

Complications of early Cholecystectomy in acute Biliary Pancreatitis

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Abstract:

Introduction: Pancreatitis, inflammation of pancreas, is an acute emergency having mortality rate 2 to 7%. Acute pancreatitis can be caused by various factors, like drugs, alcohol, toxins, gallstones, trauma, infection etc. and amongst these, gallstones are the most common cause and is seen in around 75% of the cases. Regarding gall stones, the size of it and number are important parameters. Management usually depends upon the clinical scenario, underlying conditions of pancreas, presence of co morbid conditions and cholecystectomy. This can be done immediately or with an interval while the acute episode of pancreatitis is settled; each having their own benefits and complication rates.

Objective: To determine the complications of early cholecystectomy in acute biliary pancreatitis.

Methodology: A descriptive cases series study was carried out at Mayo Hospital Lahore during June through December 2017. The cases of either gender aged 18 years and above of acute biliary pancreatitis diagnosed clinically with epigastric pain, tenderness and vomiting with raised pancreatic enzymes with history of gall stones were selected purposively. The cases underwent open laparoscopic cholecystectomy in the same admission within 5 days of admission. These subjects were then followed to look for duration of surgery, duration of hospital stay and recurrence of pancreatitis. Final outcome was seen at 3 months to look for recurrence.

Results: We took 50 cases of acute biliary pancreatitis. There were 20 (40%) males and 30 (60%) females. The mean age at presentation was 43.56 ± 4.68 years. The mean duration of surgery was observed as 54.56 ± 12.33 minutes. Total complications were seen in 9 (18%) of the cases; few had combination of these. The most common complication seen was prolonged duration of hospital stay (18%), followed by prolonged duration of surgery (10%) and recurrent pancreatitis (8%).

Conclusion: Early cholecystectomy has higher complications rate and the most common is long duration of hospital stay.

Key words: Pancreatitis, Early cholecystectomy

Introduction:

Pancreatitis is an acute emergency and is defined as inflammation of pancreas. It can be fatal and has a mortality rate of 2 to 7% of cases despite aggressive management globally. The incidence varies over different countries depending upon the risk factors and varies between 6-80/100,000 population. The maximum cases are reported in the US and is the 14th common cause leading to death¹.

Acute pancreatitis can be caused by various factors, like drugs, alcohol, toxins, gallstones, trauma, infection etc. and amongst these, gallstones are the most common cause and is seen in around 75% of the cases. The exact underlying mechanism of this is not fully known but the most common pathophysiology is the obstruction and then leading to backflow of bile in the pancreatic duct and ultimately in pancreas. This activates a cascade of proteolytic enzymes and resulting in extensive pancreatic injury².

Regarding gall stones, the size of it and number are important parameters. Male gender is also an important parameter leading to its development. The risk is high in males; although the actual number is more in females and that is due to increased incidence rate of gallstones in females as compared to males^{2,3}. The diagnosis is usually clinical and if needed, computed tomography (CT) is the investigation of choice for this. Different clinical scores have been designed to label for its diagnosis and also for prognostic purposes. APACHE II, Modified Glasgow and Ransom's prognostic criteria are most widely used⁴.

Management usually depends upon the clinical scenario, underlying conditions of pancreas,

presence of co morbid conditions; with ultimate goal of cholecystectomy. This can be done immediately or with an interval while the acute episode of pancreatitis is settled; each having their own benefits and complication rates^{3,4}.

Objectives:

To determine the complications of early cholecystectomy in acute biliary pancreatitis.

Methodology:

A descriptive cases series study was carried out at Mayo Hospital, Lahore during June through December 2017. The cases of acute biliary pancreatitis diagnosed clinically with epigastric pain, tenderness and vomiting with raised pancreatic enzymes with history of gall stones were included. There were cases of both gender with age 18 years or more. The cases underwent open or laparoscopic cholecystectomy in the same admission within 5 days of admission. These cases were then followed to look for duration of surgery (more than 60 minutes), duration of hospital stay (more than 5 days) and recurrence of pancreatic. Final outcome was seen at 3 months to look for recurrence of pancreatitis.

The data was analyzed using SPSS version 23.0. Frequency and percentages were calculated for categorical data and mean and standard deviation for numerical data.

Results:

In the present study, 50 cases of acute biliary pancreatitis were selected. There were 20 (40%) males and 30 (60%) females. The mean age at presentation was 43.56 ± 4.68 years. The mean duration of surgery was observed as 54.56 ± 12.33 minutes as shown in table 1.

Table No 01 Demographics Characteristics

	Demographics	
	Range	Mean \pm SD
Age (years)	18-62	43.56 \pm 4.68
Weight (kg)	45-109	75.34 \pm 22.12
Duration of surgery (mints)	50-90	54.56 \pm 12.33

Total complications were seen in 9 (18%) of the cases (figure 1); few had combination of these. The most common complication seen was prolonged duration of hospital stay seen in 9 (18%) of the cases; followed by prolonged duration of surgery seen in 5 (10%) of cases and recurrent pancreatitis seen in 4 (8%) of the cases as shown in table 2.

Figure No. 01 Complications reported after surgery

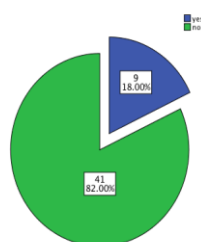


Table No. 02. Type of Complications reported after surgery

Complications	Number	Percentages
Prolonged duration of hospital-stay	9	18%
Prolonged duration of surgery	5	10%
Recurrence of pancreatitis	4	08%

Discussion:

Pancreatitis is one of the fatal and highly morbid entity reported in surgical departments. Gallstones are the most common cause of it and unfortunately are found in high number of cases even asymptomatic. Its number is rising in developed countries both due to gall stone and other factors like alcoholism. Early and late both modalities for definitive treatment of cholecystectomy have been used with different degrees of success as well as complication rate. Complications were seen in 9 (18%) of the cases; few had combination of these. The most common complication seen was prolonged duration of hospital stay seen in 9 (18%) of the cases. Many studies in the past have also seen this in high number of cases⁵⁻⁶. The reason of longer length of hospital stay can be due to acute nature of the disease and higher degree of pain leading delayed hospital discharge. The other finding can be due to extensive inflammation that takes a longer time to resolve. This contrasted with the study by Aboulian A et al, where they revealed that hospital stay was relatively short in cases undergoing early cholecystectomies as compared to

delayed one⁷. Prolonged duration of surgery seen in 5 (10%) of cases. This was also similar to studies in the past and was seen in same cases that had prolonged duration of hospital stay⁸⁻¹⁰. This can be explained as these cases have developed local complications like extensive damage and pyogenic inflammation that led to longer duration of surgery and ultimately needing longer hospital stay for settlement of infection. Jee SL et al⁸ in their study, compared the time of early and delayed surgery and it was seen that the average time for early surgery was 85 vs 80 minutes with late cholecystectomy with p value of 0.75.

In this study the recurrent pancreatitis seen in 4 (8%) of the cases. The data revealed that the chance of recurrence of pancreatitis after early surgery is seen in 03 to 12% of the cases in the past¹¹⁻¹³.

Conclusion:

Early cholecystectomy has higher complication rate and the most common is long duration of hospital stay.

Conflict of Interest:

All authors declare no conflict of interest.

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