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Original Article

Evaluation of complications of laparoscopic cholecystectomy in a single centre experience

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Abstract:

Background: Laparoscopic cholecystectomy first introduced by Muhe in 1985 followed by Muret in1987, it is becoming more popular and now it is gold standard for symtomatic gallstone disease.

Objective: To determine the complication of Laparoscopic cholecystectomy in our series.

Materials and Methods: A total 150 patients with gallstone disease whose wall thickness of gallbladder were 3mm were selected for Laparoscopic cholecystectomy, Acute cholecystitis, choledocholithiasis, obstructive jaundice, Gallbladder mass or dilated CBD, were excluded. Details histroy, physical examination, and relevant investigation were done (including LFT, HbsAg, Anti HCV) and patients were checked for anesthesia fitness, then laparoscopic cholecystectomy were done, operative finding and outcome observed.

Results: Among 150 patients there were 126patients were female and 24 patients were Male, age ranges from 16 to 65 yrs. Laparoscopic cholecystectomy were done successfully in 140 patients (92%) and conversion done in teen patients(6.6%). Major complications were seen in five (3.3%) patients, including common bile duct (CBD) injury in two patients, duodenal injury in one patient, bleeding from gall bladder bed in two patients. There was no mortality in the study.

Conclusion: Laparoscopic cholecystectomy is a safe and effective treatment for gallstone disease.

Key Words: Gall stone, Lapparoscopic cholecystectomy, morbidity, mortility.

Introduction

Gall stone disease is a major health problem world wide, particularly in the adult population.[1] Laparoscopic cholecystectomy has becoming the gold standard treatment for benign gall bladder disease.[2] Laparoscopic cholecystectomy is defined as removal of gallbladder through a keyhole size incision being the traditional procedure using two 10mm ports and two 5mm ports, but it can be done with 3 ports. Which is associated with less post operative pain and better anesthetic results.[3] With increasing expertise and technological development laparoscopic procedure become safer.[4]

Material and Methods

This prospective observational study was carried out in the surgery department in Dhaka national medical college hospital (DNMC) from November2016 to october2018 over period of two years. In this study total 150 patients with gall stone disease where wall thickness of gall bladder were 3mm were selected for laparoscopic cholecystectomy. Acute cholecystitis, choledocholithiasis, obstructive jaundice, gall bladder mass or dilated CBD were excluded. Detailed history, physical examination and all relevant investigations were done also viral marker and patients were checked for anesthesia fitness, then laparoscopic cholecystectomy were done, operative finding and outcome observed for two year.

Age of the patients

Age	Number of patients	Percentage
<20	10	6.66
21-40	70	46.6
41-60	50	33.3
>60	20	13.3

Sex of the patients

Age	Number of patients	Percentage
Male	24	16
Female	126	84

Major complication

Complication	Management
CBD injury 2 (two) cases.	Repair of CBD with placement of T tube.
Bleeding from Gall bladder bed 2(two) cases.	Conversion to open procedure and haemostasis done, then kept a drain in hepatorenal pouch.
Duodenal injury 1 (one) case.	Conversion to open procedure and then repair and kept two drain.

Minor complication

Complication	Management
Gall bladder perforation 15 (fifteen) cases.	Irrigation, suction and stone removed
Haemorrhage at Calot's triangle 10 (ten) cases.	Haemostasis, secured with clip.
Port site infection 5 (five) cases.	Appropriate antibiotics after C/S.

Results

Out of 150 patients, 126 (84%) were female and 24 (16%) were male, giving rise to a female to male ratio 5:1. The age range from 16 to 65 yrs, mean age being 40-45 yrs. Majority were in 4th (46.6%) and 5th (33.3%) decade of life. Two (1.3%) had diabetes mellitus, Ten (6.6%) had hypertension, 3 (2%) had ischemic heart disease and 135 (90%) had no co-morbidity for anesthesia or surgery. Majority of the patients (70%) had multiple stones, and 30% had single stones. Laparoscopic cholecystectomy were done satisfactory in 140 (92%) patients and conversion done in 10 (6.6) patients. Major complications were 5 patients, like bile duct injury were 2 cases (1.3%), duodenal injury was one patient, bleeding from gallbladder bed 2 (1.3%) patients, and others are due to dense adhesions and other minor injury also occurs like gallbladder perforation, port site infections.

Discussion

Laparoscopic cholecystectomy has gained favour among surgeons and popularity among the patients as it offers minimal surgical trauma, reduced hospital stay and early resumption of normal activity.[5] This study aims at assessing the complication of laparoscopic cholecystectomy. Sometimes complication in laparoscopic cholecystectomy are seen during the creation of the pneumoperitonium i.e while introducing the veress needle and insertion of trocars, which can directly damage the internal structure.[5, 6] These complications were not seen in our study, we introduced trochar and cannula through the umbilicus after neke over the umbilicus by BP handle with blade 11, we used artery forcep for clear the umbilical tissue. In our study female to male ratio 5:1 which is in accordance to Francesco (2003) showing increase incidence of calcular disease in female[7, 8]. In our study the incidence of conversion from laparoscopic cholecystectomy to open cholecystectomy was 6.6% while peter[9] reported an incidence of 14% mostly due to difficult dissection secondary to inflammation or dense adhesion. In our study CBD injury was 1.3% while the incidence of CBD injury reported by Mahatharadol[10] 0.59%, Ahmed[11] 1%, which are similar to our study. In our study there was one duodenal injury (.6%) which was recognized per operative and repaired by open surgery. Singh[12] reported duodenal injury in .17% of patients. In our study gallbladder perforation with bile leakage occurs in 15 (10%) cases, then irrigation and suction done. In four cases (2.6%) spillage of gall stone occurs, which were removed from abdominal cavity by 10mm wide bore cylindrical metallic tube through the epigastric port after removal of epigastric cannula successfully. In study of 1100 LCS, Arain's reported gall bladder perforation and bile leakage in 9.8% and spillage of the stone 3.9%.

Conclusion

Laparoscopic cholecystectomy is a safe and effective procedure in our set up to the accepted standard as compared to national and international studies. Proper training of the young surgeons is necessary and equipments are essential for good surgical outcome.

Referance

1. Mufti TS, Ahmad S, Naveed D, Akbar M, Zafar A. Laparoscopic cholecystectomy: An early experience. J Ayub Med Coll Abbottabad 2007; 19(4).
2. Robles V, Aceves T, Arellano Z, Gonzalez N, Hernandez V, Novoa J, Esquivel I. Laparoscopic cholecystectomy; complications and conversion to open cholecystectomy. Open Access journal of Surgery; ISSN: 2476-1346
3. Castro PMV, Akerman D, Munhoz CB, Sacramento ID, Mazzurana M, Alvarez GA. Laparoscopic cholecystectomy versus minilaparotomy in cholelithiasis: Systematic review and meta-analysis. ABCD Arq Bras Cir Dig 2014;27(2):148-153.
4. Urooj R, Khan S, Oonwaala ZG. An audit of laparoscopic cholecystectomy: A revisit. Ann Hamd Uni 2010; 1(1):9-11.

5. Shamim M, Dahri MM, Memon AS. Complications if laparoscopic cholecystectomy. Pakistan Journal of Surgery 2006; Vol 22(70), Issue 2.
6. Cholecystectomy: Surgical removal of the Gallbladder. American College of Surgeons, Division of education.
7. R.J.L.F. Loffeld. The consequences of lost gallstones during laparoscopic cholecystectomy. The Journal of Medicine; 2006. Vol 64(10).
8. A Farzad, F Haghighat, AR Tavassoli, H Shabahang. Laparoscopic cholecystectomy: Report of 100 cases and review of the literature. Medical journal of the Islamic Republic of Iran; 1997. Vol 11.
9. Malik AM, Laghari AA, Mallah Q, Hashmi F, Sheikh U, Talpur KAH. Extra-biliary complications during laparoscopic cholecystectomy: How serious is the problem. Journal of Minimal Access Surgery 2008. Volume 4, Issue 1.
10. Singh K, Gupta S, Kumar V, Gerg V. Complication of laparoscopic cholecystectomy performed using harmonic scalpel as the sole instrument or by using standard clip and electrocautery technique. International Journal of Contemporary Medical Research 2016; 3(10):3043-3046.
11. Kapoor M, Yasir M, Umar A, Suri A, Kumar A. Complications of laparoscopic cholecystectomy, an analysis of 300 patients. JK- Practitioner 2013; 18(1-2): 7-11.
12. Browne IL, Dixon E. Delayed jejunal perforation after laparoscopic cholecystectomy. Journal of Surgical Case Reports, 2016; 2, 1-4.