



Surgical Management of Symptomatic Cholelithiasis in Rural Medical College

KEYWORDS

Laparoscopic cholecystectomy, cholelithiasis

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ABSTRACT Cholecystectomy is one of the commonest laparoscopic surgical procedures performed by the general surgeon. Laparoscopic cholecystectomy avoids a large incision and is cited to have decreased morbidity and disability as well as a more favourable cosmetic result when compared with standard open cholecystectomy. With these advantages it is applied to majority of the cases with minimal complications and has replaced open cholecystectomy in operative management of symptomatic gall stone disease. The study was done to compare the safety and efficacy of laparoscopic cholecystectomy for symptomatic cholelithiasis and to identify the rate of conversion of laparoscopic cholecystectomy to open cholecystectomy and to evaluate its causes in a rural medical college from 2007 to 2012. In this period over 500 cases of laparoscopic cholecystectomies were done.

Introduction-

Till a few years back, open cholecystectomy had been accepted as the treatment of choice for symptomatic cholelithiasis¹. Laparoscopic cholecystectomy has now been accepted as the 'New Gold Standard' for gall bladder removal with most of the cholecystectomies in the developed countries is done laparoscopically unless there is a specific contraindication for the same or in the event of laparoscopic surgery being unsuccessful due to some reason.

Laparoscopic cholecystectomy avoids a large incision and is cited to have decreased morbidity and disability as well as a more favourable cosmetic result when compared with standard open cholecystectomy². With these advantages it is applied to majority of the cases with minimal complications and has replaced open cholecystectomy in operative management of symptomatic gall stone disease. In contrast to open cholecystectomy, laparoscopic cholecystectomy in properly selected patients seems to cause minimal wound pain, faster recovery from the operation, early discharge from hospital, early return to work and better cosmesis. However, as social norms, social conditions and developmental stage of the nation influence the hospital stay and time to return to professional activities, the facts and figures may change from community to community. This study which was conducted in Smt. Kashibai Navale Medical College, Narhe, Pune-41.

Material and methods-

Prior to the surgery all the patients were investigated for the evidence of gall stone disease and associated risk factors. All patients in this groups and ultrasonographic evidence of gall stones and were symptomatic for the same. Pre-operatively, history of jaundice, CBD diameter on ultrasonography, presence or absence of intra-hepatic biliary radical dilatation on ultrasonography and serum alkaline phosphatase value assumed importance. If felt necessary, pre-operative ERCP was performed. Patients who had undergone previous upper abdominal surgery and those with choledocholithiasis as documented by preoperative imaging or laboratory tests were excluded from the study.

Some female patients were on OC Pills and were advised to stop pills 6 weeks before surgery. Patients on Aspirin were advised to stop it 7 days before surgery.

Pre-op and post-operative chest physiotherapy was advised in all cases. Baseline ECG was performed in all patients above the age of 30 years.

Liver function tests like Sr. Bilirubin, SGOT, SGPT, Sr. Protiens, Alkaline phosphates, BT, CT, & PT were done in all patients. An abnormal PT necessitated pre-operative treatment with Vit. K.

All patients had their blood groups done as a precaution for any significant blood loss during surgery and the patients were kept as mobile as : Disable to reduce the risk of DVT in post-operative period.

Informed consent from the patient was taken for conversion to an open procedure if needed.

Discussion-

Gall stones & chronic cholecystitis can affect patients ranging from less than 10 years to more than 70 years, but the maximum incidence is seen between the ages of 30 to 60 years, with the preponderance of female sex. This correlates with the aphorism that " Fatty, fertile, flatulent, female of forty" is the usual sufferer³. The age incidence in the present study correlates with the age incidence of Sweden study⁴.

In the history of surgery, very few operations have changed the thinking and operating habits of surgeon as quickly and on such a broad scale as laparoscopic cholecystectomy. This technique has revolutionized the field of gastrointestinal surgery.

In the present series, all the patients having gallstone disease were included. None of the patients were excluded due to obesity, associated cardiac conditions, overweight or old age.

In the present series, 286 patients (57.2%) were found to have chronic cholecystitis confirmed by histopathology. 120 patients (24.0%) presented with acute cholecystitis. 44 of them were found to have acute on chronic cholecystitis and so the overall incidence of chronic cholecystitis comes to about 70%. Our results confirm that chronic cholecystitis is the commonest clinical presentation of cholelithiasis as shown in other published studies like Vijaypa (70%) and Bhansali⁵ (96%).

Patients presenting with acute cholecystitis were operated electively when attacks subsided. 50 (10%) patients having gall bladder dyspepsia. 24 laparoscopic cases (4.8%) had to be converted to open technique, due to dense pericholecystic adhesions.

Mortality and morbidity rates which are quoted for laparoscopic cholecystectomy are 1% and 9% respectively.

We had 7 complications (1.4%) of CBD injuries out of which 5 (1%) had minor bile leaks which were treated with ERCP and stenting and two patients had major CBD injury (0.4 %) which were treated by open hepaticojejunostomy.

As for the conversion rate reported which reflect on applicability of these procedures, the reported conversion rate for laparoscopic cholecystectomy is 3% to 7.3% In our study, the conversion rate for laparoscopic cholecystectomy was 4.8%.

The frequency of conversions is directly proportional to the selection criteria for laparoscopic cholecystectomy.

The results of present series compared favorably with the other published series.

Series	Conversions
J.F.Giqot ⁶	6.5%
R.Schlumpf ⁷	8.1%
D.Collef ⁸	4.8%
Present	4%

The following table gives a breakup of the reasons for conversion.

	Williams et al ⁹	Present
Bleeding	0.6	00
Bowel injury	0.12	0
Miscellaneous	0.6	0
Poor visualization	-	-
Adhesions	2.4	4%
CBD problems	0.6	0
Stones	1.2	1.4
Injury		

In our study, the average operative time required for laparoscopic cholecystectomy group was 60 mins,

In this study, the average duration for resumption of oral diet was same day in laparoscopic cholecystectomy .

Reduced total hospital stay, reduced post-operative stay and early return to work are quoted to be the advantages in laparoscopic cholecystectomy than open cholecystectomy. The reported total hospital stay for laparoscopic cholecystectomy in various studies is 3.3 days.

The average postoperative stay in this study was 2 days in laparoscopic cholecystectomy This conforms with the existing observations.

Laparoscopic Surgery

Series	Stay (days)
Southern surgeons group ¹⁰	1.2
Baird et al ¹¹	0.89
Present series (LC)	2

When it comes to cosmesis, laparoscopic cholecystectomy has definitely an edge over open cholecystectomy. May be because of this reason, the well-informed, health conscious young generation of urban areas got attracted very rapidly towards the minimally invasive technique like laparoscopic cholecystectomy. So most people prefer the laparoscopic cholecystectomy(Image1).

Some studies stated that laparoscopic cholecystectomy is quite expensive.

In laparoscopic surgery, drain was not kept in 24 patients.

In laparoscopy, 96% of patients were ambulant on 1st day. In laparoscopic surgery in 80% of patients, it was started on 1st day & in 16% of patients on 2nd day, while in 4% of patients it was started after 3 days which were converted into open. This is because in laparoscopy there is minimum handling of bowel, so peristalsis returns earlier.

In laparoscopic surgery, only 24 patient had complication, which was converted into open.

This is because there is no incision, so no infection & minimum pain in laparoscopic surgery(Image4).

In laparoscopic surgery, 92% of patients could be sent home by maximum 2nd day & 8% of patients, required stay of more than 8 days of which 24 patient was converted into open, & 1 patient wants discharge after suture removal. In laparoscopy, there is splitting of fibers so no stitches are required and healing starts as soon as trocar is removed. In Sweden study, average hospital stay in open procedure was 3 days and for laparoscopy it was 2 days. This indicates that with ongoing experience, the operative skills in both - open as well as laparoscopic procedures - can be attained to optimum levels.

In laparoscopy 96% of patients returned to normal activity at the end of 3rd week. In Sweden study, the average time for return to normal activity was 4th week in open and 2nd week in laparoscopy, which is more or less consistent with present study.

Thus, the present study indicates that in patients with symptomatic gall stones & chronic cholecystitis, one is definitely to come across certain types of per operative findings e.g. adhesions, fibrosed Calot's triangle etc. & if surgeon is not fully acquainted with all these findings in open procedure, he will definitely have difficulty in carrying out successful laparoscopic surgery & in some cases even find it impossible. All these things will lead to high conversion rate into open procedure. So, if is not proper to jump over to carry out laparoscopy without becoming master in open surgery.

Moreover, it is seen that, if any per operative complications arise, it can be easily dealt with in open surgery because of better exposure. While in laparoscopy, a major complication always compels the surgeon to convert to open, because, otherwise it is not possible to correct it because of inadequate exposure & any prolonged attempt to correct it may endanger the patient's life.

In laparoscopy, selection of patient is also an important factor, because it is contraindicated in certain types of patients as described earlier. While open surgery can be performed in all patients who are otherwise fit medically.

Summary-

The present study consists of total number 500 cases of cholecystectomy operated in Smt.Kashibai Navale Medical College,Narhe,Pune-41.during the period of June 2007 to August 2012.

In our series of 500 patient, operated by Laparoscopic Cholecystectomy, following observations and conclusions were made.

The maximum incidence of cholecystectomy was noted in the age group of 31 to 60 yrs (73.83%).

Preponderance of females in cholecystectomy was also noted.

Acute and Chronic cholecystitis were presentation of cholelithiasis.

Commonest associated co-morbid factor was diabetes mellitus.

Dense pericholecystic adhesion was cause of conversion of laparoscopic to open cholecystectomy.

Drain was kept in 24 cases for laparoscopic cholecystectomy.

The ambulation on first day in almost all Laparoscopic cholecystectomy was possible. Post operative stay 1-2 days in laparoscopic cholecystectomy. In laparoscopic cholecystec-

tomy six patients stayed in the hospital for 8 days since she wants to leave only after suture removal.

Fundus first method was done in few cases due to adhesions.

Laparoscopic cholecystectomy has been done by senior surgeon so conversion rate was almost negligible with negligible complications.

Conclusion-

Laparoscopic cholecystectomy has now been accepted as gold standard for the treatment of cholelithiasis.

Laparoscopic cholecystectomy is safe and effective form of treatment for cholelithiasis.

Post operative pain is less in laparoscopic cholecystectomy. The reduction of operative time, reduced need for post operative analgesia, reduced hospital stay, early intake of oral feeds, early ambulation, early resumption of work are distinct advantages of laparoscopic cholecystectomy in our study.

Morbidity and mortality was nil in laparoscopic cholecystectomy.

PHOTOS:



Image1

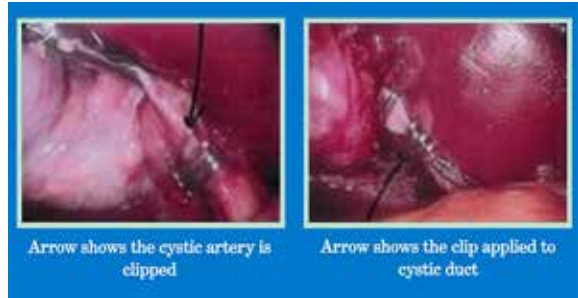


Image2 Image3



Image4 Image5

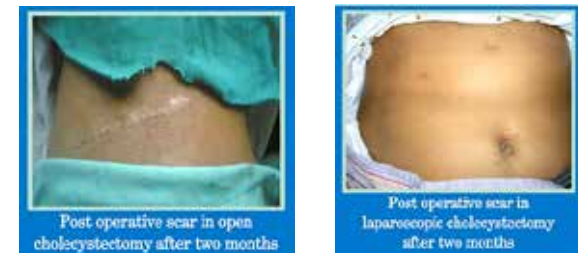


Image6 Image7

REFERENCE

1. Utpal De. Evolution of cholecystectomy. *Ind. J. Surg.* 2004;66:97-100.
2. Soper NJ et al. Comparison of early postoperative results for laparoscopic versus standard open cholecystectomy. *Surg Gynecol obstet* 1992; 174: 148.
3. R.C.G. Russell, Norman S., Williams & Christopher JK Buistrode; Bailey and Love's Short practice of Surgery 24th edition 1094-1113.
4. Open vs. Laparoscopic cholecystectomy: hospitalization sickleave, Analgesia and Trauma responses, department of Surgery and Anaesthesiology, University hospital, Uppsala, Sweden.
5. Bhansali S.K.: Management of cholelithiasis and cholecystitis. *Indian J Surgery*, 38: 436, 3 976.
6. Gigot JF. Laparoscopic cholecystectomy: with results in the current practice of general surgeons. The Belgian group for Endoscopic Surgery presented at the 3rd World Congress of Endoscopic Surgery, Bordeaux 1992;18-20.
7. Shlumpf R. A nation's experience in laparoscopic cholecystectomy Prospective multicentre analysis of 1091 cases. Swiss Association Laparoscopic and Thoracoscopic Surgery. Presented at the Third World Congress of Endoscopic Surgery, Bordeaux, 1992;18-20 (June).
8. Collect D, Edye M, Perissat J. Conversions and complications of laparoscopic cholecystectomy. Results of a survey conducted by the French Society of Endoscopic Surgery and International Radiology. Presented at the Third World Congress of Endoscopic Surgery, Bordeaux, 1992;18-20 (June).
9. Williams LF. Jr. Chapman WC, Richards WC. Multicenter biliary lithotripsy. Clinical results with the therasonic lithotripter. Presented at the Second World Congress of Biliary Lithotripsy, Chiba, Japan 1991;10-11 (May).
10. The Southern Surgeon Club. A prospective analysis of 1,518 laparoscopic cholecystectomies. *N Engl J Med* 1991;324:1073-8.
11. Baird DR, Wilson JP, Mason EM, et al. An early review of 800 laparoscopic cholecystectomies at a University-affiliated community teaching hospital. *Am Surg* 1992;58:206-10.
12. Laparoscopic Cholecystectomy The New 'Gold Standard' Nathaniel J. Soper, Paul T. Stockmann, Deanna L. Dunnegan, RN; Stanley W. Ashley, *Archives of Surgery*. Vol. 127 Aug. 1992, 917-23.