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Outcome of Laparoscopic Cholecystectomy in Acute Gall Bladder Disease

Dr. Md. Hamidul Islam[1*], Dr Md. Golam Rabbani[2], Dr. MST. Minim Parvin Mishu[3], Dr. M. H. Mahmud[4], Dr. Mrinal Kanti Roy[5], Dr. Nusrat Afroze[6]

[1]Assistant Professor (Surgery), Rangpur Medical College, Bangladesh
[2]Indoor medical officer (Surgery), Rangpur medical College & Hospital, Bangladesh
[3]Registrar (Surgery), Rangpur Medical College & Hospital, Bangladesh
[4]Assistant professor (Surgery) Prime medical college, Rangpur, Bangladesh
[5]Indoor Medical officer (Anesthesiology), Rangpur Medical College & Hospital, Bangladesh
[6]Assistant Professor (Forensic Medicine), Rangpur Community medical Collage, Bangladesh

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***Corresponding author:** Dr. Md. Hamidul Islam
Assistant Professor (Surgery), Rangpur Medical College, Bangladesh

Abstract **Original Research Article**

Background: In order to remove the gall bladder, cholecystectomy, which may be performed laparoscopically, is one option. Before, acute cholecystitis was a barrier to laparoscopic treatment, but that limitation has been removed as the technique has evolved and become more refined. ***Objective:*** To see the outcome of laparoscopic cholecystectomy in acute gall bladder disease. ***Methods:*** This prospective observational research was undertaken from July 2021 to July 2022 at Rangpur Medical college Hospital. This research includes 52 acute cholecystitis patients. Age and gender didn't affect patient selection. Detailing routine and unusual clinical histories Blood, bilirubin Sugar, serum creatinine, CBC, SGPT, HBsAg, etc. Same surgical team performed all procedures. Post-op course and problems were noted. Everyone had four ports (Additional ports) Few individuals had 2-7-day cholecystectomy after acute attack. After attack conversion counseling, all patients had urgent Laparoscopic cholecystectomy. ***Results:*** Ultrasonographic findings (Table 2) showed that all the 52 patients had features of acute cholecystitis i.e. distended tense gallbladder with oedematous wall. In this series, 51patients had stones in the gall bladder and 1 patient had only features of acute cholecystitis. 27 patients had single stone. None of them had dilated biliary tree or stone in common bile duct. Most of the patients (41 patients, 78.85%) had leucocyte count (Table-3) between 11000- 13000/cmm, 4 (26.92%) had 13000-15000/cmm and rest seven patients had normal leucocyte count. ***Conclusion:*** Early surgery for acute calculous cholecystitis and acute biliary discomfort had a better prognosis than delayed treatment. Acute biliary pain patients benefit from early surgery to prevent read mission, however laparoscopic surgeries in the acute and elective context had a comparable conversion rate. Laparoscopic cholecystectomy is doable and useful provided the patient has the proper support and skill.

Keywords: Laproscopic, Cholecystectomy, Gall Bladder Disease, Outcome.

INTRODUCTION

Laparoscopic cholecystectomy has become the treatment of choice for symptomatic gall stone disease. This procedure is considered to be the gold standard. The open cholecystectomy was the standard treatment for gallstone disease prior to the development of the laparoscopic cholecystectomy [1]. A laparoscopic cholecystectomy is a surgical treatment that removes a damaged gallbladder with the use of minimally invasive techniques. Since the early 1990s, this method has more or less taken the place of the traditional open method for performing regular cholecystectomies [2]. At the present time, laparoscopic cholecystectomy is recommended for the treatment of cholecystitis (acute and chronic), symptomatic cholelithiasis, biliary dyskinesia, acalculous cholecystitis, gallstone pancreatitis, and gallbladder tumors and polyps [3]. These are also the indications for having an open cholecystectomy performed. In most cases, an open cholecystectomy is the most effective method of treating cancer of the gallbladder. The majority of the information that is currently available attests to the fact that laparoscopic cholecystectomy is superior in terms of postoperative pain, length of hospital stays, and amount of time required to return to regular activity [4].

In 1985, Muhe was the first surgeon in Germany to conduct a cholecystectomy using laparoscopic techniques [5]. However, the majority of

people chose to disregard his first report. Phillipe Mouret, a French gynecologist who is today acknowledged to be the pioneer, conducted a laparoscopic cholecystectomy in 1987. A few months later, he displayed a film of his method in Paris [6], which was the first time this procedure had been shown publicly.

Gallstones affect the digestive tracts of around 20 million individuals in the United States. There are around 300,000 patients whose cholecystectomies are done each year in the United States. Gallstones may exist without any symptoms in anywhere from ten to fifteen percent of the population. Twenty percent of these cases exhibit the symptoms (biliary colic). About one percent to four percent of the twenty percent who are experiencing symptoms may develop problems (acute cholecystitis, gallstone pancreatitis, choledocholithiasis, and gallstone ileus) [7]. The likelihood of developing gallstones rises with advancing age; also, ladies are more likely to be affected by this condition than men are. Between the ages of 50 and 65, gallstones affect around 20 percent of females and 5 percent of males. Cholesterol makes up around 75 percent of the total composition of gallstones, whereas pigmentation accounts for the remaining 25 percent [8]. The clinical signs and symptoms of gallstones are the same regardless of the makeup of the gallstones.

It is now well-established that laparoscopic cholecystectomy is the therapy of choice for individuals who suffer from symptomatic gall stone diseases [9]. After its inception, there was continued uncertainty regarding the application of laparoscopic techniques in the management of patients diagnosed with acute cholecystitis; however, this uncertainty has gradually disappeared as the level of experience within the surgical community has increased, in addition to the arrangement of operating schedule [4].

OBJECTIVES

- To see the outcome of laparoscopic cholecystectomy in acute gall bladder disease.

MTEHODS

This prospective observational study was conducted at the general surgical department of Rangpur Medical college Hospital from July 2021 to July 2022. A total number 52 patients had acute cholecystitis were included in this study. Patients were chosen not withstanding age and gender. Detailed regular and exceptional clinical histories were documented CBC, serum SGPT, HBsAg, blood, bilirubin Sugar, serum creatinine, etc. All operations were done by the same surgical team. Post-operative Overall course and complications were recorded. Everyone endured (Some patients needed) usual four ports (Additional ports) Patients were few patients operated within 2-7 days following acute attack seven-day instances 3 patients open cholecystectomy. All patients got acute Laparoscopic cholecystectomy after attack conversion counseling if needed.

DATA COLLECTION AND ANALYSIS

Using a questionnaire, data were collected. One researcher conducted all interviews after collecting data, Microsoft excel 2013 was used for compiling and organizing the data .All data were compiled in a major table first. Standard statistical formulae were used and analysis was done by Statistical Package for Social Science (SPSS) 23.

RESULTS

Among the 52 patients highest number of the patients was male 32 (61.54%) and female were 20 (38.46%). (Figure 1). Of the 52 patients identified, 50 (96·15%) had acute gallstone disease and 2 (3·75%) had acute acalculous cholecystitis. Some 19 (36·54%) of the patients with acute gallstone disease had acute cholecystitis and 33 (63·46%) had acute biliary pain (Table 1).

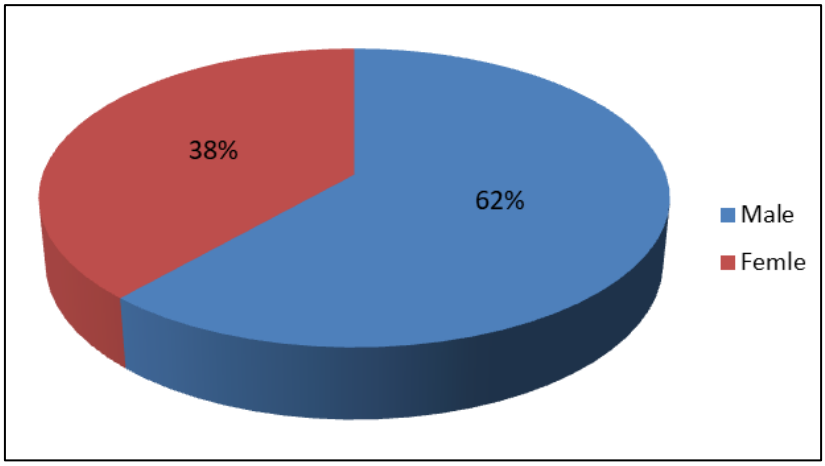

Figure 1: Gender distribution of the patients (N=52)

Table 1: Types of diseases (N=52)

Disease type	No. of patients (n=52)
Acute gallstone disease	50 (96·15%)
Acute acalculous cholecystitis	2(3·75%)
Acute gallstone disease with	
Acute cholecystitis	19 (36·54%)
Acute biliary pain	33 (63·46%)

All the patients (Figure 2) presented with pain in the right hypochondrium. Most of them (48 patients) had nausea/vomiting, with history of flatulence dyspepsia (45 patients) and positive Murphy's sign (44 patients). Twenty four patients showed radiation of pain to right inter-scapular region. Twenty one patients had raised temperature with rigidity and tenderness in right hypochondrium. Past history of acute attack was found in 45 patients (86.53%). No patients gave any past history of jaundice.

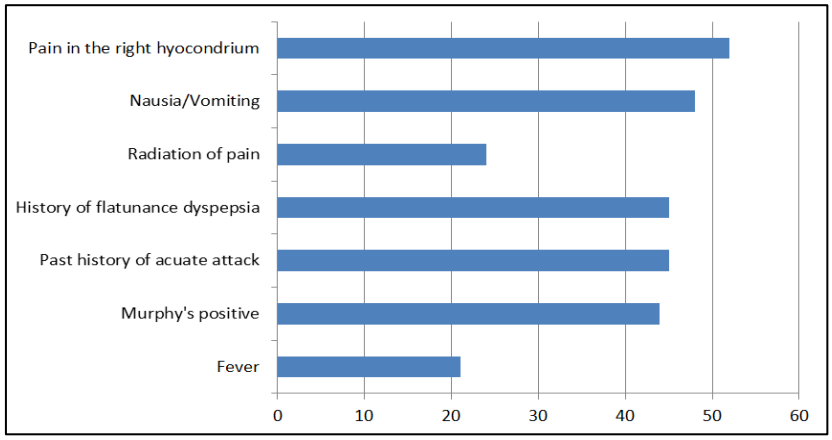

Figure 2: Distribution of the patients of acute cholecystitis according to their clinical presentation (N-52)

Ultra sonographic findings (Table 2) showed that all the 52 patients had features of acute cholecystitis i.e. distended tense gallbladder with oedematous wall. In this series, 51patients had stones in the gall bladder and 1 patient had only features of acute cholecystitis. 27 patients had single stone. None of them had dilated biliary tree or stone in common bile duct

Table 2: Ultrasonographic (USG) findings of the patients (N=52)

Ultraonographic (USG) findings	No of the patients (N=52)
Feature of acute cholecystitis without cholelithiasis	1 (3.12%)
Features of acute cholecystitis with cholelithiasis	51 (96.88%)
Acute cholecystitis with dilated CBD or CBD stone	00 (00%)

Most of the patients (41 patients, 78.85%) had leucocyte count (Table 3) between 11000- 13000/cmm, 4 (26.92%) had 13000-15000/cmm and rest seven patients had normal leucocyte count.

Table 3: Leucocyte count in patients with acute cholecystitis (N=52)

Leucocytes count	No of the patients (N=52)
>11000 to 13000/cmm	41 (78.85%)
>7500-9500/cmm	07 (13.46%)
>13000-15000/cmm	04 (7.69%)

In most of the patients (47 patients) operation (Table 4) was done within 2-7 days. Only in 5 patients operation was done after seven days with poor result.

Table 4: Time between the onset of acute attack and the surgery (N=52)

Time in days	No of the patients (N=52)
<Three days	40 (76.92%)
>Three days <7 days	07 (13.46%)
>7 days	5 (9.61%)

DISCUSSION

Laparoscopic cholecystectomy is used to treat symptomatic gall bladder disorders. Acute cholecystitis was formerly a laparoscopic cholecystectomy contraindication. As surgical experience has grown, early hesitancy has faded. This study's findings are statistically significant. 52 instances had acalculous variety. In 95% of acute cholecystitis patients, 5% gallstones are present [10]. All patients had acute attacks before surgery, however the length varied. Early laparoscopic surgery reduced patient anxiety, hospital stay, and resource waste. In this research, ultra sonographic results were mostly congruent with laparoscopic findings; three patients had open cholecystectomy after 15-20 minutes of laparoscopic surgery. 29 patients (90.63%) had an impacted stone in the infundibulum that was pushed into the gall bladder or removed with a distal incision and gall bladder suction. 22 patients (68.75%) had enlarged gallbladders that required aspiration to grab the wall. All patients showed mild-to-severe oedema-related wall thickening. No problems were discovered while cutting the cystic duct, however short and broad ducts required intracorporeal catgut ties. Three patients with brittle gallbladder walls ruptured and were treated with suction, lavage with normal saline and diluted povidone iodine, and gallbladder removal (improvised by using surgical gloves). Three individuals had massive gallstones that necessitated expansion of the umbilical port. Six individuals had a 24-48-hours subhepatic drain negligible postoperative complication. Three patients experienced vomiting, two had wound sepsis, and one had a slight chest infection (two patients). In this investigation, the conversion rate was 9%, substantially lower than Shapiro and Costello's 30% conversion rate in patients with acute cholecystitis treated by laparoscopic cholecystectomy owing to increased wall thickness [11]. This group had no biliary leakage, which is consistent with a research including 152 individuals with acute cholecystitis [12]. In another research, 50 patients with acute cholecystitis had laparoscopic cholecystectomy, and bile duct damage occurred in 4% of cases [13]. This series' mean laparoscopic cholecystectomy time was 54. 54 minutes (45-90 minutes). Laparoscopic procedures took longer with significant adhesions. Operation time correlated with acute attack duration. Early operation from assault start reduces time needed. Laparoscopic cholecystectomy is the preferred therapy for acute gallbladder illness. Five of 32 patients presented after seven days, and three had open surgery owing to extensive adhesion. This research implies laparoscopic cholecystectomy is achievable within seven days after attack beginning and preferably within three days. Laparoscopic cholecystectomy in acute cholecystitis should be avoided in the early stages of training. In competent hands, this reduces postoperative discomfort and handicap, allowing early hospital departure and faster returns to work. It reduces psychological stress and scarring [14].

CONCLUSION

Early surgery for acute calculous cholecystitis and acute biliary discomfort had a better prognosis than delayed treatment. Acute biliary pain patients benefit from early surgery to prevent read mission, however laparoscopic surgeries in the acute and elective context had a comparable conversion rate. Laparoscopic cholecystectomy is doable and useful provided the patient has the proper support and skill.

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