

Indications and Complication of Laparoscopic Cholecystectomy at a Tertiary Care Setting in Sindh Province: A Cross Sectional Survey

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ABSTRACT

Objective: The study was aimed to-evaluate the indications and-complications-of-the laparoscopic cholecystectomy at a tertiary care setting in sindh province.

Background: The-hepato-biliary-system is affected by a wide range of illnesses known as gall bladder diseases, each of which has a unique clinical presentation and degree of morbidity. The majority of adult populations in Western nations are affected by cholelithiasis, which affects 5% to 25% of the adult population. Initially, people from developing nations had little access to the advantages of laparoscopic cholecystectomy.

Materials and Methods: A cross sectional study was carried out at the surgical dept Chandka Medical College Hospital Larkana for a period of 6 months in 2020 which included patients who went through laparoscopic cholecystectomy were included in the study, however, the patients having a history of previous abdominal surgery, hepatobiliary carcinoma, challenges ejection fraction, patients with coagulopathies and those reactive for HbsAg or HCV antibodies were excluded from the study.

Results: The mean age of the subjects was 43.8± 9.67 years. There were 93.7% of study participants were females, 18.6% were diabetic and 26.5%) were hypertensive. 41.81% patients were aged between 30 to 40 years. The indications for the cholecystectomy included Symptomatic cholelithiasis for 148 (83.62%) cases, acute cholecystitis for 24(13.56%) cases and gall bladder polyp for 5 (2.82%) cases. There were 11 (6.21%) cases which needed to be converted to open cholecystectomy. Bile leaking was reported in 8 (4.52%) cases and injury to liver/intestine were reported for 3 (1.69%) cases.

Conclusion: In a setting of a developing country, -laparoscopic-cholecystectomy-looks to be a safe and-effective treatment with few complications.

Keywords: Laparoscopic cholecystectomy, Indications, Complications, cholelithiasis.

INTRODUCTION

The hepato-biliary system is affected by a wide range of disorders known as gall bladder diseases, each of which might show clinically in a different way and have a different level of morbidity [1]. The most common condition affecting the gallbladder is cholelithiasis, which affects 5% to 25% of adults in Western countries[2].

Acute cholecystitis is a common problem and constitutes a major proportion of hospital admission and elective surgery worldwide. Surgical management of acute cholecystitis as well as the exact timing of laparoscopic cholecystectomy, when opted as the treatment modality, still remains controversial. In the past, laparoscopic cholecystectomy (LC) in patients with acute cholecystitis used to be contraindicated since studies conducted in that era reported higher complication rates, a prolonged operation time, and higher conversion rates to open surgery [2-4]. In early 1990s, the preferred and commonly practiced mode of treatment for acute cholecystitis was conservative treatment followed by delayed laparoscopic cholecystectomy (DLC) [2]. Recent studies suggest that it is quite safer to operate within first 72 hours. This early laparoscopic cholecystectomy is now reported to have no difference in complications and conversion rates compared to DLC in cases of acute cholecystitis, provided the operating person is an experienced surgeon and has good laparoscopic skills [5,6].

Cholelithiasis disease burden is anticipated to increase along with an increase in the prevalence of obesity. Gall bladder illnesses that necessitate surgical intervention include cholelithiasis, biliary pancreatitis, biliary dyskinesia, gall bladder polyps, and neoplasms in both paediatric and adult populations[7-9].

This study was aimed to determine the indications and outcome of laparoscopic cholecystectomy at a tertiary care setting in Sindh province.

MATERIALS AND METHODS

A cross sectional study was carried out at the surgical dept Chandka Medical College Hospital Larkana for a period of 6 months in 2020 to evaluate the complications and outcomes of the laparoscopic cholecystectomy.

In this study, those patients who went through laparoscopic cholecystectomy were included in the study, however, the patients having a history of previous abdominal surgery, hepatobiliary carcinoma, challenges ejection fraction, patients with coagulopathies and those reactive for HbsAg or HCV antibodies were excluded from the study.

The data was collected in a structured questionnaire which was designed to record patients sociodemographic variables, indications for the surgery, intra operative findings and post operative outcomes and complications of the patients

For data entry and analysis, we used SPSS Version 23 (Statistical Package for Social Sciences). The qualitative factors were given in frequency and percentage, whereas the quantitative variables were described in mean and standard deviation.

RESULTS

The present study included 177 patients who went through laparoscopic cholecystectomy.

Table 1: Sociodemographic factors and comorbidities of the study participants

Variable	N=177	%
Gender		
Male	11	6.21
Female	166	93.79
Age (Mean and SD 43.8± 9.67)		
Below 30Y	23	12.99
30 to 40 Y	74	41.81
41 to 50Y	49	27.68
above 50Y	31	17.51
Comorbidities		
Diabetic	33	18.64
Hypertensive	47	26.55
Residence		
Rural	83	46.89
Urban	94	53.11

The mean age of the subjects was 43.8± 9.67 years. There were 93.7% of study participants were females. Amongst the study participants 18.6% were diabetic and nearly one fourth of the

participants (26.5%) were hypertensive. Most of the patients were aged between 30 to 40 years (41.81%) and 94 (53.11%) belonged to urban type of residence, Table I.

In the present study, the indications for the cholecystectomy included Symptomatic cholelithiasis for 148 (83.62%) cases, acute cholecystitis for 24(13.56%) cases and gall bladder polyp for 5 (2.82%) cases. Fig. 1

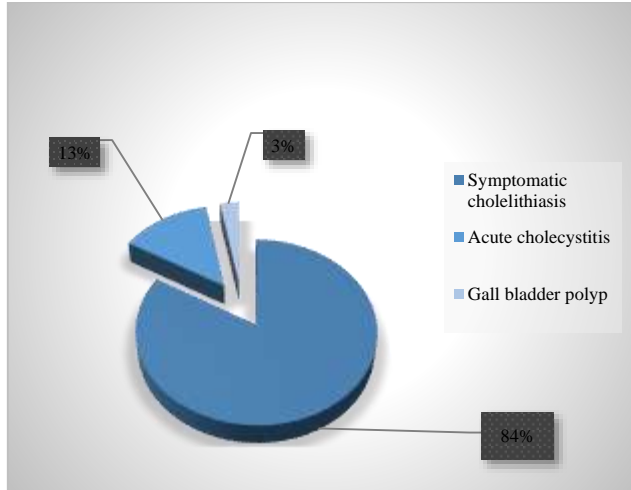


Fig. 1: Indications for laparoscopic cholecystectomy

The table II details the complications of the cholecystectomy in our study. There were 11 (6.21%) cases which needed to be converted to open cholecystectomy. Bile leaking was reported in 8 (4.52%) cases and bleeding, injury to bile duct, injury to liver/intestine were reported for 2(1.13%), 2(1.13%) and 3 (1.69%) cases respectively.

Table-3: Complications-of-laparoscopic-cholecystectomy

Complications-	n=177	%
Conversion-to-open-cholecystectomy	11	6.21
Bile leaking in the body.	8	4.52
Bleeding	2	1.13
Injury to the bile ducts,	2	1.13
Injury to liver or intestines.	3	1.69

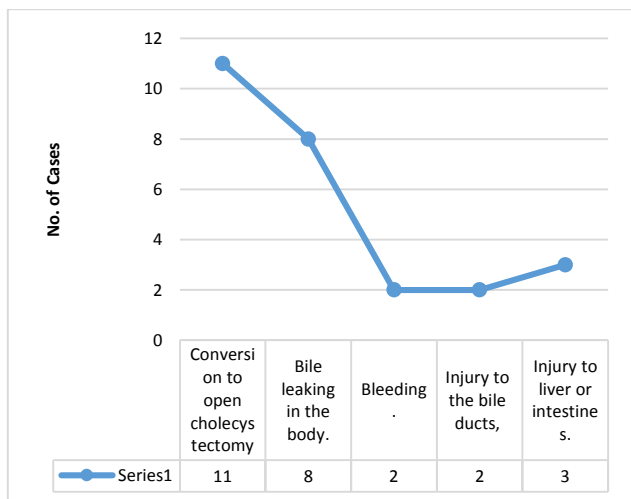


Fig. 2: Complications-of laparoscopic cholecystectomy

DISCUSSION

Patient selection, surgeon inexperience, and technical limitations are some of the causes of laparoscopic cholecystectomy

difficulties, all of which will increase morbidity and mortality [10]. Major biliary and vascular complications can be fatal, although small complications might make patients uncomfortable and lengthen their time in the hospital. In order to address intraoperative difficulties during the surgical intervention in a timely way, it is critical to identify them during the procedure [11]. Reduced post-operative discomfort and rapid recovery are the major objectives to provide improved patient care in the laparoscopic surgery era of today[12].

In the present study, the mean age of the subjects was 43.8± 9.67 years. There were 93.7% of study participants were females, 18.6% were diabetic and 26.5%) were hypertensive. 41.81% patients were aged between 30 to 40 years.

Male sex is a risk factor for severe acute illness, according to recent investigations [13,14,15]. Although men only accounted for 25% of elective cholecystectomies, Koo and Thirlby[16] found that men made up 48% of instances of acute cholecystitis. Additionally, patients with severe cholecystitis had a considerably greater male to female ratio, according to Lein and Huang[15]. The indications for the cholecystectomy included Symptomatic cholelithiasis for 148 (83.62%) cases, acute cholecystitis for 24(13.56%) cases and gall bladder polyp for 5 (2.82%) cases.

Comparatively Shamsuddin et al reported that cholelithiasis was observed in 236(99.2%) of the patients whereas in 2(0.8%) patients polyps in the gall bladder were observed [17]. There were 11 (6.21%) cases which needed to be converted to open cholecystectomy. Bile leaking was reported in 8 (4.52%) cases and injury to liver/intestine were reported for 3 (1.69%) cases. Comparatively various researches have reported-conversion-rate-of-laparoscopic-cholecystectomy to open cholecystectomy ranges from 0-5 and 28 % in cases of acute cholecystitis [18,19 – 23]. On the other hand, A study from observed that out of 102 patients , the-bile-leakage was reported in 3 (2.9%)-patients [24].

CONCLUSION

Early laparoscopic cholecystectomy for individuals reporting with acute-cholecystitis was observed to be a harmless technique irrespective of its timing from the onset of symptoms, when performed by an experience laparoscopic surgeon. Injuries to the bile ducts and conversion rates did not significantly increase.

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