

Acute Biliary-Pancreatitis: is early Cholecystectomy Safe?

MOHAMMAD HASSAN ABBAS, NOOR AHMED NIAZI, MOHTMAM NAZIR, HAROON-UR-RASHID, SULTAN AHMED AWAIISI, SAJID ANWER

Department of Surgery, Sheikh Zayed Hospital, Rahim Yar Khan

Correspondence to Dr. Hassan Abbas, Email: drhassanabbas@yahoo.com, Cell: 0300-6722211

ABSTRACT

Aim: To determine the surgical outcome of early cholecystectomy in subjects suffering from acute biliary-pancreatitis.

Study design: Descriptive cases-series.

Setting & duration: Sheikh Zayed Hospital. Rahim Yar Khan, from 01-01-2018 to 15-10-2018.

Methodology: In this study the cases with age > 30 year of either gender that had acute biliary pancreatitis due to background history of gall stones were included. Early cholecystectomy was done and were followed for various surgical outcomes.

Results: In this study, 55 cases were enrolled and the mean age of the subjects was 47.51 ± 5.23 years. There were 32(58.19%) female subjects and 8(14.55%) had history of DM and 9(16.36%) had history of HTN. Overall complications were seen in 13(23.64%) of cases with overlapping of more than one. Most common one was prolong length of stay in hospital which was observed in 10(18.18%), followed by prolong surgical duration seen in 5 (9.09%) subjects.

Conclusion: Acute biliary pancreatitis followed by early cholecystectomy is not devoid of complications and the most common one is prolong length of hospital stay.

Keywords: DM, HTN, Cholecystectomy, hospital stay

INTRODUCTION

Acute pancreatitis is relatively an uncommon surgical emergency secondary to gall stone slippage, which carries a high degree of morbidity and mortality. Gallstones are increasing day by day both in the developed as well as under developed countries; the cause of which is multifactorial. Pancreatitis rate is 5-80 per 100,000 populations¹.

The major signs and symptoms include pain radiating to back, vomiting, fever, nausea and may end up in shock. The basis underlying causes are gallstones, infections, trauma, drugs, toxins etc. Accompanying cholelithiasis is seen in 3/4th of the total cases presenting with acute pancreatitis².

The risk factors for cholelithiasis are females gender, higher age groups, alcoholism and deranged lipid profiles and surgical resection of the gall bladder is the mainstay of the treatment to avoid further complications.³

The diagnosis is usually clinical and is supported by the radiological investigation in the form of Ultrasonography (USG) to rule out cholelithiasis and computed tomography (CT), which is diagnosis of choice for pancreatitis and supported by raised enzymes in the form of lipases and amylases. APACHI II, Modified Glasgow and Ranson's prognostic criteria are different scoring systems to predict the severity and outcome in these cases⁴.

Cholecystectomy can be performed by both open and laparoscopic surgical techniques each carried their own pros and cons. There are two schools of thoughts; either to do cholecystectomy at 1st instance on admission or delayed one, which can be done while the acute insult is settled down³⁻⁴. Early surgery is commonly practiced for which this study was planned to see its various outcomes.

The objective of the study was to determine the surgical outcome of early cholecystectomy in subjects suffering from acute biliary-pancreatitis.

METHODOLOGY

This was a descriptive cases-series study conducted in the Emergency and Department of Surgery, Sheikh Zayed Hospital. Rahim Yar Khan from 01-01-2018 to 15-10-2018 after IRB permission. The subjects were selected of both genders and with age > 30 years suffering from acute biliary pancreatitis. This diagnosis of this was made on history and clinical analysis with fever, vomiting, abdominal pain, tenderness radiating to back in cases with previous documented history of gall stones assessed on USG and a rise in the pancreatic enzyme values of at least

more than 2 time of the normal values. All these subjects were admitted and initially resuscitated with fluids, antiemetic and antibiotics and as per need of antipyretics. Ultimate cholecystectomy was performed within 3days of admission to the hospital. The cases of both laparoscopic surgeries and open ones were included. The cases were looked for duration of surgery (which was labelled as prolonged if more than 60 minutes), length of hospital stay, in hospital mortality (assessed till discharge), recurrence of pancreatitis (as per clinical signs and symptoms and symptoms along with raised markers i.e. amylase and lipase) after three months where final outcome was assessed.

Statistical analysis: SPSS-version 22.0 was used for data analysis. Continuous data was presented in the form of mean and standard deviation while nominal as frequencies and percentages.

RESULTS

In this study, 55 cases were enrolled and the mean age of the subjects was 47.51 ± 5.23 years and mean BMI was 28.87 ± 4.97 (Table I). There WEE 32(58.19%) female subjects and 8(14.55%) had history of DM and 9(16.36%) had history of HTN as shown in table I. Overall complications were seen in 13(23.64%) of cases with overlapping of more than one (Fig. I). Most common one was prolong length of stay in hospital which was observed in 10 (18.18%), followed by prolong surgical duration seen in 5(9.09%) and both recurrence and in hospital mortality was seen in 1(1.81%) cases each (Table II).

Table I; Variables (n= 55)

	Demographics	
	Range	Mean \pm SD
Age	32-69	47.51 \pm 5.23
BMI	24-38	28.87 \pm 4.97
Duration of surgery	48-95	52.79 \pm 7.41
Male	23(41.81%)	
Female	32(58.19%)	
DM	8(14.55%+)	
HTN	9(16.36%)	

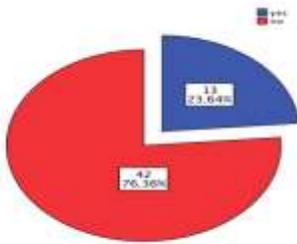
Table II; Spectrum of complications (n=55)

	Spectrum of complications	
	n	%age
Prolong length of hospital stay	10	18.18%
Prolong duration of surgery	5	9.09%
Pancreatitis Recurrence	1	1.81%
In-hospital Mortality	1	1.81%

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Figure 1: Frequency of complications (n= 55)



DISCUSSION

Pancreatitis and the gallstones are sometimes interlinked when the latter one slips and the block the draining pathway. There is always the risk of recurrence in cases of cholelithiasis and the preceding event can result in fatal pancreatitis. Surgical intervention in the form of cholecystectomy is the treatment of choice; however, to do surgical intervention in the setting of acute pancreatitis is not devoid of complications⁵⁻⁶.

Overall complications were seen in the present study in 13 (23.64%) out of 55 cases with overlapping of more than one complication. Most common one was prolong length of stay in hospital which was observed in 10 (18.18%), followed by prolong surgical duration seen in 5 (9.09%) and both recurrence and in hospital mortality was seen in 1 (1.81%) cases each. The data of the previous studies carried out in the same context also revealed more or less the same results in terms of hospital stay.⁷⁻¹⁰ This can be attributed to the factor that the cases that had acute pancreatitis had more degree of pain, so the increased length of hospital stay might be due to pancreatitis as compared to cholecystectomy postoperative stay only. However, contrasting results were seen by the study by Aboulian A et al, where they compared early vs delayed surgery and longer stay was observed in delayed cholecystectomy, which might be due to adhesion in the setting of previous infection.⁷

The studies have shown that the prolonged duration of surgery was seen in around ten percent of the cases and the overall incidence of mortality is seen in less than 2% of the cases which was almost similar to the present study. According to the latter one; they also found that the length of hospital stay was also longer in cases that had higher numbers for amylases and lipases more than 3 times of their limit. According to a comparative study conducted by Jee SL et al⁸ on cholecystectomy done for acute pancreatitis in the form early or delayed surgery it was seen that the mean duration of time for early surgery was 85 as compared to 80 minutes for delayed surgery ($p=0.75$).

In the present study the recurrence was seen in 1(1.81%) of the cases and results from the various previous studies found this in 3 to 12% of the cases and varied according to the length of the follow up which was 3 months in the present study and was studied for 5 years maximum in previous studies¹¹⁻¹³.

In a study done by Koga et al basically compared both early vs delayed cholecystectomy and they revealed that early surgical intervention was better than delayed one. In their findings, they assess that mean operative time was 105 vs 124 minutes, mean length of postoperative hospital stay was almost the same,

conversion to open cholecystectomy rate was 1.3% vs 10.7%), bile leak was noted in 0.3% vs 3.3%), residual calculus in 2.4% vs 6.7%, and readmission was observed in 1.0% vs 6.7%) in early vs delayed surgery group¹⁴.

On the other hand early surgical intervention was as safe as delayed one by the study done by Discolo et al where there was no difference in these groups in terms of mean operative times (89 vs 96.6 minutes with $p=0.36$), rate of conversion to open cholecystectomy (5.4% vs 10.3% with $p= 0.34$) and intra operative complication rates¹⁵.

CONCLUSION

Acute biliary pancreatitis followed by early cholecystectomy is not devoid of complication

Conflict of interest: Nil

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