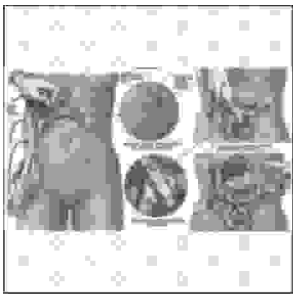
ORIGINAL PROF-1002

BILIARY TRACT INJURY;
INCIDENCE IN MINI-CHOLECYSTECTOMY



DR. ABDUL SATTAR
Medical Officer
Department of General Surgery,
Nishtar Hospital, Multan.

DR. SHAUKAT ALI, FCPS
Senior Medical Officer,
Department of General Surgery,
Nishtar Hospital, Multan.

DR. SHAZIA BATOOL RANA
Department of Obstetrics and Gynaecology,
Nishtar Hospital, Multan.

ABSTRACT... dr.sattar786@yahoo.com. **Objective**:-To observe the rate of biliary tract injury and to prove the effectiveness of mini-cholecystectomy in developing countries. **Setting:-** Department of Surgery, Nishtar Hospital, Multan. **Design:-** Descriptive study. **Duration:-** One year, starting from October 2002 to October 2003. **Material and methods:** Total 50 patients were treated with mini-cholecystectomy. Follow up for complication was done for the period of 6 months after procedure. **Results**: In 50 patients there was no bile duct injury. Biliary peritonitis and strictures were seen in 2(4%) patients. Patients developed biliary leakage in which drain was not put at the time of operation and only drain was put and recovered. **Conclusion**: Mini-cholecystectomy is relatively economical method for the treatment of gall stone disease which is associated with less patients discomfort and less incidence of postoperative complications, short hospital stay, good cosmetic results, early return to work, so it should always be preferred to conventional cholecystectomy.

Key words: Gall bladder, Mini-cholecystectomy, cholecystitis, biliary peritonitis, stricture.

INTRODUCTION

Gall stone disease is a second commonest abdominal problem after acute appendicitis, which needs proper early investigations to reduce the agony and complications. Exact cause of gall stone formation is not known but possible factors responsible are metabolic, infection, abnormalities in bile composition and stasis[1]. Cholelithiasis is the most common biliary pathology[2]. A fat, fertile, flatulent female of fifty is the classical sufferer from symptomatic gall stone.

Gallstone are common and cholecystectomy (conventional, mini or laparoscopic) is the treatment of choice in symptomatic patients or patients with complication of gall stone[3]. Mini cholecystectomy was described in 1982 by Odwyer is an indication that the surgeons are making an attempt to reduce the morbidity[4]. In 1987 laparosocpic cholecystectomy was added to the list of surgical treatment of gall stone disease.

The treatment of choice for cholecystitis is

cholecystectomy. Mini-cholecystectomy can be performed through a smaller incision about 5 cm in the right subcostal region.

The treatment of choice now-a-days is laparoscopic cholecystectomy because of minimal morbidity and mortality and also less hospital stay. But it is very costly as Pakistan is developing country and most of the patients belong to low socio-economic class and problem is that they cannot afford the treatment, which is very costly. Secondly modern treatment facilities are not available in most of the hospitals, so there must be some mode of treatment which should solve the patient's problem.

Mini-cholecystectomy solve the problem of such patients with the reduced hospital stay and quick recovery than the conventional open cholecystectomy and also less costly then laparoscopic cholecystectomy and does not need any special instrument.

PURPOSE OF STUDY

To observe the rate of biliary tract injury and to prove the effectiveness of mini-cholecystectomy in developing countries..

MATERIAL & METHODS

This was a descriptive study. It was carried out on 50 patients suffering from gall stone disease over a period of one year starting from October 2002 to October 2003. This study was carried out in 40 bedded surgical unit of Nishtar Hospital, Multan.

Selection of the patients

Patients of either sex who on the basis of their history, clinical examination and laboratory investigations were suspected of having gall stone disease were included in this study. All the patients were admitted in the ward History, clinical examination and laboratory investigations were adopted for every patient.

Inclusion criteria

Patients with symptoms and signs of gall bladder stone.
Patients with normal LFTs.
Patients of either sex above the age of 13 years.
No history of jaundice.

Exclusion criteria

Patients with jaundice, stone in CBD, carcinoma of gall bladder and patients below 13 years of age or above 70 years and diabetic patients were not included in the study.

Operative and Postoperative complications

Biliary tract injury, biliary leakage, biliary peritonitis, jaundice, stricture were noted. After mini-cholecystectomy, patients were encouraged for early mobility after 6-8 hours. I/V fluids were discontinued and sips were allowed after 8-10 hours. Median operating time was 45 minutes. Median hospital stay was 3 days and they were asked to come back after 7 days for the removal of stitches and follow up. Monthly to access the postoperative complications like stricture upto 6 months. The results were analyzed on SPSS-10 to find out the frequencies and percentages.

RESULTS

During the study period 50 patients of gall stone and chronic cholecystitis were admitted in surgical unit, Nishtar Hospital, Multan. All patients were admitted through outpatient department. All the patients were treated by mini-cholecystectomy.

Among the 50 patients, 40(80%) were above the age of 40 years while 10(20%) below the age of 40 years as shown in Fig-1.

Fig-2 shows that among the 50 patients, 42(84%) patients were female while 8(16%) were male with a female to male ratio 5.25:1. Out of 50 patients, 36(72%) patients belonged to lower socio-economic class while the remaining 14(28%) patients belonged to middle class (Fig-3).

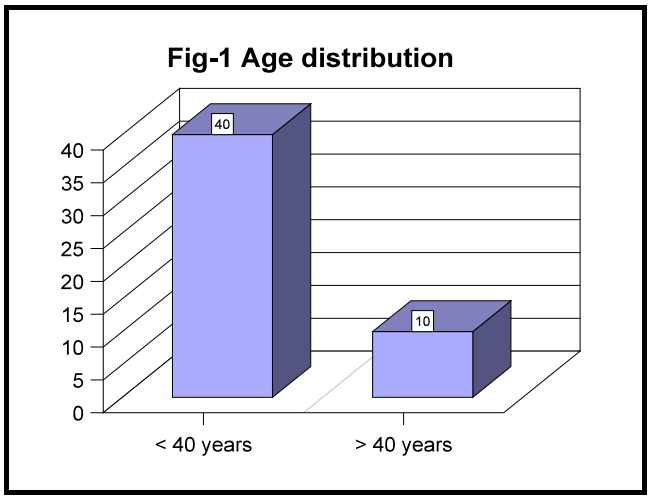
Out of 50 patients, 8(16%) patients complained of severe pain and required strong analgesic uptil 2nd postoperative day. There was no bile duct injury, biliary peritonitis, jaundice and stricture. Two patients (4%) developed biliary leakage in which drain was not put at the time of operation and only drain was put and patient recovered

(Table-I).

Table-I. Complications in successfully treated patients		
Complications	**No of pts**	**%age**
Bile duct injury	-	-
Biliary leakage	2	4
Biliary peritonitis	-	-
Jaundice	-	-
Stricture	-	-

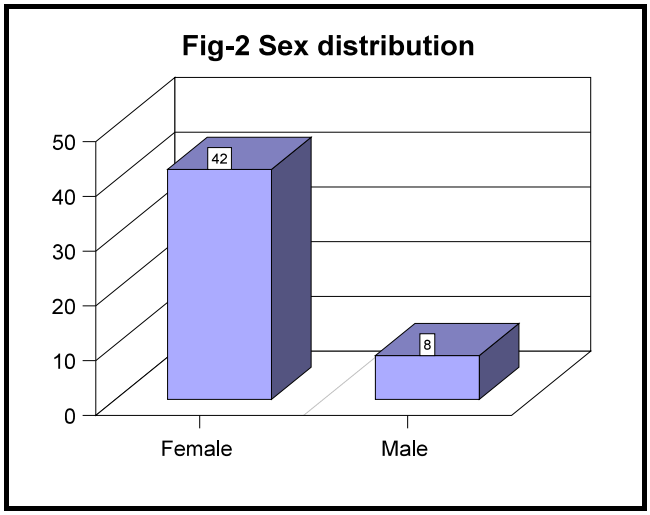
DISCUSSION

Gall stone disease is a common disease involving the hepato-biliary system and is quite common in our country. The clinical presentation is variable. Patients may be asymptomatic or may present with acute or chronic cholecystitis, empyema gall bladder and obstructive jaundice.

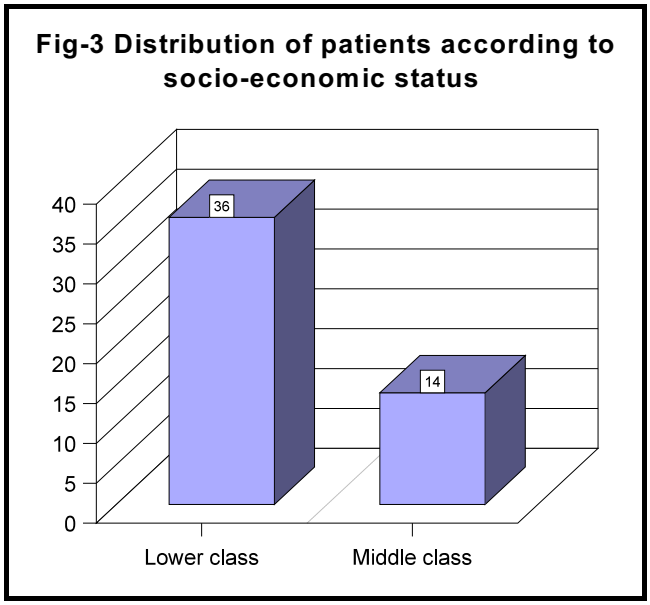


The area of our study included South Punjab, adjacent parts of Sind and Baluchistan. In this region poverty is common and literacy rate is very low therefore the patients with gall stone disease usually present late.

In present study the female to male ratio of gall stone disease is 5.25:1 which correlates to study conducted in Chandka Medical College, Larkana, Pakistan[5]. While different studies conducted in Europe showed female to male ratio 3:1. The rate of biliary tract injury in mini-cholecystectomy in present study is zero.



Surveys from different countries reviewed by Strasberg et al in 1995 showed an incidence of iatrogenic bile duct injury of 0.125% and 0.55% during open and laparoscopic cholecystectomy respectively[6]. Iatrogenic injury associated with cholecystectomy in western Australia the risk of iatrogenic injury during LC was found to be 1.79 times that of open cholecystectomy.



In an international study conducted at Dahr-e Bacheq Hospital, Beyrouth, Liban in 1998 showed that in mini-cholecystectomy no biliary complications, little pain with

low analgesia, average hospital stay of 2 days and return to normal working is between 8 days and 14 days[7]. Another study conducted in Delhi, India department of gastrointestinal surgery, Army Hospital in 1998 in mini-cholecystectomy mean operating time is 61.6 minutes, bile duct injury 0.3%, postoperative complications 3.6%. Mini-cholecystectomy is considered a safe, variable alternative to LC (laparoscopic cholecystectomy) in the third world[8].

Mini-cholecystectomy can be used as a viable alternative to laparoscopic cholecystectomy especially in patients who cannot tolerate laparoscopic procedure and in area where cost containment is critical[9]. Mini-cholecystectomy cost was 29% less expensive than LC costs of equipment and operation themselves accounted for most of difference[10]. LC is a more cost effective method for treatment of gall stone disease than mini-cholecystectomy[11].

In present study mean operating time is 45 minutes (30-80 minutes), mean hospital stay was 3 days (0-6 days), moderate pain 16%, and biliary leakage was 4%. Another study conducted in department of general surgery, Genoa-Nervi Hospital, Italy showed the average postoperative stay was 2 days[12]. In a study performed at All India Institute of Medical Sciences, New Dehli, in 1997 also showed the average postoperative hospital stay of 2.6 days. An average postoperative hospital stay of 3.3 days was also shown in a study performed at department of gastroenterology surgery, Syth GS Medical College, Mumbai[13].

Thus the results of present study coincide with those of national and international studies indicating that mini-cholecystectobiliary leakage in 2(4%) patients, shorter hospital stay and less pain. Similarly one study conducted at Lautaro Clinic Arica, Chili also showed that the incidence of postoperative complications is much higher in conventional open cholecystectomy than in mini-cholecystectomy[14].

In this way present study is again supported by study published in international literature. The decreased incidence of postoperative complication is multifactorial in origin. In mini-cholecystectomy there is less tissue trauma, so less postoperative pain, less chances of infection and less chances of postoperative complication like hernia, chest infection and DVT etc.

CONCLUSION

Mini-cholecystectomy is relatively economical method for the treatment of gall stone disease which is associated with less patients discomfort and decreased incidence of biliary tract injury, short hospital stay, good cosmetic results, early return to work. So it should always be preferred to conventional cholecystectomy.

Mini-cholecystectomy also has the advantage that it neither require expensive new equipment nor the acquisition of novel skills by the surgeon. It should be done in those cases, which are contraindicated, to LC like pregnancy, acute cholecystitis.

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THE PAST IS THE ONLY DEAD THING THAT SMELLS SWEET.

Walter Scott