbladder secondary to an obstruction in the gallbladder neck, often resulting from cholelithiasis. The present study was conducted to compare interval and early cholecystectomy in acute cholecystitis.

Materials & Methods: 90 patients of acute cholecystitis were divided into 2 groups. Group I patients were treated with early cholecystectomy and group II patients with interval cholecystectomy. Parameter such as hospital stay, complications etc. were recorded.

Results: Group I had 22 males and 23 females and group II had 24 males and 21 females. Type of operation performed was lap cholecystectomy in 37 and 34 in group I and II respectively. Lap to open conversion was observed in 3 in group I and 6 in group II. The hospital stay was 1-5 days in 28 in group I and 18 in group II, 5-10 days in 7 in group I and 12 in group II and >10 days 5 in group I and 10 in group II. The difference was significant ($P < 0.05$). complications observed were biliary leaks in 3 in group I and 6 in group II, wound infection in 4 in group I and 5 in group II and stricture 1 in group I and 2 in group II. The difference was significant ($P < 0.05$).

Conclusion: Early cholecystectomy had less total hospital stay and complications than interval cholecystectomy in patients with acute cholecystitis.

Key words: Early cholecystectomy, hospital stay, gallbladder

INTRODUCTION

Acute cholecystitis is a common emergency surgical condition that is characterized by inflammation of the gallbladder secondary to an obstruction in the gallbladder neck, often resulting from cholelithiasis.¹ Gallstones are a common finding, accounting for 10-15% of all cases occurring in the general population. Of all the patients with cholelithiasis, 1-4% present with symptoms every year, while some of these (30%) develop acute cholecystitis.² The diagnosis of acute cholecystitis is confirmed on the basis of typical anamnesis, including recurrent or unremitting right-upper quadrant pain, fever, nausea, and clinical examination findings of right-upper quadrant tenderness, positive Murphy sign, elevated laboratory findings for acute inflammation, and ultrasound (US). Only in the case of unclear clinical

symptoms or discrepant findings, a further radiological examination is conducted by computed tomography (CT).³

Cholecystectomy is the definitive treatment for patients with acute cholecystitis. Management of gallstones has changed gradually over two decades with Laparoscopic Cholecystectomy (LC) emerging as the gold standard for the elective treatment of symptomatic gallstones.⁴ Early cholecystectomy performed within 2 to 3 days of presentation is preferred over interval or delayed cholecystectomy that is performed 6 to 10 weeks after initial medical therapy. About 20% of patients fail initial medical therapy and require surgery during the initial admission or before the end of the planned cooling-off period.⁵ The pendulum has now swung toward early laparoscopic cholecystectomy for the management of acute cholecystitis, as in the era of open cholecystectomy for acute cholecystitis.⁶ The present study was conducted to compare interval and early cholecystectomy in acute cholecystitis.

MATERIALS & METHODS

The present study comprised of 90 patients of acute cholecystitis of both genders. All gave their written consent for the participation in the study.

Data such as name, age, gender etc. was recorded. The diagnosis was made based on the presence of two of the following four features: abdominal pain characteristic of acute cholecystitis, positive Murphy's sign, total leucocyte count >10,000/ul, and ultrasonographic evidence of acute calculous cholecystitis.

Detailed physical examination such as general survey, abdominal examination, other systemic examinations were carried out. Patients were divided into 2 groups. Group I patients were treated with early cholecystectomy and group II patients with interval cholecystectomy. Baseline investigations such as routine blood examination, hemoglobin, total leucocyte count, differential leucocyte count, ESR, RBS, urea, and creatinine, liver function tests were conducted. USG examination of liver, gallbladder, pancreas and common bile duct was done to confirm the diagnosis of acute cholecystitis. Parameter such as hospital stay, complications etc. were recorded. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

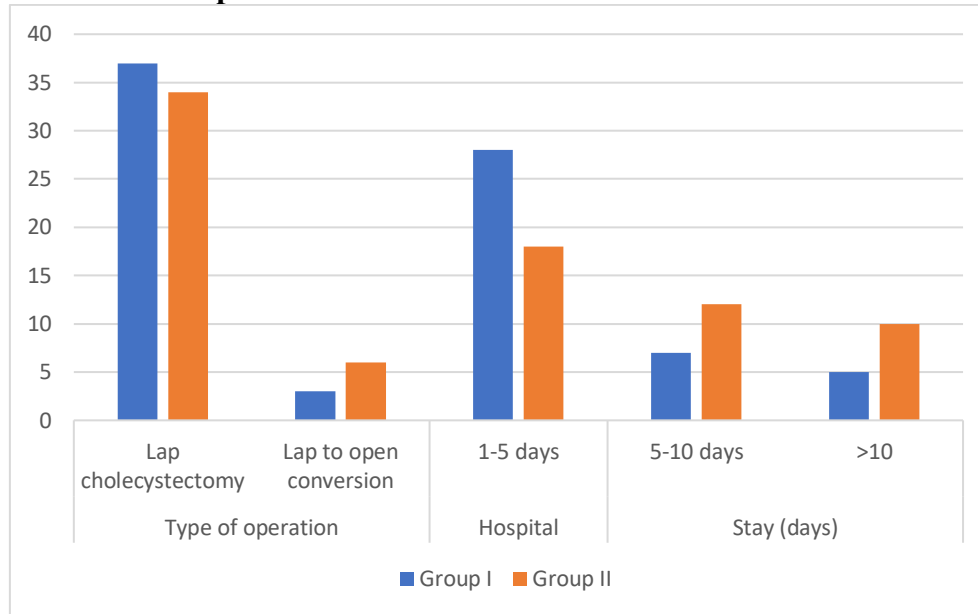
Group	Group I	Group II
Method	early cholecystectomy	interval cholecystectomy
M:F	22:23	24:21

Table I shows that group I had 22 males and 23 females and group II had 24 males and 21 females.

Table II Assessment of parameters

Parameters	Variables	Group I	Group II	P value
Type of operation	Lapcholecystectomy	37	34	0.02
	Lap to open conversion	3	6	
Hospital Stay (days)	1-5	28	18	0.05
	5-10	7	12	
	>10	5	10	

Table II, graph I shows that type of operation performed was lap cholecystectomy in 37 and 34 in group I and II respectively. Lap to open conversion was observed in 3 in group I and 6 in group II. The hospital stay was 1-5 days in 28 in group I and 18 in group II, 5-10 days in 7 in group I and 12 in group II and >10 days 5 in group I and 10 in group II. The difference was significant (P< 0.05).

Graph I Assessment of parameters**Table III Assessment of complications**

Complications	Group I	Group II	P value
Biliary leaks	3	6	0.02
Wound infection	4	5	
Stricture	1	2	

Table III shows that complications observed were biliary leaks in 3 in group I and 6 in group II, wound infection in 4 in group I and 5 in group II and stricture 1 in group I and 2 in group II. The difference was significant ($P < 0.05$).

DISCUSSION

Laparoscopic cholecystectomy has many advantages over the standard open cholecystectomy: minimal trauma, decreased pain, shorter hospital stay, satisfactory cosmetic outcome, quick recovery, and return to work.^{7,8} In the USA approximately 1 million patients are newly diagnosed annually, and approximately 600,000 operations are performed a year, more than 75% of them by laparoscopy.^{9,10} The present study was conducted to compare interval and early cholecystectomy in acute cholecystitis.

We found that group I had 22 males and 23 females and group II had 24 males and 21 females. A. S. Serralta et al¹¹ evaluated the efficacy of early laparoscopic cholecystectomy (ELC) in comparison with conservative treatment followed by delayed laparoscopic cholecystectomy (DLC) in the management of acute cholecystitis. ELC was performed in 82 consecutive patients, whereas DLC was performed in 87 patients who previously underwent medical treatment. Surgical variables, hospital stay, and postoperative morbidity were evaluated in both groups. Time of surgery and conversion rate were lower in the ELC group. Postoperative morbidity was similar in both groups. Overall hospital stay was shorter in the ELC group. ELC within 72 hours of the onset of acute cholecystitis is a safe procedure with better results than DLC in terms of surgical timing, conversion rate, and hospital stay.

We observed that type of operation performed was lap cholecystectomy in 37 and 34 in group I and II respectively. Lap to open conversion was observed in 3 in group I and 6 in group II. The hospital stay was 1-5 days in 28 in group I and 18 in group II, 5-10 days in 7 in group I and 12 in group II and >10 days 5 in group I and 10 in group II. Kolla et al¹² evaluated the safety and feasibility of laparoscopic cholecystectomy for acute cholecystitis and compared

the results with delayed cholecystectomy. 40 patients with a diagnosis of acute cholecystitis were assigned randomly to early laparoscopic cholecystectomy within 24 h of admission (early group, n = 20) or to initial conservative treatment followed by delayed laparoscopic cholecystectomy, 6 to 12 weeks later (delayed group, n = 20). There was no significant difference in the conversion rates (early, 25% vs delayed, 25%), operating times (early, 104 min vs delayed, 93 min), postoperative analgesia requirements (early, 5.3 days vs delayed, 4.8 days), or postoperative complications (early, 15% vs delayed, 20%). However, the early group had significantly more blood loss (228 vs 114 ml) and shorter hospital stay (4.1 vs 10.1 days).

We found that complications observed were biliary leaks in 3 in group I and 6 in group II, wound infection in 4 in group I and 5 in group II and stricture 1 in group I and 2 in group II. Gurusamy KS et al¹³ compared the early laparoscopic cholecystectomy versus delayed laparoscopic cholecystectomy. There was no statistically significant difference between the two groups for any of the outcomes including bile duct injury and conversion to open cholecystectomy. A total of 40 patients (17.5%) from the delayed group had to undergo emergency laparoscopic cholecystectomy due to non-resolving or recurrent cholecystitis; 18 (45%) of these had to undergo conversion to open procedure. The total hospital stay was about three days shorter in the early group compared with the delayed group.

The limitation the study is small sample size.

CONCLUSION

Authors found that early cholecystectomy had less total hospital stay and complications than interval cholecystectomy in patients with acute cholecystitis.

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