



## Is Minicholecystectomy Obsolete?

### KEYWORDS

cholelithiasis, mini-cholecystectomy, lap-cholecystectomy

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**ABSTRACT** *Open cholecystectomy through a small incision is called mini cholecystectomy. Minimally invasive techniques in surgical treatment of gall bladder disease include laproscopic cholecystectomy and minicholecystectomy. Minicholecystectomy can be an alternative to laproscopic cholecystectomy in day surgery.*

*Patients selected for day care surgery were assigned either group on random basis. Observations were regarding operative time, difficult gall bladder surgery, conversion to open cholecystectomy, bile spillage, drainage in operative field and postoperative hospital stay.*

*It is concluded that mini cholecystectomy is a safe, even in patients with medical problems, less postoperative complications and cost effective as compared to lap cholecystectomy in day care surgery.*

### INTRODUCTION

Soon after its introduction, laproscopic cholecystectomy was considered the method of choice for treatment of gall stones and an early consensus conference concluded that it might confer economic advantages over open surgery.<sup>1</sup> Single blind randomized controlled trials have indicated that convalescence differences between minicholecystectomy and laproscopic cholecystectomy are small.<sup>2</sup> From another report, no significant differences were observed between minicholecystectomy and laproscopic cholecystectomy in terms of patients opinion of general well being, abdominal pain and scarring, one year after surgery.<sup>1,2</sup> Health care costs are lower after minicholecystectomy than after laproscopic cholecystectomy.<sup>2</sup> Both surgeries can be done as one day surgery.

Against this background a comparative study of minicholecystectomy and laproscopic Cholecystectomy was done. The patients were assigned on random basis, the groups of minicholecystectomy or lap cholecystectomy. Patients with acute cholecystitis, pancreatitis and CBD stone were excluded from this study.

After investigations on outpatient basis, preanesthetic checkup was done and the patients were admitted in surgical ward. The patients were assigned on random basis, operation of minicholecystectomy or laproscopic cholecystectomy. Both minicholecystectomy and lap cholecystectomy were compatible with routine surgical procedures. A total of 150 patients were operated in either group. The Study was carried with the aim comparing results of minicholecystectomy and laproscopic cholecystectomy.

### Patient and methods:

This study was conducted on patients suffering from cholelithiasis. The preoperative assessment included routine investigation. Liver function test, HbsAg and Hcv were done in all patients. The diagnosis of cholelithiasis was made with ultrasonography; Single or multiple stones, contracted or distended gall bladder, thickness of wall of gall bladder, wall echo complex, large stone in Hartman's pouch, acute or sub acute cholecystitis, size of CBD, chledochoolithiasis. Investigations and preanaesthetic check up were done on outpatient basis. The patients were assigned on random

basis the surgery of minicholecystectomy or laproscopic cholecystectomy. Both minicholecystectomy and laproscopic cholecystectomy were compatible with routine surgical procedures. A total of 150 patients were operated in either group.

As the workload is more in our institute and it is not possible to assign only laproscopic cholecystectomy for all patients. Minicholecystectomy may present a cost and time efficient approach. General anesthesia was used in both groups. A sand bag was placed under spine at level of Liver. A transverse or sub costal muscle cutting incision of 4 to 7 cm length is used. Generally a cystic duct first method is used. After dissection of cystic duct it is ligated with 2-0 silk or ligaclips. Then cystic artery is dissected and ligated. The gall bladder is dissected from liver using electro cautery. Haemostasis is achieved. Local anesthesia using 1% Bupivacaine is infiltrated into muscles and skin. The wound is closed in layers using vicryl 1-0. The skin is closed using skin staplers.

Laproscopic cholecystectomy was done using standard technique. Carboxy peritoneum was used. Four ports technique was used. Two 10mm and 5mm ports are used. Calots triangle first dissection is used. Liga clips are used for cystic duct and artery ligation. Electro cautery is used dissection.

### Results

The mean operative time for minicholecystectomy was 20 minutes ranging 10-45 minutes. AGE & SEX: were comparable in both groups. The mean operative time for laproscopic cholecystectomy was 60 minutes ranging from 45-120 minutes. In both groups, difficult gall bladder was described as when there were dense adhesions, contracted calots triangle, wall echo complex and rare anatomical variants. The difficult gall bladder was found in total of 15 patients, 5 in minicholecystectomy group and 10 in laproscopic cholecystectomy group.

Age group	MC	LC
20-30	20	25
31-40	18	15
41-50	15	15

51-60	10	12
61-75	12	8

**Table 1- operative and post-operative parameters**

Incision length	4-6
Operation time	47.7 min
Peritoneal drainage	30
Nasogastric suction	7hrs
Postopanalgesics	2-8 days
Postophospital stay	4 days
Return to work	14 days

**Table II- operative findings**

No adhesions	20
Minimal adhesions	10
Dense adhesions	7
Obliterate calots triangle	4
Contracted gall bladder	4
Mucocele empyema	7
Dilated CBD in situ	2
Free floating gall bladder	2

Two patients in each blood group having dense adhesions or contracted gall bladder, long cystic duct was left ligating gall bladder at neck. This prevented any injury to CBD. No CBD exploration was carried as patients having wide CBD OR stone in CBD were subjected to MRCP and were excluded from study. There was no injury to CBD, so CBD was not operated in any patient in any group. The incision was increased to more than 10 cm in 3 patients in minicholecystectomy group. It was converted to open cholecystectomy in 8 patients in laparoscopic cholecystectomy. The common causes of conversion included adhesions, empyema, anatomical variations. Hemorrhage led to conversion in 2 patients in laparoscopic cholecystectomy. The bile spillage occurred from neck of gall bladder or hepatic surface of gall bladder in only 1 patient in minicholecystectomy group. It occurred in 9 patients in laparoscopic chol-

ecystectomy group. The tube drain was placed in these patients in both groups. Stone spillage occurred in 6 patients in laparoscopic cholecystectomy group. Only one injection of inj. diclofenac was given to each patient in post operative period. None of the patients demanded more analgesia. Nasogastric suction was not required in any of patient in both groups. All patients returned to work within a week.

## DISCUSSION

Big surgeons make big incisions. The way to hell is paved with small incisions I do not enter through windows, I enter through doors. These dicta have lost their essence in present era of minimum invasive surgery. Now patients want less discomfort, short hospital stay, best cosmetics and less expenditure. Minicholecystectomy can be offered to a symptomatic gall bladder and high risk old age patients. No special equipment or training is required laparoscopic cholecystectomy needs both special equipment and training. Carboxy peritoneum is dangerous in geriatric patients with COPD. The main advantage of using minicholecystectomy is its general applicability. In laparoscopic cholecystectomy conversion rate is more and old patients have more morbidity. The limited exposure to open cholecystectomy which is essential as pre training to laparoscopic cholecystectomy, creates a dilemma for training of residents. Minicholecystectomy helps to meet the needs patients with growth of work overload. Minicholecystectomy is best for geriatric patients. Minicholecystectomy is an attractive alternative to laparoscopic cholecystectomy in one day care surgery. Minicholecystectomy is cost effective. Patients demanding laparoscopic cholecystectomy are quite different in terms of social and financial status.

## Conclusions:

Minicholecystectomy is compatible with short hospital stay, evidence based gall bladder surgery, cost effective and training of surgical residents. Minicholecystectomy is an attractive surgical procedure with well established superiorities irrespective of enthusiasm for laparoscopic cholecystectomy.

## REFERENCE

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