

Complications of Laparoscopic Cholecystectomy at surgical unit II Shalamar Hospital Lahore

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ABSTRACT

Aim: To evaluate the complications of laparoscopic cholecystectomy (LC) at surgical unit II Shalamar Hospital Lahore.

Place and duration of study: Department of Surgery at Shalamar Hospital Lahore from January 2013 to December 2014.

Methods: This study was retrospective including 365 patients who underwent elective laparoscopic cholecystectomy for symptomatic cholelithiasis.

Results: Out of 365 patients females patients were 303(83.01%) while male patients were 62(16.9%). Age range was 16 to 75 years. The main operative incidents encountered were hemorrhage 35(9.5%), iatrogenic perforation of the gallbladder 52(14.24%) and common bile duct (CBD) injuries 6(1.64%). Conversion to open operation was necessary in 16 patients (4.3%), usually due to obscure anatomy as a result of acute inflammation and hemorrhage.

Conclusion: Laparoscopic cholecystectomy is the gold standard method for symptomatic cholelithiasis with multiple benefits of reduced postoperative pain, smaller scars, shorter hospital stay to patients. However the complications and conversion rate can be minimized by the improving the training, good case selections and surgical techniques.

Keywords: laparoscopic cholecystectomy, incidents, complications, cholelithiasis.

INTRODUCTION

Cholelithiasis affects about 10 to 15% of adult population. First laparoscopic cholecystectomy¹ was performed by Dr. Philippe Mouret in 1987 in Lyon, France. Till today laparoscopic cholecystectomy (LC) has become the gold standard procedure in the surgical treatment of symptomatic cholelithiasis² and become one of most common operation performed worldwide. Numerous studies had already documented the advantages³ of decreased post op pain, nausea, vomiting, short hospital stay, early mobilization, less intra abdominal adhesions and cosmetically acceptable scar⁴. Although The (LC) is not completely risk-free and associated with some major complications being more frequent than with open cholecystectomy⁵ (OC). The overall frequency of major complications is less than 8%. However, the incidence of complications is strongly related to the experience and recently a decrease in complication rate has been reported. The major complication⁶ related to the procedure includes bleeding from the cystic artery, and biliary complications, i.e., spilled gallstones⁷, biliary leak, and common bile duct injury. Iatrogenic injuries can be successfully avoided by appreciating the limitations and pitfalls of

laparoscopic surgery, and by carefully dissecting the Calot's triangle before dividing any structure. This study presents 02 years experience of LC complications occurred at shalamar hospital Lahore, This aim of this study was to analyze these complications at shalamar hospital Lahore and to deal with them in better way to reduce their graph.

MATERIALS AND METHODS

This retrospective study was carried out in the Department of Surgery, Shalamar Hospital Lahore from January 2013 to December 2014. Laparoscopic cholecystectomy (LC) was performed in all 365 patients, being men 62(16.9%) women 303(83.01%) Ages ranged between 16 and 75 years. All patients admitted through outpatient department. Detailed history, clinical examination and relevant investigations such as such as CBC, ESR, blood sugar, blood urea, Serum Creatnine, HbsAg, HCV Antibody, Liver Function Tests, Chest X-ray, ultrasound of upper abdomen especially for CBD, ECG and cardiac assessment were done especially for elderly patient or having any risks. Pre operative anesthesia assessment is ensured to all patients. Consent was taken properly prior to surgery, informing nature of procedure, possible risks, including the possibility of conversion to open cholecystectomy. All patients scheduled for elective

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cholecystectomy were admitted on day prior to surgery LC was done using standard four ports technique. A 10mm camera port infra umbilical or supra umbilical, 10 mm epigastric port and two other 5 mm ports in the mid clavicular line and anterior axillary line were used. Veress needle technique was used for the creation of pneumoperitoneum. Metallic clips were used during the procedure to ligate the cystic duct and artery, hemostasis is achieved via electrocautery. Retrieval was achieved through epigastric port. Muscular layers both camera and epigastric port sites were opposed using Vicryl 1. All collected specimen were sent for histopathology.

Post operative analgesia is achieved by ketrolac IV, thrice a day. Patients kept nil per oral for 6 hours and then encouraged to proceed with oral liquids and then with food provided there is no any complaint of nausea or vomiting. Early mobilization is encouraged and on doing so urinary catheter was removed. Follow up of all discharged patients done at one week, one month, and two months intervals in the outpatient department. Skin sutures were removed on 8th post operative day. Any associated complaints were noted and dealt accordingly. Data was analyzed using the SPSS-13.0.

RESULTS

In our study 365 patients with majority of females underwent L.C. Age range was 16 to 75 years. The mean age was about 42 years. The youngest patient was of 16 years female. Indications for Laparoscopic Cholecystectomy (LC) included acute cholecystitis 35(9.5%) symptomatic cholelithiasis in 281(76.9%), chronic cholecystitis 42(11.50%), mucocoele gall bladder 7(1.9%). Mean operation time was 45.08±10.18 minutes. The main operative incidents encountered were hemorrhage 35(9.5%). Bleeding resulted from accidental injury to cystic artery in 07 patients. Gross spillage of infected bile is seen in 06 patients, iatrogenic perforation⁸ of the gallbladder 52(14.24%) and common bile duct (CBD) injuries 6(1.64%). Conversion to open operation was necessary in 16 patients (4.3%), usually due to obscure anatomy as a result of acute inflammation⁹ and hemorrhage from cystic artery. There was no any mortality recorded. Post-operative hospital stay was 24 to 48 hours for uncomplicated cases.

DISCUSSION

Unfortunately LC is not free from risks and complications. LC is gold standard procedure for cholelithiasis although it is not risk free but with advancements the results of LC are getting better and complications and conversion rate is decreasing.

The advantages of less pain, short stay hospitalization and early mobilization cosmetically acceptable scar has established it procedure of choice for patients. In our study conversion rate was 4.3% and Bleeding is dangerous complication of laparoscopic cholecystectomy. Bleeding from the port site is secured by applying simple pressure or using cautery, while bleeding during the dissection of Hartman's triangle is dangerous. It becomes very difficult¹⁰ for the surgeon to identify the anatomy and it also increases the post of infection chances. Sometimes the slipping of clips causes the artery to bleed and results in hematoma.

Port site infection¹¹ is rare complications and in our study only 5 cases were followed up with the epigastric port site infection. They all were recovered well. However CBD injury¹² is one of the notorious complications of the laparoscopic Cholecystectomy¹³. The identification of anatomical structures can reduce its incidence. Two patients results in intrahepatic abscess formation¹⁴ which were drained sonographically successfully. Other complications which occurred were bile leakage (03 cases), sub-hepatic abscess (02 cases) and retained bile duct stones (21 cases). Port site infection occurs in 12 patients (3.2%). Post-operative hospital stay was 24 to 48 hours for uncomplicated cases. Serious complications that can occur with laparoscopic cholecystectomy including bile duct injury, bile leaks, bleeding and bowel injury result in part from patient selection, surgical inexperience that are inherent to the minimally invasive approach. A major mode of ductal injury is diathermy burns, which may initially go unnoticed and usually involve the right or common hepatic ducts. No mortality occurred in our study.

CONCLUSION

The advantages of L.C have made it procedure of choice for cholelithiasis⁹. However it is not risk free. The commonest complication was hemorrhage and wound infection. However complications can be decreased with good selection of cases experience and improvement in surgical skills.

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