

STUDY OF COMPLICATION OF LAPAROSCOPIC CHOLECYSTECTOMY IN TELANGANA POPULATION

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Abstract

Background: Laparoscopic cholecystectomy is considered the gold standard method of choice for surgical treatment of symptomatic biliary lithiasis. The surgery is associated with certain complications and attempt has been made to identify and compare such incidents. **Materials and Methods:** 48 adult patients aged between 39 to 60 years of age having benign GB disease were operated with LC, prior to surgery, haematological and radiological evaluation was carried out. Histo-pathological study, intra operative and post-operative complications were noted. **Result:** Intra-operative complications were 4 (8.3%) trocar sites bleeding, liver bed injury, 3 (6.25%) Bile leakage from GB 2 (4.16%) bleeding from calots and post-operative complications was 1 (2.08%) i.e., port site infection. **Conclusion:** It is confirmed that LC procedure is safe and effective procedure short hospital stay small surgical scar and least mortality as compared to open cholecystectomy.

INTRODUCTION

During the past decade laparoscopic cholecystectomy (LC) has become the procedure of choice in surgical treatment of biliary lithiasis.^[1] The surgery is infrequently associated with various intra and post of complications as compared to open cholecystectomy (OC).

The intra operative and immediate post operative complications include bowel and vascular injury (trocar site bleeding), biliary leak and bile duct injuries. However, LC is now considered the gold standard in management of cholelithiasis as it has the benefit of being a minimally invasive procedure, patients requiring a shorter duration of hospital stay, low morbidity rate and a cosmetically acceptable surgical scar.^[2-4] Hence attempt was made identify the complications encountered with laparoscopic cholecystectomy (LC) and enable us to improve the quality of a meticulous surgical procedure.

MATERIALS AND METHODS

48 patients aged between 30 to 60 years old regularly visited to Mamata Academy of Medical Sciences, Bachupally, Hyderabad, Telangana-500090 were studied.

Inclusive Criteria

Patients diagnosed Benign GB disease, above 18 years were selected for study.

Exclusion Criteria

Patients having common Bile duct (CBD) stone or dilatation features of obstructive jaundice and Malignancy of Gall Bladder (GB) were excluded from study.

Method

Every patients was evaluated with physical examination relevant laboratory and radiological investigations and underwent laparoscope cholecystectomy (LC) Histo-pathological test were conducted to evaluate the causes of GB disease, peri-operative and post operative complication were noted.

Duration of study was from January 2022 to January 2023.

Statistical Analysis

Histo-pathological findings, peri and post operative complication were classified with percentage. The statistical analysis was carried out SPSS software. The ratio of male and female was 1:2.

RESULTS

[Table 1] Histo-pathological study of cholecystitis – 38 (79.16%) had chronic calculous cholecystitis, 3 (6.25%) had chronic calculous cholecystitis with

Mucocele, 2 (4.16%) had acute on chronic calculus cholecystitis, 2 (4.16%) had Empyema G.B, 1 (2.08%) acute cholecystitis, 1 (2.08%) chronic

cholecystitis with cystitis glandularisproliferans, 1 (2.08%) chronic acalculous cholecystitis.

Table 1: Histopathological study of Cholecystitis

Sl. No	Details	No. of Patients	Percentage (%)
1	Chronic calculous cholecystitis	38	79.16
2	Chronic calculous cholecystitis with Mucocele	3	6.25
3	Acute chronic calculous cholecystitis	2	4.16
4	Empyema Gall Bladder	2	4.16
5	Acute cholecystitis	1	2.08
6	Chronic cholecystitis with cystitis glandularis proliferans	1	2.08
7	Chronic acalculous cholecystitis	1	2.08

Table 2: Peri and post-operative Complications. Total No. of Patients: 48

Complications	No. of patients	Percentage
(A) Intra-operative complications		
Trocar site bleeding	4	8.3
Liver bed injury	4	8.3
Bile leakage from GB	3	6.25
Bleeding from calots	2	4.16
Spilled gall stones	0	0
Injury to common Bile duct	0	0
Major vascular surgery	0	0
(B) Post-operative complications		
Port site infection	1	2.08
Haemorrhage	0	0
Biliary leak	0	0
Mortality	0	0

Table 3: Comparison of conversion rates with previous studies

Name of the Author with year	Conversion rate percentage (%)
Rooh-ul-Mugin et al 2008	3.6
Shaun et al 2009	5.37
Ghnam et al 2010	5.30
Daniel et al 2012	7
Shankar et al 2012	7.8
Nidani et al 2015	6
Lee S No. et al 2015	8.5
Miodrag et al 2016	3.9
Faruquzzaman et al 2017	7
Present study 2022	6

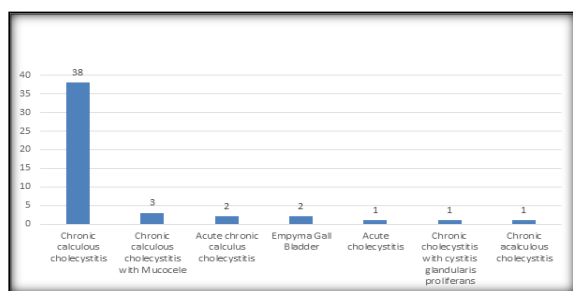


Figure 1: Histopathological study of Cholecystitis

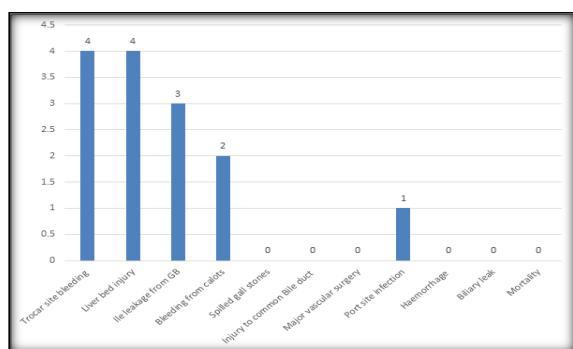


Figure 2: Peri and post-operative Complications

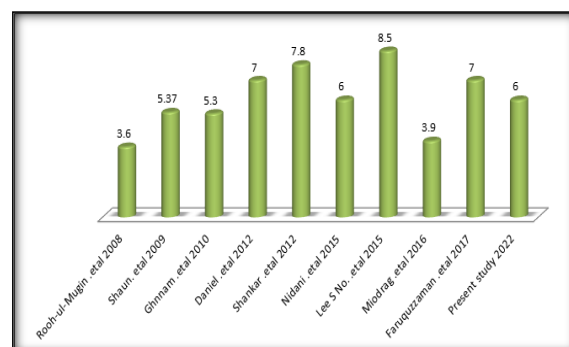


Figure 3: Comparison of conversion rates with previous studies

[Table 2] Peri and post-operative complication of cholecystitis – 4 (8.3%) trocar site bleeding, 4 (8.3%) liver bed injury, 3 (6.25%) Bile leakage from GA, 2 (4.16%) bleeding from calots

(B) Post-operative complication were – 1 (2.08%) port site infection

[Table 3] Present study conversion rate is compared with previous workers.

DISCUSSION

Present study of complications of laparoscopic cholecystectomy in Telangana Population is outlined below. The histo-pathological studies included 38 (79.16%) chronic calculous cholecystitis, 3 (6.25%) chronic calculous cholecystitis with mucocele, 2 (4.16%) acute on chronic calculous cholecystitis, empyema GB, 1 (2.08%) acute cholecystitis, chronic cholecystitis with cystitis glandular proliferans and 1 (2.08%) chronic acalculous cholecystitis. (Table-1) Intra-operative and post operative complications were 4 (8.5%) Trocar site Bleeding, 4 (8.5%) liver bed injury, 3 (6.25%) bile leakage from GB, 2 (4.16%) bleeding from calots and post-operative complication was 1 (2.08%) port site infection [Table 2]. The conversion rate was 6.1 [Table 3]. These findings are more or less in agreement with previous studies.^[5-7]

Trocar related bowel injuries are frequently encountered during port entry. The trocar site bleeding can occur from trocar site vessels, inferior epigastric artery or omental vessels.^[8] It was managed with pressure haemostasis from the trocar itself, diathermy or vessel ligation. Omental vessel injury was managed with laparoscopic energy device. Liver bed injury occurs in the form of bleeding from the liver bed, it was more common in cases where the GB was partially intra hepatic or firmly adherent to the liver bed and the plane of dissection was not clearly defined.^[9] Bile spillage may occur inadvertently during the surgical dissection of GB handling either by grasper or electro cautery dissection of GB with laparoscopic instruments. It may also occur at the time of retrieval from the abdomen spilled gall stones are due to iatrogenic perforation of GB is most of the time associated with spilled gall stones in the peritoneal cavity.^[10] Biliary leakage was due to improper ligation of cystic duct. The port site infection was managed conservatively with daily dressing and with Intravenous antibiotics after culture and sensitivity.^[11] Mortality during Laparoscopic cholecystectomy is rare phenomenon.

It could be due to un-diagnosed rupture of malignancy in GB.

CONCLUSION

Presently laparoscopic cholecystectomy is most advanced technique with least rate of mortality and morbidity. It is safe and effective procedure in patients presenting with symptomatic benign GB diseases. Most of the complications are due to lack of skill and experience of surgeons hence proper and skilful training of laparoscopic technique can minimise the complications and LC technique can remain as gold standard method.

Limitation of Study

Owing to tertiary locations of research centre, small sample size and lack of latest techniques, we have limited finding and results.

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