



CODEN [USA]: IAJPBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.1473038>Available online at: <http://www.iajps.com>**Research Article****LAPROSCOPIC CHOLECYSTECTOMY AND RELATED
COMPLICATIONS AT MAYO HOSPITAL LAHORE**¹Dr. Ariba Mumtaz, ²Dr. Iraj Shehzad, ²Dr. Muqaddus Shakeel Butt¹Allied Hospital Faisalabad²House Officer Jinnah Hospital, Lahore**Abstract:**

Objective: The aim of this research work was to find out the difficulties of surgical removal of the gall bladder from laparoscopy and related reasons at Mayo Hospital Lahore.

Methodology: This research work was carried out from July 2015 to June 2017 in the duration of two years. The information of all the participants who were going under the surgical removal of the gall bladder from laparoscopy during the period of this research work & satisfying the selection standards was gathered and its analysis carried out retrospectively.

Results: There were two hundred and sixteen patients who underwent the surgical removal of the gall bladder from laparoscopy. Females were greater in number than male patients. The total rate of complication was five percent. Some of the complications are bleeding in four patients from cystic artery & gall bladder, infection of port site was also in four patients, injury of bile duct in two patients & colonic injuries in only one patient. The most frequent reasons of these difficulties were unintentional damage to cystic artery, leakage of the bile which is infected and put a cut on the bile duct in error.

Conclusions: Haemorrhage and infection of port site were the most frequent difficulties with the least common complications of injuries of bile duct & colonic wounds. The most frequent reason of bleeding was the injury to the cystic artery, whereas the most common reason of the infection in the port site was the gross spillage of the bile which was infectious.

Key Words: Laparoscopy, Surgical removal, gall bladder, complications, bile, bile duct, cystic artery, port site.

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Please cite this article in press Ariba Mumtaz et al., *Laparoscopic Cholecystectomy and Related Complications at Mayo Hospital Lahore.*, Indo Am. J. P. Sci, 2018; 05(10).

INTRODUCTION:

Stones in the gall bladder are the main health issue in the whole world. Phillip Mouret was the first man who performed the surgical removal of the gall bladder with the help of laparoscopy which was assisted by video in Lyon located in France [1]. LC (Laparoscopic Cholecystectomy) caught the attention of the people related to this field and now it placed us from a condition of prediction to a point where different instrument have not the ability to perform this function in excellence [2]. LC is considered as a model for the diseases of gall stones. Various research works have described the safety & effectiveness of this method as well as some other related benefits as low stay in the hospitals, less recovery time, low rate of adhesions in the abdomen and excellent results [3]. Laparoscopic Cholecystectomy can be easily performed as a normal method [4]. Unluckily, this less invasive method has an association with a high occurrence of the difficulties [5, 6].

General anaesthesia is necessary for this operation and this surgery is prone to have complications as an open surgical removal of gall bladder, in addition to various difficulties which have association with the method of laparoscopy as visceral damages, bleeding, injury of the bile duct etc. The total rate of complications is less than five percent [7]. The occurrence of the complications has a strong association with the skilfulness and now, there is a decrease in the difficulties rate has been concluded [8, 9]. The main objective of this research work was to conclude the complications of Laparoscopic Cholecystectomy & its reasons at Mayo Hospital Lahore.

METHODOLOGY:

The data record of all patients who faced laparoscopic cholecystectomy at Mayo Hospital Lahore. This research work was carried out from July 2015 to June 2017 in the duration of two years. Patients with previous history of jaundice, CBD abnormality, choledocholithiasis, abnormalities of bleedings, HCV and HBV were exited from the research work. Different tests were carried out as complete count of the blood, urea, sugar in the blood, and tests for the liver operation, X ray of the chest and abdomen ultrasound. Anaesthetists evaluated every participant of the research work. The participants who were selected for elective cholecystectomy admitted one day before the day of operation. The participants were acknowledged with the all medical aspects of the issue and their willing was taken for further process.

The method of four ports was the standard for the surgery. Pneumoperitoneum creation was the result of veress method. Epigastric port removed the gall bladder from the liver bed. Suction carried out in the patients of bleeding & bile outflow from gall bladder perforation. Change to open method conducted because of operative difficulty. The removed gall bladder samples were examined for diagnosis of reasons. All the participants had only liquids after operation and proceeded to food after some time after ensuring the condition of no vomit. The complications before and after operation were noted. Drain removal carried out after one day off operation. Patients got rid from admission on next day. Skin stitches removal carried out after eight days. Check-ups carried out after regular intervals. The management of the difficulties in the check-ups carried out. The analysis of the collected information carried out with special emphasis to the rate of complications & their reasons.

RESULTS:

One hundred and eighty-three were the female participants and thirty-three were the male participants of this research work. The average age of the patients was thirty-five years with a range from twenty to seventy years. Signs for LC were included as cholecystitis in forty-two patients and symptomatic gallstones in one hundred and seventy-four patients. The total rate of complication was five percent whereas the rate of mortality was zero percent. The most common complication was Bleeding found in for participants undergoing laparoscopic cholecystectomy.

Bleeding was the outcome of unintentional damage to the cystic artery in 3 participants and from bed during the exclusion of gall bladder techniques were in use to stop the bleeding in the participants. In some participants, the change to open method surgery was used to tackle the problem. Infection of port during surgery was available in four cases. One patient had the infection of wound in umbilical port was fat and epigastric port was not fit in two patients who had the contaminated bile gross. Common bile duct injury affected two patients. It was outcome of clipping in error. Second surgery carried out to remove clips & T tube had positioned in the common bile duct. One participant with colonic abnormality was discovered during method in need to change to open surgery.

DISCUSSION:

There are two types of complications from laparoscopic cholecystectomy. These complications are outcome of laparoscopic involvement as wound

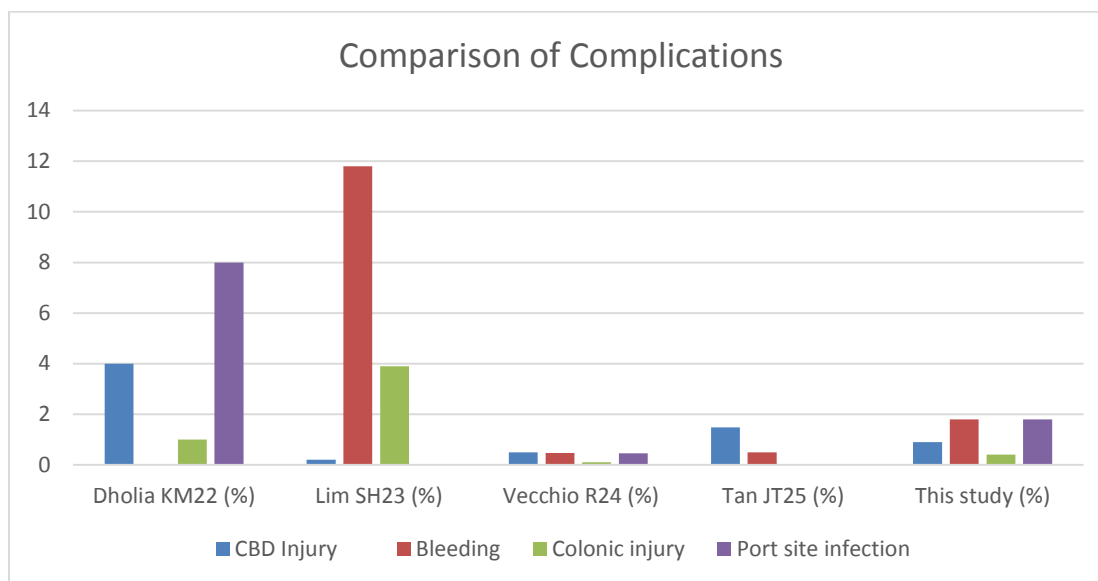
got from veress needle, injuries of trocar and those complications which have association with the surgery as the injury of the common bile duct. The frequencies of the difficulties in laparoscopic Cholecystectomy were very high during the starting period of laparoscopy, technical restriction being the important reason of this high rate. Problems are easily seen during the formation of the pneumoperitoneum with the use of veress needle. Deziel [13] confirmed the thirteen patients with injuries in aorta in a research work of seventy-seven thousand six hundred and four surgeries.

These insertion problems can be decreased by the use of open method for the creation of

pneumoperitoneum. The occurrence of the bile duct as an association with experience & a reduction in the injuries of bile duct has been described [9, 10]. Different research works have reported the methods of safety to prevent complications but there is still occurrence of about 0-1% is available [11-13]. In this research work, the bile duct damage was found in two patients. The clips were discovered in the patients and rectified. After the detection of the CBD, the placement of the T tube carried out. These complications can be mitigated by the experience & proper selection of the cases. As soon as doctor gets more skill in this matter, the rate of the problems should reduce. The visceral damage occurs because of veress needle.

Table-I: Comparison of complications

Complications	CBD Injury	Bleeding	Colonic injury	Port site infection
Dholia (KM22)%	4	-	1	8
Lim (SH23) %	0.2	11.8	3.9	-
Vecchio (R24) %	0.5	0.47	0.1	0.45
Tan (JT25) %	1.48	0.49	-	-
This study %	0.9	1.8	0.4	1.8



In this case study, only single patient had the colonic damage which was discovered before operation and basic rectification was performed. The total occurrence of the severe visceral complications during laparoscopic cholecystectomy was 0-5% [3, 7, 9]. In this research work, bleeding was occurring in the case of only four participants. Two participants required to change the procedure to open method as laparoscopy was unable to control the bleeding. Pressure & suture application is effective in controlling the low bleeding. Improper exposure, swelling, hypertension and unskilful method are some of the reasons which are taking part in the bleeding of operative site [8, 9, 14, 15]. Local research works [16] has concluded the bleeding in 3.18% participants but another research work by Usal [17] stated the vessel damage in only 0.11% patients. The infection of the wound occurs from 0.3% to 1% of the patients [18-20].

In this research work, 4 patients got infection in the surgical port. Ordinary dressings and oral medications had the best results in the management of those infections. The infection of the wound was very frequent in fat patients. The information of these patients sent the infection committee of the hospital for further actions. The concluded occurrence of the infection in the surgical port site was from 0.5 to 1% [18-21]. The contrast of complications as concluded in this case study is mentioned in Table-1.

CONCLUSION:

The total rate of complication was five percent & these complications consists bleeding & infection of port site as the most common difficulties followed by the injuries of common bile duct and colonic injuries. The damage to the cystic artery was the main reason of bleeding. The spillage of the bile which was infected, fatness & USS (umbilical stitch sinus) were the main reason of the infection of port site.

REFERENCES:

1. Shamim M, Dahri MM, Memon AS. Complications of laparoscopic cholecystectomy. *Pak J Surg* 2006;22(2):70-7.
2. Gadacz TR. Update on laparoscopic cholecystectomy, including a clinical pathway. *Surg Clin North Am* 2000;80:1127.
3. Deziel DJ, Millikan KW, Economou SG, Doolas A, Ko ST, Airan MC. Complications of laparoscopic cholecystectomy: A national survey of 4292 hospitals & an analysis of 77604 cases. *Am J Surg* 1993;165:9-14.
4. Keulemans YCA, Eshuis J, Haesde H, Wit de LT, Gouma DJ. Laparoscopic cholecystectomy: Day care versus clinical observation. *Ann Surg* 1998;228:734-40.
5. Go PMNYH, Schol FPG, Gouma DJ. Laparoscopic cholecystectomy in the Netherland. *Br J Surg* 1993;80:1180-3.
6. McMohan AJ, Fullarton G, Baxter JN, O'Dwyer PJ. Bile duct injury and bile leakage in laparoscopic cholecystectomy. *J Am Coll Surg* 1995;180:101-25.
7. Jones DB, Soper NJ. Complications of laparoscopic cholecystectomy. *Ann Rev Med* 1996;47:31.
8. Schol FPG, Go PMNYH, Gouma DJ. Risk factors for bile duct injury in laparoscopic Cholecystectomy: analysis of 49 cases. *Br J Surg* 1998;81:1786-8.
9. Nair RJ, Dunn DC, Fowler S, McCloy RF. Progress with cholecystectomy: improving results in England & Wales. *Br J Surg* 1997;84:1396-8.
10. Richardson MC, Bell J, Fullarton JM. Incidence and nature of bile duct injury following laparoscopic cholecystectomy; An audit of 5913 cases. West of Scotland Laparoscopic cholecystectomy Audit Group. *Br J Surg* 1996;83:1356-60.
11. McMohan AJ, Fullarton G, Baxter JN, O'Dwyer PJ. Bile duct injury and bile leakage in laparoscopic cholecystectomy. *Br J Surg* 1995;82:307-13.
12. Strasberg SM, Heartl M, Soper NJ. An analysis of the problem of biliary injury during laparoscopic cholecystectomy. *J Am Coll Surg* 1995;180:101-25.
13. MacFayden BV, Vecchio R, Richrdo AF, Mathis CR. Bile duct injury after laparoscopic cholecystectomy. The United State experience. *Surg Endosc* 1998;12:315-21.
14. Soper NJ, Dunnegan DL. Laparoscopic cholecystectomy: experience of a single surgeon. *World J Surg* 1993;17:16-20.
15. Deveney KE. The early experience with laparoscopic cholecystectomy. An analysis of complications. *Arch Surg* 1993;128:627-32.
16. Arain Gm, Hasan A, Randhawa MH, Malik SA. Laparoscopic cholecystectomy and its complications. A study of 1100 cases. *Pak J Gastroenterol* 1998;12:1-2.
17. Usal H, Sayad P, Hayek N, Hallak A, Huie F, Ferzli G. Major vascular injuries during laparoscopic cholecystectomy. An institutional review of experience with 2589 procedures and literature review. *Surg Endosc* 1998;12(7):960-2.

18. Soper NJ, Stockmann PT, Dunnegan DL, Ashley SW. Laparoscopic cholecystectomy. The new gold standard? Arch Surg 1992;127:917-21.
19. Stoker ME, Vose J, O'Mara B, Maini BS. Laparoscopic cholecystectomy. A clinical and financial analysis of 280 operations. Arch Surg 1992;127:589-94.
20. Wittgen CM, Andrus JP, Andrus CH, Kaminski DL. Cholecystectomy. Which procedure is best for the high risk patients? Surg Endosc 1993;7:395-9.
21. Dunn D, Fowler S, Nair R. Laparoscopic cholecystectomy in England and Wales: Results of an audit by Royal College of Surgeons, England. Ann R Coll Surg Engl 1994;76:269.
22. Dholia KM, Memon AA, Sheikh MS. Laparoscopic cholecystectomy: Experience of 100 cases at a teaching hospital of Sindh. J Liaquat Univ Med Health Sci 2005;4(3):105-8.
23. Lim SH, Saleh I, Poh BK. Laparoscopic Cholecystectomy: An audit of our training programme. ANZ J Surg 2005;75(4):231-3.
24. Vecchio R, Macfadyen BV, Latteri S. Laparoscopic cholecystectomy: Analysis of 114,005 cases of United States series. Int Surg 1998;83:215-9.
25. Tan JT, Suyapto DR, Neo EL, Leong PS. Prospective audit of laparoscopic cholecystectomy at a secondary referral centre in South Australia. ANZ J Surg 2006;76(5):335-8.