

## Re-evaluation of the length of postoperative hospital stay in an elective uncomplicated laparoscopic cholecystectomy.

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### Abstract -

**Background** - Laparoscopic cholecystectomy is now considered gold standard for gall stone disease. After elective uncomplicated cholecystectomy patients are generally discharged either on or after 2<sup>nd</sup> post operative day in our hospital. This article searches scope for early discharge of such patients preferably on 1<sup>st</sup> post operative day or even on the same day so as to reduce the burden on health care system.

**Materials and Methods**- Data of 150 cases who underwent elective uncomplicated laparoscopic cholecystectomy during July 2019 to December 2019 was evaluated retrospectively. Post operative data of 20 cases was found inadequate and was removed from the study.

**Result** - Mean operating time was 45 minutes. Mean post operative stay was 2.4 days. Sub-hepatic drain when applied was removed on 1<sup>st</sup> post operative day in most of the cases. Readmission rate was zero. Mortality rate was zero. Complications if any were minor and were dealt conservatively.

**Conclusion** - Patients undergoing elective uncomplicated laparoscopic cholecystectomy can be safely discharged on 1<sup>st</sup> post operative day until and unless there is sufficient clinical evidence or any comorbidity for the delay in discharge of such patients.

**Key words** - uncomplicated laparoscopic cholecystectomy.

Date of Submission: 07-05-2020

Date of Acceptance: 21-05-2020

### I. Introduction:

Laparoscopic cholecystectomy is the treatment of choice for symptomatic gall stone disease[1]. It has now become the bread and butter surgery for general surgeons and one of the most frequently performed minimal invasive surgery in our hospital. Laparoscopic technique offer the patients great benefits in terms of reduced post operative pain, small scars, shorter hospital stay, early return to work and decreased risk of selected complications when compared with open technique[2,3,4]. In our set up the usual norm is to discharge the patient at least after 48 hrs that is on/after 2<sup>nd</sup> post operative day. Many studies around the world advocate that after elective uncomplicated laparoscopic cholecystectomy patients can be safely discharged 24hrs post operatively or even on the same day as day care procedure[5]. In our study we have tried to reevaluate our approach of discharging the uncomplicated cases of laparoscopic cholecystectomy after 48 hrs of operation and have tried to answer to the question that “can this period be reduced to 24hrs?”

### II. Materials And Methods :

A total of 150 cholecystectomies were performed from July 2019 to December 2019 in our hospital. A retrospective analysis was carried out from data obtained from the discharge slip, OT- note and patient history documented at the time of admission and archived in the medical record department of our hospital.

Inclusion criteria – symptomatic cholelithiasis confirmed by ultrasound.

Exclusion criteria – a. acute cholecystitis

b. patients with body mass index > 38kg/m<sup>2</sup>

c. American society anaesthesiologist score (ASA) more than or equal to 3

d. evidence of common bile duct stone or previous ERCP or severe pancreatitis

- e. previous history of extensive abdominal surgery
- f. cholecystectomies done along with other procedures like salpingectomy, ovarian cystectomy
- g. laparoscopic cholecystectomies converted to open.

Out of 150 elective uncomplicated laparoscopic procedures post operative recovery data of 20 patients was found inadequate so only 130 patients were finally included in the study.

### **III. Result:**

Out of 130 patients, 90 were female and 40 were male patients with an average age of 44 years. All the operation was done by conventional four port placement and average operating time was 45 mins. Mean post operative hospital stay was 2.40 days ranging from 2 to 6 days. Patients who were required to stay for more than 48 hours were mainly for re-evaluation of their already existing comorbidities like dose adjustment for insulin/oral hypoglycaemic drugs (for diabetic patients) or antihypertensive drugs (for hypertensive patients) or those who were on anti-coagulant therapy. In difficult laparoscopic cholecystectomies where frozen calots triangle was found as in mirizzi's syndrome and those associated with liver cirrhosis a subhepatic drain was given which was removed on first postoperative day but in five of those cases it was removed on fourth day due to persistent sanguinous nature of the discharge. None of the patients discharged were readmitted for any abdominal collection or any reoperation. Mortality rate was zero. Minor complications was seen in few post operative cases like minor abdominal pain, occasional vomiting, heart burn and obstipation which were conservatively treated.

### **IV. Discussion:**

The newer techniques in surgery are aimed at giving maximum comfort to the patient, less post operative pain, shorter hospital stay and reduced cost[6,7]. Based on the above retrospective analysis we found that after an elective uncomplicated laparoscopic cholecystectomy about 80% of the patients were discharged on second postoperative day and only about 20% had a post operative stay of more than 48hrs. Those who were discharged on second post operative day had an uneventful stay or with minor post operative complication which need not warranted the patients to remain admitted in the hospital. Studies in the west are advocating laparoscopic cholecystectomies as day care procedure where patients are admitted for investigation or operation on a planned non resident basis[8]. Ours is a high volume hospital and there is a constant shortage of vacant beds. Moreover, patients have to bear daily bed charges. Based on above discussion we can safely say that majority of the patients could have easily been discharged on post operative day 1 which could have allowed more turn over of patients in the surgical ward so more patients could be operated. This would have helped in reducing the number of patients in the wait list and reduce the burden of health care on our system.

### **V. Conclusion:**

Through this study we can easily conclude that with efficient selection of patients for laparoscopic cholecystectomy we can safely discharge the patients on post operative day 1 given that every parameter is normal. This would reduce the burden on our health care system and also reduce the overall treatment cost and reduce the number of patients denied of admission because of non vacant beds.

### **Limitations:**

Ours was a single centre study with relatively small sample size. A multicentre study with a large sample size can provide a broader picture.

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