

Laparoscopic Cholecystectomy “Outpatient Procedure”

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ABSTRACT. Laparoscopic cholecystectomy can be successfully and safely performed as an outpatient procedure in most patients with gallstones. Eighty patients (80) have been admitted for laparoscopic cholecystectomy in an outpatient surgery unit according to certain criteria. All patients had laparoscopic cholecystectomy successfully completed with no conversion. Seventy-seven patients (96.25%) were discharged on the same day and only 3 patients (3.75%) had to be admitted. Two had intra-abdominal drain inserted and one had uncontrolled intra-operative hypertension. “Laparoscopic cholecystectomy” as a day procedure provides a safe treatment for most patients with symptomatic gallstones.

Keywords: Laparoscopic cholecystectomy, Gallbladder, Gallstones, Outpatient.

Introduction

Laparoscopic cholecystectomy is considered “the acceptable gold standard” for the treatment of cholelithiasis^[1].

Many reports on “outpatient laparoscopic cholecystectomy”^[2] showed up to 87% of patients were sent home on the same day. The main postoperative problems reported in these reports were nausea, vomiting, and abdominal pain^[3]. Changes in anaesthetic practice would seem to make a day-case laparoscopy a more acceptable procedure^[4].

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In Saudi Arabia, our patients prefer to stay in the hospital. Most of the hospitals in our country are still admitting patients for laparoscopic cholecystectomy stay up to 2-4 days.

Our goal was to assess the feasibility, safety, and acceptability of providing this procedure on day-care basis.

Materials and Methods

Patients seen in the outpatient clinics under the service of the two involved consultants were admitted for a day-care laparoscopic cholecystectomy if they fulfill the following criteria:

1. Any age or sex.
2. Symptomatic gallstones diagnosed by ultrasound.
3. ASA (American Society of Anesthesiologist) Class 1.
4. No liver cirrhosis diagnosed biochemically or radiologically.

All the patients were informed that they would go home on the same day during the interview in the outpatient clinic. All patients were evaluated preoperatively by liver function test and abdominal ultrasound. Patients were admitted to the day unit at 7:30 a.m., and an attempt was made to perform surgery as early as possible. All patients had prophylactic antibiotics with induction of anaesthesia (Zinacef 1.5 g IV).

Anaesthesia was induced by thiopeantal, barbiturate, and maintained with nitrous oxide, narcotic, and inhalation agents. They were monitored in the recovery room and then transferred to the day-care unit to be observed by the day-care nurses.

Postoperative patients had the following:

1. Diclofinac 75 mg intramuscular injection before discharge.
2. Reviewed by the surgical team before discharge.
3. Discharged on Diclofinac 50 mg every 8 hours.
4. Instructed to come to the hospital if their pain was not relieved by oral analgesia.
5. Patients were reviewed in the surgical clinic one week postoperatively and asked about pain, vomiting and also their personal view of being discharged on the same day.

Results

Eighty patients underwent laparoscopic cholecystectomy as a day-care procedure between 1999 and 2000. Age ranged between 19-74 years old (mean age was 46.5 years), Female = Male ratio = 3:1.

Liver function test was normal in all patients. Ultrasound confirmed the presence of gall stones. Gall bladder wall minimally thickened in 69 patients (81.25%). The intrahepatic biliary tree were not dilated in all patients.

The past surgical history was unremarkable in the majority of the patients except 12 patients (15%) who had lower abdominal surgery (5 appendectomies, 2 caesarean sections, and 5 laparoscopies). Hospital stay ranged between 6-12 hours with an average of 9 hours. The detailed operative notes in regards to the difficulties and to the blood loss were reviewed. Most patients had minimal to moderate difficulties which were related to the presence of adhesions at the gall bladder area of the presence of impacted large stone in a Hartman's pouch.

All patients admitted for day-care laparoscopic cholecystectomy had their procedure completed laparoscopically (no conversion to open cholecystectomy). Only 3 patients (3.75%) had to be admitted.

Two of them had difficult dissection with excessive oozing from the liver bed which required abdominal drain insertion, although both did not require blood transfusion, they were admitted to be monitored for excessive blood loss from the drain. The third patient had uncontrolled high blood pressure during the procedure and even postoperative and was admitted for better evaluation and observation. No patient required readmission and none had postoperative complications.

The patients were reviewed in the surgical clinic one week postoperatively, there were no wound infection, and only two patients had serious discharge from the supraumbilical wound.

The acceptability of laparoscopic cholecystectomy as day-care was high among the patients, 66.67% strongly accepted, and 33.33% accepted but they preferred to be admitted for one or two days for different reasons: some of them admitted that the main reason for this preference that they feel safer, while others claimed that they had nausea, vomiting, and postoperative pain that was not relieved with analgesia.

Discussion

Laparoscopic cholecystectomy has been performed regularly as out-patients in patients with uncomplicated gallstones disease in many countries. Many centers have employed "short-stay" units or "23-hours admissions" for postoperative observation following laparoscopic cholecystectomy^[5]. A retrospective analysis of 130 patients undergoing laparoscopic cholecystectomy as outpatient procedures showed that, the outpatient experience was rated as good by 75.5% of the patients, fair by 22.5%, and poor by 2%. In retrospect, 20.4% of the patients stated that they would have preferred an inpatient to an outpatient procedure^[6]. The acceptance rate of our patients was high, our patients were satisfied with the treatment modality they underwent and same day discharge in > 99% of cases with low morbidity, 66.67% strongly accepted, and

33.33% accepted.

Inadequately treated pain is the major cause of unanticipated hospital admissions, but as results of understanding of the mechanisms of acute pain and the physiological basis of pain conception, the provisions of stress free anaesthesia with minimal postoperative discomfort is now possible for most patients undergoing elective surgical procedure.

Reported overall complications rate for laparoscopic cholecystectomy range between 0.5 - 5%. Most of the reported complications are not diagnosed within the first twenty-four hours [7]. The hospital stay did not reduce the detection and subsequent consequences of complications. Therefore, 6 hours of observation after laparoscopic cholecystectomy appears to be sufficient [8]. Patient selection is an important factor in deciding the performance of laparoscopic cholecystectomy appears to be sufficient [14]. Patient selection is an important factor in deciding the performance of laparoscopic cholecystectomy as day-care. In the future we might expand our selection criteria to include selected cases of acute cholecystitis and ASA class 11 and 111. Patients for day-care surgery should be done at the beginning of the lists, also they should receive good analgesia to avoid the readmission due to uncontrolled pain. The main problems reported were nausea and vomiting. Changes in day surgery anaesthetic practice includes the wider use of non-steroidal analgesics and the specific use of propofol, a new short acting anaesthetic drug with improved recovery and anti-emetic properties [4].

The cost savings for outpatient surgery compared with surgery with 24-hour admission was 25% [5], cost savings were not immediately apparent in our initial analysis.

The outcome of patients who underwent laparoscopic cholecystectomy appeared not to be influenced by clinical observation after surgery [8].

Outpatient laparoscopic cholecystectomy is highly acceptable to patients, even though many desire some convalescence in a hospital setting. We suggest that increasing institutional experience, better patient education, and strategies to eliminate common postoperative problems can lead to greater same-day discharge rate after laparoscopic cholecystectomy [9].

References

- [1] Hunter JG. Avoidance of bile duct injury during laparoscopic cholecystectomy. *Am J Surg* 1991; 162 (1): 71-76.
- [2] Arregui ME, Davis CJ, Arkush A, Nagan RF. In selected patients outpatient laparoscopic cholecystectomy is safe and significantly reduces hospitalization charges. *Surg Laparosc Endosc* 1991; 1 (4): 240-245.
- [3] Taylor E, Gaw F, Kennedy C. Outpatient laparoscopic cholecystectomy feasibility. *J Laparoendosc Surg* 1996; 6(2): 73-7.
- [4] Ratcliffe F, Lawson R, Millar J. Day-case laparoscopy revisited: have post-operative morbidity and patient acceptance improved? *Health Trends* 1994; 26(2): 47-49.
- [5] Zegarra RF 2nd, Saba AK, Peschiera JL. Outpatient laparoscopic cholecystectomy: safe and cost effective? *Surg Laparosc Endosc* 1997; 7(6): 487-90.
- [6] Lillemo KD, Lin JW, Talamini MA, Yeo CJ, Snyder DS, Parker SD. Laparoscopic cholecystectomy as a "true" outpatient procedure: initial experience in 130 consecutive patients. *J Gastrointest Surg* 1999; 3(1): 44-49.

- [7] **Callery MP, Strasberg SM, Soper NJ.** Complications of laparoscopic general surgery. *Gastrointest Endosc Clin N Am* 1996; **6(2)**: 423-444.
- [8] **Keulemans Y, Eshuis J, de Haes H, de Wit LT, Gouma DJ.** Laparoscopic cholecystectomy: day-care versus clinical observation. *Ann Surg* 1998; **228(6)**: 734-740.
- [9] **Calland JF, Tanaka K, Foley E, Bovbjerg VE, Markey DW, Blome S, Minasi JS, Hanks JB, Moore MM, Young JS, Jones RS, Schirmer BD, Adams RB.** Outpatient laparoscopic cholecystectomy: patient outcomes after implementation of a clinical pathway. *Ann Surg* 2001; **233(5)**: 704-715.
- [10] **Davidoff AM, Branum GD, Meyers WC.** Clinical features and mechanisms of major laparoscopic biliary injury. *Semin Ultrasound CT MR* 1993; **14(5)**: 338-45.
- [11] **Deziel DJ.** Complications of cholecystectomy. Incidence, clinical manifestations, and diagnosis. *Surg Clin North Am* 1994; **74(4)**: 809-823.
- [12] **Strasberg SM, Hertl M, Soper NJ.** An analysis of the problem of biliary injury during laparoscopic cholecystectomy. *J Am Coll Surg* 1995; **180(1)**: 101-125.
- [13] **Lam D, Miranda R, Hom SJ.** Laparoscopic cholecystectomy as an outpatient procedure. *J Am Coll Surg* 1997; **185(2)**: 152-155.
- [14] **Voitk AJ.** Outpatient cholecystectomy. *J Laparoendosc Surg* 1996; **6(2)**: 79-81.
- [15] **Fallis WM, Scurrah D.** Outpatient laparoscopic cholecystectomy: home visit versus telephone follow-up. *Can J Surg* 2001; **44(1)**: 39-44.

استئصال المرارة بالمنظار (العناية اليومية)

فاطمة الشبتي ، عدنان عبدالعاطي مرداد و زهور الشريف الغيثي

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المستخلص. لقد تم إدخال ثمانين حالة من أجل استئصال المرارة بالمنظار في تنويم وحدة العناية اليومية بناء على مواصفات معينة. لقد تم استئصال المرارة بالمنظار في جميع الحالات بنجاح دون اللجوء للفتح. سبعة وسبعون مريضاً (96, 25%) خرجوا من المستشفى في نفس اليوم ولكن ثلاثة مرضى (3, 75%) احتاجوا للتنويم، حالتين بسبب وضع قسطرة في البطن والحالة الثالثة بسبب ارتفاع في ضغط الدم خلال العملية. عملية استئصال المرارة بالمنظار (كعناية يومية)، إذا تم خروج المريض في نفس اليوم هي عملية آمنة لعدد كبير من المرضى الذين يعانون من حصوات في المرارة.