

COMPLICATIONS OF EARLY CHOLECYSTECTOMY IN ACUTE BILIARY PANCREATITIS

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ABSTRACT

Background: Acute biliary pancreatitis, managed by early cholecystectomy may result in many complications. **Objective:** To determine the frequencies of complications in early cholecystectomy due to acute biliary pancreatitis. **Methodology:** This was a cross sectional study, conducted at Department of Surgery, Services Hospital, Lahore from 1st July to 31st December 2017. In this study, the cases of both gender, with age range 30 to 60 years, suffering from acute biliary pancreatitis, were included. The diagnosis was made by the presence of right hypochondrial pain of 5 or more on visual analogue scale, associated with vomiting with or without fever. The cases with hepatocellular carcinoma and sepsis, were excluded. These cases underwent open or laparoscopic cholecystectomy within 3 days of hospital admission. After surgery these cases were looked for duration of surgery (prolonged if > 60 minutes), duration of hospital stay (prolonged if >5 days) and recurrence of pancreatitis. Final outcome was seen at 3 months. Data was entered in SPSS version 22 and analyzed. **Results:** In this study, there were total 100 cases of acute biliary pancreatitis, out of which 64 (64%) were females and 36 (36%) were males. The mean age of the participants was 41±7 years. The mean duration of surgery was 53.21± 10.39 minutes. Complications were seen in 11 (11%) of the cases; and some of these had more than one complications. Prolonged duration of hospital stay was the most commonly observed complication and was observed in 10 (10%) of the cases. This was followed by prolonged duration of surgery which was seen in 6 (6%) of cases and recurrent pancreatitis was observed in 3 (3%) of the cases. **Conclusion:** Early cholecystectomy lead to complication rate in 1 in 10th case and the most common one is prolong duration of hospital stay.

Key words: Pancreatitis, Early cholecystectomy, Complications.

INTRODUCTION

Pancreatitis is considered as one of the acute and fatal entity in both medical and surgical departments.¹ It is defined as the inflammation of the pancreas. The data has revealed the mortality rate of 3 to 7% worldwide even with aggressive management.^{2,3,4} The maximum cases of acute pancreatitis are reported in the United States, which is approach the top ten causes of death.¹

There are wide range of etiologies that can lead of this and included alcoholism, gallstones, drugs, toxins trauma and different infections. Gall stones are the salient ones among all these and according to a survey they are found in more than 75% of the cases suffering from pancreatitis.⁵⁻⁸ The obstruction to the drainage of the bile and retrograde activation of the pancreatic enzymes and leading to destruction of the own cells is thought to be the major underlying pathophysiology.²

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 fairly 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 made clinically and there

are different classifications score to diagnose as well as categorize its severity and outcome.⁶⁻⁸ APACHI II, Modified Glasgow and Ranson's prognostic criteria are most widely used.⁴ CT scan is considered as the gold standard for diagnosis.⁹⁻¹¹

Surgical resection of the gall bladders is the mainstay of the treatment sooner or later and both early and delayed surgeries are carried out and each carrying their own benefits and side effect profiles.^{3,4} This study was conducted, to determine the frequency of complications in early cholecystectomy due to acute biliary pancreatitis.

METHODOLOGY

Study design: Cross sectional study. **Study site:** Department of Surgery, Services Hospital, Lahore. **Study time:** 1st July to 31st December 2017. **Sampling technique:** Non probability-consecutive sampling. In this study, the cases of both gender, with age range of 30 to 60 years, suffering from acute biliary pancreatitis, were included. The diagnosis was made by the presence of right hypo chondrial pain of 5 or more on visual analogue scale, associated with vomiting with or without fever. The cases with hepatocellular carcinoma and sepsis, were excluded. These cases then, underwent open or laparoscopic cholecystectomy within 3 days of hospital admission. After surgery these cases were looked for

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duration of surgery (prolonged if > 60 minutes), duration of hospital stay (prolonged if >5 days) and recurrence of pancreatitis (yes/no). Final outcome was seen at 3 months.

The data was analyzed by SPSS version 22.0. Frequency and percentages were used to present nominal data and mean and standard deviation for numerical data.

RESULTS

In this study, there were total 100 cases of acute biliary pancreatitis, out of which 64 (64%) were females and 36 (36%) were males. The mean age of the participants was 41 ± 7 years. The mean duration of surgery was 53.21 ± 10.39 minutes (Table I). Complications were seen in 11 (11%) of the cases (Figure I); and some of these had more than one complications. Prolonged duration of hospital stay was the most commonly observed complication and was observed in 10 (10%) of the cases. This was followed by prolonged duration of surgery which was seen in 6 (6%) of cases and recurrent pancreatitis was observed in 3 (3%) of the cases as shown in table II.

Table I: Demographics of subjects

| Variable | Values | |
|-------------------------------|--------|-------------------|
| | Range | Mean \pm SD |
| Age (years) | 15-65 | 41 \pm 7 |
| Weight (Kg.) | 38-117 | 73 \pm 19 |
| Duration of surgery (Minutes) | 45-95 | 53.21 \pm 10.39 |

Figure I: Frequency of complications among undergoing cholecystectomy having acute biliary pancreatitis.

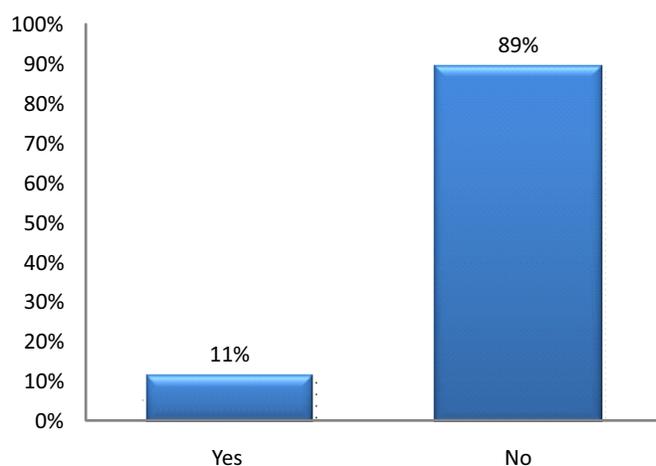


Table II: Types of Complications

| Complications | Complications | |
|-------------------------------------|---------------|-----|
| | No | % |
| Prolonged duration of hospital stay | 10 | 10% |
| Prolonged duration of surgery | 6 | 6% |
| Recurrence of pancreatitis | 3 | 3% |

DISCUSSION

Acute pancreatitis is caused by various causes and among them gall stones are the most commonly seen. Surgical resection may be needed to avoid further morbidity and avoid the recurrence of it. Early cholecystectomy relieves the risk of recurrence but has its own complications profile.

In the present study, the complications of early cholecystectomy were seen in 11 (11%) of the cases. Some of the patients had more than one type of complications observed. Prolonged duration of hospital stay was the most commonly observed complication and was observed in 10 (10%) of the cases. This was also seen by the many studies done in the past with almost similar prevalence rate.^{5,6} This long duration of hospital stay can be explained by the factor that in early disease and surgery there is more pain and agony due to pancreatitis which led to long duration of stay. Abouljian A et al, revealed opposite results as compared to the present study where they compared early and late cholecystectomies and it was seen that length of hospital stay was shorter with early surgery as compared to delayed one.⁷ In this study, prolonged duration of surgery was observed in 6 (6%) of cases. The data from the previous studies has also shown that prolonged duration of surgery is among the highest ranked complications of early cholecystectomy.⁸⁻¹⁰ In early surgery, acute and extensive inflammation lead more time to clear the debris tissue and hence took more time for surgery. In a study done by Jee SL et al,⁸ they 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. Recurrence of pancreatitis was the least commonly observed complication and it was seen in 3 (3%) of the cases. The results from the previous studies revealed its prevalence between 03 to 12% of the cases in the past.¹¹⁻¹³

CONCLUSION

Early cholecystectomy lead to complications in every in 10th case and the most common one is prolonged duration of hospital stay.

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CORRIGENDUM**Frequency of common maternal complications following obstetric cholestasis**

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In the version of this article initially published, the name of Noreen Waseem was incorrect.

1. The correct name is Noreen Nasim.

The errors have been corrected in online versions of this article.