

Complications of Laparoscopic Cholecystectomy

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ABSTRACT

Objective: To study the Complications of Laparoscopic Cholecystectomy.

Design of Study: Retrospective study.

Place and duration of Study: This study was conducted at the Islam Teaching Hospital Sialkot from January 2014 to December 2017.

Materials and Methods: 535 patients (88 men, 447 women age range 15-66 years, average age 41 years) in patients undergoing Laparoscopic Cholecystectomy. All the patients undergoing Laparoscopic Cholecystectomy were diagnosed on ultrasound examination and clinical examination of the patients. Performa was designed to note age, gender and complications in Laparoscopic Cholecystectomy. The data was analyzed for results on SPSS version 10. The informed consent of all the patients was taken and permission of ethical committee was also taken.

Results: The number of patients undergoing Lap-Cholecystectomy at age group 46-55 years was maximum in male 29 (32.95%) and in female 203 (45.41%) and minimum at age group 66 & above years in male 02 (2.27%) and in female 07 (1.56%) as shown in table no. 1. The rate of complications in patients undergoing Lap-Cholecystectomy was Intra Operative Hemorrhage 36 (6.72%), Bile Duct Injury 01 (0.18%), Suppuration at Trocar Site 17 (3.17%), Laparoscopic Re-Intervention 07 (1.30%), Bile Leakage 12 (2.24%), Conversion 21 (3.92%), Prolong Hospitalization 44 (8.22%) as shown in table no.2. It was seen that among complications in patients undergoing Lap-Cholecystectomy was Prolong Hospitalization maximum 44 (8.22%) and Bile Duct Injury 01 (0.18%) was minimum. It was also seen that the incidence of patients in Lap-Cholecystectomy were maximum in females 447 (83.55%) and minimum in male 88 (16.44%).

Conclusion: It was concluded from the study that complications of Laparoscopic cholecystectomy are yet present in spite of due care and experience of the surgeon.

Key Words: Laparoscopic Cholecystectomy, Complications, Retrospective

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INTRODUCTION

The introduction of laparoscopic cholecystectomy (LC) has caused a real "revolution" in the surgical treatment of symptomatic gallbladder diseases. The new technique is "minimally invasive"; it allows a short hospital stay, a decreased postoperative pain with an early post-operative recovery, a better cosmetic result, and, finally, a reduction of costs. All these features prompted unconditioned world-wide acceptance of the procedure by both surgeons and patients, so in the last 6 years, since Dr. Mouret's first LC in 1987, open cholecystectomy has gradually become the second choice in the surgical management of gallbladder symptomatic diseases. LC compares favorably with the conventional operation regarding morbidity and

mortality, although a slightly higher incidence of biliary injury after LC has been reported¹. The safety of LC has been therefore established in referral centers with large series of laparoscopic procedures, but not in centers that are starting their experience and are still in the "learning curve." "Compl curve." Complications after LC will probably become more and more infrequent but in certain instances they can still be devastating. The interventional radiologist and the endoscopist are often asked to help the referring surgeon in the diagnosis and treatment of such complications².

MATERIALS AND METHODS

From January 2014 to December 2017, 535 patients (88 men, 447 women age range 15-66 years, average age 41 years) in patients undergoing Laparoscopic Cholecystectomy. All the patients undergoing Laparoscopic Cholecystectomy were diagnosed on ultrasound examination and clinical examination of the patients. Performa was designed to note age, gender and complications in Laparoscopic Cholecystectomy. The data was analyzed for results on SPSS version 10. The informed consent of all the patients was taken and permission of ethical committee was also taken.

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RESULTS

The number of patients undergoing Lap-Cholecystectomy at age group 46-55 years was maximum in male 29 (32.95%) and in female 203 (45.41%) and minimum at age group 66 & above years in male 02 (2.27%) and in female 07 (1.56%). table 1.

Table No. 1 Age & Gender Distribution in Patients Undergoing LAP-Cholecystectomy

Sr#	Age (Years)	Male (%) N=88	Female (%) N= 447
1	15-25	01 (1.13%)	12 (2.68%)
2	26-35	13 (14.77%)	47 (10.51%)
3	36-45	25 (28.40%)	156 (34.89%)
4	46-55	29 (32.95%)	203 (45.41%)
5	56-65	18 (20.45%)	22 (4.92%)
6	66 & above	02 (2.27%)	07 (1.56%)
	Total	88 (99.97%)	447 (99.97%)

The rate of complications in patients undergoing Lap-Cholecystectomy was Intra Operative Hemorrhage 36 (6.72%), Bile Duct Injury 01 (0.18%), Suppuration at Trocar Site 17 (3.17%), Laparoscopic Re-Intervention 07 (1.30%), Bile Leakage 12 (2.24%), Conversion 21

(3.92%), Prolong Hospitalization 44 (8.22%) as shown in table 2. It was seen that among complications in patients undergoing Lap-Cholecys-tectomy was Prolong Hospitalization maximum 44 (8.22%) and Bile Duct Injury 01 (0.18%) was minimum. It was also seen that the incidence of patients in Lap-Cholecystectomy were maximum in females 447 (83.55%) and minimum in male 88 (16.44%).

Table No. 2 Complication Distribution in Patients Undergoing LAP-Cholecystectomy

Sr#	Complications	Cases	%age
1	Intra Operative Hemorrhage	36	6.72%
2	Bile Duct Injury	01	0.18%
3	Suppuration at Trocar Site	17	3.17%
4	Laparoscopic Re-Intervention	07	1.30%
5	Bile Leakage	12	2.24%
6	Conversion	21	3.92%
7	Prolong Hospitalization	44	8.22%
	Total	138	25.75%

Table No. 3 Complication Distribution in Patients Undergoing LAP-Cholecystectomy

Sr#	Complications	Cases	Percentage (%)
1	Intra Operative Hemorrhage	-Gall Bladder Bed (25) -Cystic Artery (9) -Omental Vessels (2)	4.67% 1.68% 0.37%
2	Bile Duct Injury	-Transection of CBD (00) -Partial CBD Injury (01)	0% 0.18%
3	Suppuration at Trocar Site	-Epigastric Port Site (12) -Umbilical Port Site (05)	2.24% 0.93%
4	Laparoscopic Re-Intervention	07	1.30%
5	Bile Leakage	-From Cystic Duct (04) -From CBD (01) -From Gall Bladder Bed (07)	0.74% 0.18% 1.30%
6	Conversion	-Due to difficulty in Dissection (18) -Due to CBD Injury (01) -Due to Hemorrhage (02)	3.36% 0.18% 0.37%
7	Prolong Hospitalization	44	8.22%
	Total		

DISCUSSION

The risks and complications of LC must be neither over-rated nor under-rated. Laparoscopy is not easy for the surgeon, thorough instruction as well as experience being crucial for improvement of results. Contrary to initial reports of an increased complication rate, recent data show that LC entails lower morbidity and mortality rates than open operation³⁻⁶. One of the most frequent situations carrying an increased operative risk is acute cholecystitis. However, the postoperative morbidity and mortality rates, as well as the excellent late results, allow us to conclude that obese patients are the principal beneficiaries of the laparoscopic technique. It

avoids the wound infection, wound dehiscence and especially the incisional hernia that often complicate open cholecystectomy in the obese.

The major problems related to LC are bile duct injury, haemorrhage and subhepatic abscess. Lesions of the extrahepatic bile ducts can occur at any level as follows⁷⁻¹⁰ post-mortem studies demonstrate their presence in 3-5% of individuals⁸. However, accessory bile ducts were only recognised in three patients immediately after detachment of the gallbladder. Postoperative bile leak and choleperitoneum were avoided by clipping these ducts. When bile leakage >500 ml/24 h persists in the early postoperative period,

endoscopic sphincterotomy or transpapillary stenting are recommended¹¹⁻¹⁴.

Woods et al⁸ noted this cause in 17 of 34 cases with biliary complications. In our study we noted it in 36 patients, Bile Duct Injury 01 (0.18%), Suppuration at Trocar Site 17 (3.17%), Laparoscopic Re-Intervention 07 (1.30%), Bile Leakage 12 (2.24%), Conversion 21 (3.92%), Prolong Hospitalization 44 (8.22%) as shown in table 2. It was seen that among complications in patients undergoing Lap-Cholecystectomy was Prolong Hospitalization maximum 44 (8.22%) and Bile Duct Injury 01 (0.18%) was minimum. It was also seen that the incidence of patients in Lap-Cholecystectomy were maximum in females 447 (83.55%) and minimum in male 88 (16.44%). The most serious complication was suppuration at trocar site 17(3.17%) and bile leakage 12(2.24%). A particular mode of CBD injury that is specific to LC is clipping the 'cone' of CBD with the first clip applied to the cystic duct. To avoid this situation it is preferable to apply the clip at a little distance from the cysticocholedochal junction, because endoscopic studies show that a long cystic stump (without stones) is not a true cause of post-cholecystectomy pain¹⁵⁻¹⁷.

As regards haemorrhage, even though arterial injury is usually a reason for conversion^{4,5} in our study conversion was 21 (3.92%). Bile leakage and bleeding may determine subhepatic abscess formation. Huang et al⁵ reported 3 such complications in a group of 350 LCs. The clinical picture was manifest 7–10 days after operations performed for acute cholecystitis. Pain in the right upper quadrant, fever, leucocytosis and ultrasonography led to the diagnosis.

CONCLUSION

It was concluded from the study that complications of Laparoscopic cholecystectomy are yet present in spite of due care and experience of the surgeon

Author's Contribution:

Concept & Design of Study: Tanveer Sheikh
 Drafting: Khalid Azeem
 Data Analysis: Maqsood Ahmad Khan
 Revisiting Critically: Khalid Azeem
 Final Approval of version: Tanveer Sheikh

Conflict of Interest: The study has no conflict of interest to declare by any author.

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