CODEN [USA]: IAJPBB ISSN: 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES
http://doi.org/10.5281/zenodo.3840159

Available online at: http://www.iajps.com Research Article

OUTCOME, EFFICACY AND ECONOMICAL BENEFITS OF DAY CARE LAPAROSCOPIC SURGERY

Dr. Aali Ahmed Ejaz[1], Dr. Saad Ijaz[2], Dr. Muhammad Zeeshan[3]
[1] MBBS, FCPS-1 (Surgery) POF Hospital Wah Cantt
[2] Ayub Medical College, Abbottabad
[3] DHQ Hospital, Attock

Article Received: March 2020 **Accepted:** April 2020 **Published:** May 2020

Abstract:

Goal: *The objective of this study were to determine the safety and feasibility of Day case Laparoscopic Cholecystectomy, unplanned admission rate, identify reasons for unplanned admissions and re-admissions after discharge, and to explore how to improve the same day discharge rate.*

Project: *A Retrospective descriptive study.*

Place and duration: *In the Surgical department of POF Hospital Wah Cantt for one year duration from February 2019 to February 2020.*

Methodology: *Patients with gallstones and biliary colic were selected at the clinic and ultrasound confirmed symptoms. Patients who hospitalized with cholecystitis, which improved after conservative treatment, were also considered for daily surgery after six weeks of discharge. Other criteria established for LC day care surgery were patients under 55 who received points I and II as an ASA fitness score, lived 50 km from the hospital, and were hospitalized in case of problems. During discharge, they were advised to go to the emergency room when they felt significant pain, vomiting or other ailments.*

Results: *62% of patients met the eligibility criteria, 224 patients and were considered sufficient for Day case LC. The most common reason for rejection was that the patient lived outside the specified area (20%). A total of 88.8% (199) of patients were discharged within eight hours after surgery. The reasons for discharge failure were abdominal drainage in 7 patients, vomiting in 6 patients, conversion to open surgery in 5 patients and late onset of surgery in 6 patients. One patient was admitted when SVT developed (paroxysmal supraventricular tachycardia. 5 patients (2.2%) after discharge and reported vomiting, one patient was admitted with benign hepatic collection, and one patient developed obstructive jaundice due to CBD stones. None of the patients had any surgical complications, and then he was discharged completely.*

Conclusions: *Day case LC is safe, workable and potentially beneficial to the patient's healthcare system. We can improve our Day case LC and reduce the number of requests and re-requests by strictly following the instructions / protocols regarding Day Case LC and better cooperation with the anesthesiology department.*

Key words: *Day case laparoscopic cholecystectomy, criteria for day case surgery, ASA I & II*

Corresponding author:
Dr. Aali Ahmed Ejaz,
MBBS, FCPS-1 (Surgery) POF Hospital Wah Cantt

QR code

Please cite this article in press Aali Ahmed Ejaz et al, ***Outcome, Efficacy And Economical Benefits Of Day Care Laparoscopic Surgery.,*** *Indo Am. J. P. Sci, 2020; 07(05).*

INTRODUCTION:

Laparoscopic cholecystectomy (LC) is now widely accepted as the treatment of choice for symptomatic gallbladder disease[1-2]. Advances in surgical and anesthesiological techniques, greater knowledge of the procedure, each left in hospital. shorter time. The Ministry of Health of the Pakistan has defined and ordered an increase in the number of outpatient operations, which is one of the main goals of the Health Service Plan of Pakistan[3-4]. 2 Operations such as LC, which is performed as a daily case, should be increased in day surgery departments. Although the publications report safe discharge the same day after LC, with complications and readmission rates similar to procedures performed in patients with night-time observations[7-8]. In this study, we tried to find the acceptability of LC during the day for patients and the viability of LC discharged on the same day.

In July 2019, we started performing LC by admitting patients in the day-case unit. We put Day case LC as first case on normal operating lists. Comprehensive data have been collected on the surgical procedures, recovery period, postoperative pain, discharge time, status of patient at discharge time, in case of admission reason for admission and other problems.

PATIENTS AND METHODS:

The work was carried out at the Surgical department of POF Hospital Wah Cantt for one year duration from February 2019 to February 2020. Patients selected from clinics who showed symptoms compatible with bile colic and ultrasound confirmed the presence of gallstones. Patients who experienced acute biliary pain and / or cholecystitis that resolved after conservative treatment were considered for daily surgery after six weeks of discharge. Other criteria established for the daily case of LC were patients under 55 years of age who lived 50 km from the hospital and had the results of the first and second physical assessment of the American Society of Anesthesiologists for anesthesia. In case of problems, he is taken to hospital. During discharge, they were advised to go to the emergency room when they felt severe pain, vomiting or other moderate to severe ailments. Otherwise, regular monitoring of patients undergoing in the OPD. Patients with a body mass index (BMI)> 35 kg / m2, American Society of Anesthesiologists (ASA) achieve 3 or more complex bile disease (signs of common bile duct or previous endoscopic retrograde cholangiogram, pancreatitis Severe, recurrent cholecystitis) previous extensive abdominal surgery was not considered suitable for one-day surgery and was excluded. All patients must have a responsible adult who will accompany them at home and stay with them for 48 hours. All patients were admitted at 7:30 am on the day of surgery. Antibiotic prophylaxis and DVT are administered according to routine guidelines. The operation usually started before 09:00. In some cases, however, it is delayed due to the delayed arrival of the patient to the outpatient surgery department or due to lack of space due to emergency operations. Laparoscopic cholecystectomy was performed throughout the day by surgeons-consultants. The standard four-port technique was used. For peritoneal pneumothorax, an open or closed technique was used, depending on the surgeon's preferences. First cannulation through the hypogastric / umbilical incision using a 10 mm port and three additional ports: epigastric (10 mm) and two laparoscopic views from the right lateral side (5 mm). Intra-abdominal pressure was kept below 14 mmHg. After closure, 0.5% bupivacaine was applied to all ports in accordance with safe doses calculated by weight. After sufficient recovery from anesthesia, the patient was transferred to the day care unit, where trained nurses made careful observation. If the observations were satisfactory, the intravenous fluids were discontinued. Patients were encouraged to act as quickly as possible and fluids were given based on tolerance. Patients are very stable, fully aware and if:

1. The surgeon did not expect any surgical problems.
2. There was very little nausea or vomiting.
3. Pain has been controlled or minimal.
4. Patients could easily enter the bathroom.
5. Patients were able to get dressed.
6. Patients were sure that they would return home.

Patients who did not meet any of the above criteria were admitted. Patients were given a combination of antiemetic and 500 mg TID, diclofenac sodium 50 mg BID and Caps Tramadol 50 mg BID during discharge. Along with the OPD quote, advice was provided on wound healing and diet. Patients also received information on how to contact the surgical voice recorder on call in case of serious symptoms that have already been explained.

RESULTS:

224 patients underwent LC premedication in our hospital. All patients agreed to daily drug administration after receiving written consent / information prior to surgery. The average age at the time of surgery was 38 (19-55 years), and 87% of patients were women. The average body mass index was 28 kg / m2 (range 18-33 kg / m2) and the average weight 71 kg (range 53-88 kg). Despite our exclusion protocol, several patients attended who did not meet the criteria for LC day. The mean surgery time for all patients was 52 minutes (range 25-115 minutes). Five conversions have been made to open type surgery. In three cases, as shown in Table 1, there were fibrous adhesions that were difficult to appreciate the anatomy that caused the transformation. One case had a duodenal fistula, and one case developed due to excessive bleeding from cirrhosis and gallbladder placenta. Because GB adhered deeply and intensively to the bed, 7 patients

were placed with drainage, and extraction was followed by a significant area that was significantly drained. Six patients reported pain and vomiting in the upper abdomen at night and were released the following morning. The young patient developed supraventricular tachycardia 2 hours after surgery, so one day was accepted. Five patients reported for the night due to the late onset of cases. 199 patients (82%) were successfully discharged on the day of surgery. The average length of stay of successful daily patients from surgery to discharge was 6 hours 50 minutes (range, 6-8 hours). Five patients were re-admitted after a successful LC day care surgery. Three patients were admitted late at night with abdominal pain and vomiting after discharge. The tests were not unusual, and the pain began with admission for 24 hours. One patient entered the third day of surgery with upper right quadrant pain and low-grade fever. LFT showed slight changes in levels. Later ultrasound revealed a small sub-hepatic conservative collection. One patient was hospitalized with obstructive jaundice on the fifth day after surgery. An ERCP was performed showing the stone in CBD. After sphincterotomy and stone removal, jaundice has completely disappeared.

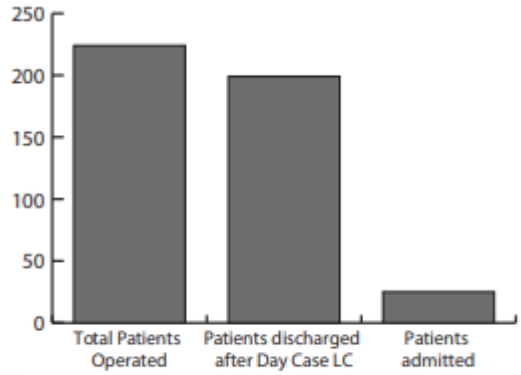

Figure 1: *Graphic representation of results of day-care laparoscopic surgery*

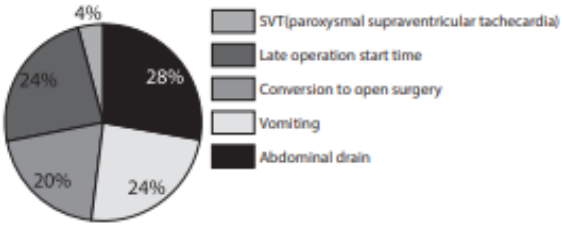

Figure 2: *Reasons for failure to discharge*

Table 1: Causes of conversion to open cholecystectomy

Reasons, Conversion to Open Surgery	No. of Patients
Adhesions difficult Anatomy	3
Choledochoduedenal Fistula	1
Cirrhotic Liver, excessive bleeding from GB bed	1
Total	5

Table 2: Reasons for overnight stay of daycare laparoscopic surgery patients

Reason for Admission	No. of Patients
Late start of operation	6
Pain upper abdomen and vomiting	6
Placement of drain	7
Conversion to open Cholecystectomy	5
Supraventricular Tachycardia	01
Total	25

Table 3: Causes of re-admission

Reasons, Patients Re-admitted after discharge	No. of Patients
Pain and Vomiting	3
Sub-hepatic collection	1
Jaundice	1
Total	5

After observing OPD on postoperative day 9 or 10, patients were asked about their experiences with day LC. Both successful patients during the day and hospitalized patients were very satisfied with the service received. The remaining 6% said they would feel safer or more comfortable if they were admitted to hospital overnight.

DISCUSSION:

At the beginning of the LC during the day, there was concern about whether the patient and family would accept this, but we found that a small number of patients who qualified for LC during the day refused surgery and discharged at one day[7-10]. 8.8% of our patients were successfully discharged on the day of surgery. This number can be increased to 92%

1. Exclusion of patients who do not meet the daily LC case criteria
2. Ask the patient to come to the day care unit on time.
3. Separate OR allocation for LC during the day and LC in hospital.

Increased age, ASA> 2, duration of surgery, and previous cholecystitis or pancreatitis are among the frequencies identified by researchers as determinants of unplanned admission[11-13]. In our study, the main factor predicting independent acceptance is the delay at the beginning of the operation, i.e. 1,200 hours later.

Acceptance of same-day dismissal in Great Britain has been reported and satisfaction rates are 71-95%. In this study, 94% of patients were very satisfied with the services we provide in dismissed and accepted groups[14-15].

CONCLUSION:

Our experience shows that the use of daily LC at King Abdullah Hospital, Bisha, KSA is appropriate and acceptable for patients. We can improve our LC services for Day cases and lower the acceptance and readmission rate, strictly following the guidelines / protocols for Day Case LC and better cooperation in the anesthesiology department.

REFERENCES:

1. Turkstani, A., O. Ibraheim, G. Khairy, A. Alseif, and N. Khalil. "Spinal versus general anesthesia for laparoscopic cholecystectomy: A comparative study of cost effectiveness and side effects." Anaesthesia, Pain & Intensive care (2019): 9-14.
2. Koppatz, Hanna, Jukka Harju, Jukka Sirén, Panu Mentula, Tom Scheinin, and Ville Sallinen. "Three-dimensional versus two-dimensional high-definition laparoscopy in cholecystectomy: a prospective randomized controlled study." Surgical endoscopy 33, no. 11 (2019): 3725-3731.
3. Griffiths, Ewen A., James Hodson, Ravi S. Vohra, Paul Marriott, Tarek Katbeh, Samer Zino, Ahmad HM Nassar, and West Midlands Research Collaborative. "Utilisation of an operative difficulty grading scale for laparoscopic cholecystectomy." Surgical endoscopy 33, no. 1 (2019): 110-121.
4. Ullah, Mahmud Ekram, Md Mushfiqur Rahman, Hashim Rabbi, Md Noor A. Alam, and Tapash Kumar Maitra. "Outcome of laparoscopic cholecystectomy as ambulatory surgery: experience of 250 cases." BIRDEM Medical Journal 9, no. 2 (2019): 157-161.
5. Khan, Saad Ullah, Jun Yi Soh, Nazli Muhibullah, Aikaterini Peleki, Muhammad Abdullah, and Peter William Waterland. "Emergency Laparoscopic Cholecystectomy: Is Dedicated Hot Gall Bladder List Cost Effective?." Journal of Ayub Medical College Abbottabad 31, no. 1 (2019): 3-7.
6. Mak, Malcolm HW, Woon Ling Chew, Sameer P. Junnarkar, Winston WL Woon, Jee-Keem Low, Terence CW Huey, and Vishalkumar G. Shelat. "Patient reported outcomes in elective laparoscopic cholecystectomy." Annals of Hepato-Biliary-Pancreatic Surgery 23, no. 1 (2019): 20-33.
7. Marino, Marco Vito, Antonello Mirabella, Domenico Guarrasi, Massimo Lupo, and Andrzej Lech Komorowski. "Robotic-assisted repair of iatrogenic common bile duct injury after laparoscopic cholecystectomy: Surgical technique and outcomes." The International Journal of Medical Robotics and Computer Assisted Surgery 15, no. 3 (2019): e1992.
8. El-Sharkawy, A. M., N. Tewari, R. S. Vohra, CholeS Study Group, and West Midlands Research Collaborative. "The Cholecystectomy As A Day Case (CAAD) Score: A Validated Score of Preoperative Predictors of Successful Day-Case Cholecystectomy Using the CholeS Data Set." World journal of surgery 43, no. 8 (2019): 1928-1934.
9. Tseng, Esther S., Jonathan B. Imran, Ibrahim Nassour, Stephen S. Luk, and Michael W. Cripps. "Laparoscopic cholecystectomy is safe both day and night." journal of surgical research 233 (2019): 163-166.
10. Liu, Qiao-fei, Ling-ling Bian, Meng-qing Sun, Rong-hua Zhang, Wei-bin Wang, Yong-ning Li, and Jun-chao Guo. "A rare intrahepatic subcapsular hematoma (ISH) after laparoscopic cholecystectomy: a case report and literature review." BMC surgery 19, no. 1 (2019): 3.
11. Rebibo, Lionel, Pauline Leourier, Rachid Badaoui, Fabien Le Roux, Emmanuel Lorne, and Jean-Marc Regimbeau. "Minor laparoscopic liver resection as day-case surgery (without overnight hospitalisation): a pilot study." Surgical endoscopy 33, no. 1 (2019): 261-271.
12. Rebibo, Lionel, Karim K. Maurice, Martin Nimier, Mouna Ben Rehouma, Philippe Montravers, and Simon Msika. "Laparoscopic sleeve gastrectomy as day-case surgery: a review of the literature." Surgery for Obesity

and Related Diseases 15, no. 7 (2019): 1211-1217.
13. Aslet, M. E. D., D. R. A. Yates, and S. Wasawo. "Improving the day case rate for laparoscopic cholecystectomy via introduction of a dedicated clinical pathway." Journal of perioperative practice (2019): 1750458919862701.
14. Mak, Malcolm HW, Woon Ling Chew, Sameer P. Junnarkar, Winston WL Woon, Jee-Keem Low, Terence CW Huey, and Vishalkumar G. Shelat. "Patient reported outcomes in elective laparoscopic cholecystectomy." Annals of Hepato-Biliary-Pancreatic Surgery 23, no. 1 (2019): 20-33.
15. Kaushal-Deep, Singh Mathuria, Mehershree Lodhi, Afzal Anees, Shehtaj Khan, and Mohammad Amanullah Khan. "Randomised prospective study of using intraoperative, intraincisional and intraperitoneal ropivacaine for the early discharge of post-laparoscopic cholecystectomy patients as a day case in a cost-effective way in government setup of low-income and middle-income countries: Opening new horizons." Postgraduate medical journal 95, no. 1120 (2019): 78-84.