



EVALUATION OF EARLY VERSUS DELAYED LAPAROSCOPIC CHOLECYSTECTOMY IN ACUTE CHOLECYSTITIS WITH CHOLELITHIASIS

General Surgery

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ABSTRACT

Most of the surgeons prefer to do delayed laparoscopic cholecystectomy in acute cholecystitis with cholelithiasis. The aim of our study is to evaluate the safety, feasibility and complication of acute laparoscopic cholecystectomy for acute cholecystitis with cholelithiasis and to compare the results of early and delayed laparoscopic cholecystectomy for acute cholecystitis with cholelithiasis. Total 42 cases were studied, 21 in each group. Early laparoscopic cholecystectomy were done within 3-4 days of acute episode and within 24 hours of admission. Delayed laparoscopic cholecystectomy were done after 6-8 weeks of acute episode. Early laparoscopic cholecystectomy for acute cholecystitis with cholelithiasis is safe and feasible with shorter duration of hospital stay if performed by experienced surgeon.

KEYWORDS

INTRODUCTION

Gall stones represent a significant health problem in the gangatic plane of Bihar. A large number of patients with asymptomatic cholelithiasis carries risk for acute attack of cholecystitis and other gallstone related morbidities. As it is a general thought that early laparoscopic cholecystectomy in acute cholecystitis has disadvantage like distorted anatomy due to edema and acute inflammation, difficult exposure and more chances of intra-operative and post operative complications, so frequently delayed laparoscopic cholecystectomy performed.

The comparative study of relative advantage and disadvantage of early and delayed laparoscopic cholecystectomy in acute cholecystitis with cholelithiasis requires a careful on immediate and late complications and problems faced during surgery in both acute and delayed cases.

AIMS AND OBJECTIVE

I. To Evaluate The Risk:-

Early risk:- In the form of injury to the structures in calot's triangle as well as other structures due to inflamed and edematous surrounding structures.

Delayed risk:- In the form of prolonged bleeding and delayed identification of CBD injury.

II. To compare the results of early and delayed laparoscopic cholecystectomy with cholelithiasis in term of safety, feasibility, complications and hospital stay.

MATERIAL AND METHOD

This study was undertaken in the department of surgery at JLNMCH, Bhagalpur, Bihar between June 2019 to December 2020.

- Total 42 patients were included in the study irrespective of age and sex. We were willing to study more cases but due to covid-19 pandemic, it is reduced to 42.

Patients admitted in emergency and OPD at JLNMCH were diagnosed with acute cholecystitis with cholelithiasis on the basis of clinical examination, laboratory and ultrasonographic findings.

- MRCP and ERCP done in some suspicious cases.
- Patients were included in study after taking informed consent.
- Randomization of patients was done according to their choice of treatment after detailed discussion of both types of surgeries and

their advantage and disadvantage with patients and their care takers.

- In early group laparoscopic cholecystectomy was done within 2-4 days of development of symptoms and within 48 hours of admission whereas in delayed group conservative management with fluid and antibiotic done and elective laparoscopic cholecystectomy done after 6-8 weeks of acute episode.
- Surgeries were performed under general anesthesia in supine position using standard 4 ports technique.
- Every excised GB was sent for histopathological examination.
- Instruments used are 10mm, 30 degree telescope, single chip camera, halogen source of light, Verres needle, two 10mm ports, two 5mm ports, two graspers, diathermy, GB extractor and other instruments.
- Some technical modification adopted in need during operation according to on-table findings.
- Proper post-operative care given and patients were carefully observed for any complication and sincerely managed.
- oral intake allowed within 10-12 hours of operation.
- Patients were discharged in healthy condition.
- follow up of patients done properly.

Study Parameters

Data was collected which include patient's demography, timing of surgery(early or delayed), operative time, intra-operative and post-operative complications, amount of bleeding during operation, hospital stay and estimated cost of treatment.

RESULTS

During our study period 42 patients with acute cholecystitis due to cholelithiasis were included. They were randomized in early and delayed group with 21 patients in each group. Patients were comparable in age, sex, clinical, laboratory and radiological parameters.

In early group:-

Laparoscopic cholecystectomy was done within 2-4 days of acute episode.

In delayed group:-

Laparoscopic cholecystectomy done after 6-8 weeks of acute episode.

Operating Time And Blood Loss :-

Average operating time was (40-150min) mean.

Time 64 minutes in early laparoscopic cholecystectomy whereas average time was (50-100 min) mean time 58.2 minutes in delayed laparoscopic cholecystectomy.

The difference of blood loss was not significant.

Complications:-

All patients were discharged in healthy condition.

Over all complication rate was 33.33%(in 7 pts out of 21) in early group and 9.5%(in 2 patients out of 21) in delayed group.

Intra-operative complications

In early cases:-

- Bleeding due to inflamed and more vascular structures(in 2 cases).
- Bile duct injury.(in 1 case)
- perforation of G.B and spillage of stones.(in 1 case)

In delayed cases:-

- Bile duct injury(in 1 case).

POST-OPRATIVE COMPLICATIONS:-

In early group:-

- Wound infection (2 cases)
- Fever (2 cases)
- Chest infection(1 case)

In Delayed Group:-

- Wound infection with fever (1 case).
- Bile leakage for short duration (1 case).

There was high rate of fever and chest infection in early group.

Hospital Stay:-

There was average hospital stay of 4-6 days in early group and in delayed group average hospital stay was 4- 10 days. If we consider hospital stay of patients during acute phase, hospital stay in delayed cases would be much higher and so the cost of treatment.

SUMMARY.

Summary of results is tabulated in table below.

FEATURES	EARLY GROUP	DELAYED GROUP
No of cases	21	21
Timing of surgery	Within 2-4 days of development of symptoms	After 6-8 weeks of acute episode
Duration of surgery	Mean time 64mins	Mean time 58.2min
infection	More common	Less common
complications	More common (~33.3 3%)	Less common (~9.5%)
Blood loss	Little more (not significant)	less
Hospital stay	Less (average 4-6d)	More (avg 4-10d)
Cost of treatment	Estimated less	Estimated more

DISCUSSION

We performed prospective randomized trial study comparing early versus delayed laparoscopic cholecystectomy to evaluate safety, feasibility and complication in our set up.

In our study we observed that early laparoscopic cholecystectomy has shorter hospital stay thus lower cost of treatment as compared to delayed, but at the same time chances of complication and operative time is more.

Early laparoscopic cholecystectomy is safe and feasible if performed by experienced surgeon. Early laparoscopic cholecystectomy should be done as early as possible. Golden period of early laparoscopic cholecystectomy is suggested within 72 hours of onset of symptoms. In our study we operated within 2-4 days of onset of symptoms and within 24 hours of admission.

In delayed cases gallstone related morbidities increased and patients

may have another episode of acute symptoms during waiting period so the suffering of patient may increase, but the rate of complication is less in delayed.

We have opted some technical differences in laparoscopic cholecystectomy related to operative finding Sub hepatic drain was placed in 33.33% cases of early group, and 9.5% cases of delayed group.

The result would have been more accurate if we had studied large number of cases but due to covid-19 pandemic we could not reach our target level.

CONCLUSION

On the basis of our study result we have concluded that early laparoscopic cholecystectomy with cholelithiasis is safe, feasible with benefits of shorter hospital stay and lower cost of therapy but complication rate and mean time taken in surgery is more compared to delayed laparoscopic cholecystectomy.

Difference in blood loss is little more in early group but statically not significant.

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