

# Early Conversion is a Safe Option to Avoid Complications in Laparoscopic Cholecystectomy for the Beginners

M ALI S H GONDAL H N RANA M ALI

Department of Surgery, Social Security Teaching Hospital, Multan Road Lahore.

Correspondence to Dr Maratab Ali, Assistant Professor E. mail: maratabali@hotmail.com

A prospective study of 60 patients with 56(93.3%)females and 4(6.6%)males, age ranging from 25-65years underwent laparoscopic cholecystectomy.50 (83.3%) laparoscopic cholecystectomies were successfully completed while 10(16.6%) were converted into open procedure. Out of 10(100%), in 5(50%) the cause of conversion was excessive bleeding while in the remaining 5(50%) the cause was adhesion, inflammation and hypotension. Operative time varies from 40 to 100minutes with mean of 70minutes. Postoperative drainage done in 40(66.6%) of cases. 5(8.3%) patients developed complications, out of which 4 patients developed biloma and one patient developed port side wound infection. There was no CBD clipping, Gut injury or mortality recorded in this series. It is concluded that early conversion is a safe option to avoid life-threatening complications for the beginners.

**Key words:** Cholecystectomy, Laparoscopic, Complications prevention.

With the advent of Laparoscopy, abdomen has been exposed to the naked human eye without causing breach in the anatomical landmarks of the body<sup>1</sup>. It is the matter of one century when Carl Langenbuch in 1882 performed first cholecystectomy<sup>2</sup>. The procedure was revolutionized in 20<sup>th</sup> century by two French, Dubois and Mouret by introducing laparoscopic cholecystectomy. Laparoscopic cholecystectomy has become the most acceptable and prevalent method of treating uncomplicated gallstones<sup>3</sup>. The procedure is becoming readily available in our country over the last few years and its popularity has spread widely but relatively few data on results have been published<sup>4</sup>. This main script expresses our experience of 60 cases done over a period of six months at Social Security Teaching Hospital Lahore.

## Method and material:

It was a prospective study done at Surgical Department of Social Security Teaching Hospital Lahore from January 2005 to June 2005. All the patients were diagnosed Ultrasonographically, admitted through OPD were investigated in the ward. History, clinical examination, investigations, operative and post-operative details and complications were recorded in the printed performa that was analyzed by a statistician and results compared with available national and International literature. All the patients with a diagnosis of non-complicated gallstones were included in the study. Patients with acute cholecystitis, previous h/o upper abdominal surgery and morbidly obese were excluded from the study. Three ports technique was used in all patients.

## Results:

A total of 60 (100%) cases with 56 (93.3%) females and 4 (6.6%) males. Age ranging from 25 to 65 years underwent Laproscopic cholecystectomy from January 2005 to June2005 at Surgical Department of Social Security Teaching Hospital Lahore. Female to male ratio 14:1. 48 (80%) belonged to urban and 12(20%) to rural areas.

88%(n=53) had pain right hypochondrium and 60%(n=32) of them gave H/o dyspepsia, 10%(n=6) patients had H/o vomiting and fever while remaining 2%(n=1) had asymptomatic gallstones.30% (n=18) patients had associated Diabetes mellitus of which 40%(n=7) were known Hypertensive.

A second generation Cephalosporin was administered to all patients at the induction of anesthesia. Nasogastric intubation and Foley catheterization done where ever indicated.

Out of 60(100%) patients, 50 (83.3%) Laproscopic cholecystectomies were successfully completed while 10 (16.6%) were converted into open procedure. Out of 10 in 5(50%)patients the cause of conversion was bleeding and in the remaining 5 (50%) the procedure could not be completed because of adhesions, inflammation and hypotension. Operative time varies from 40minutes to 100minutes with the mean of 70 minutes. 5(8.3%) patients develop complications, out of which 4 patients develop biloma. All were managed conservatively except one who required repeated ultrasound-guided aspirations. One patient developed port site wound infection.

Fig.1

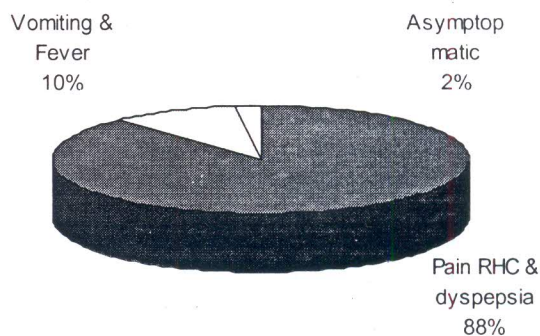
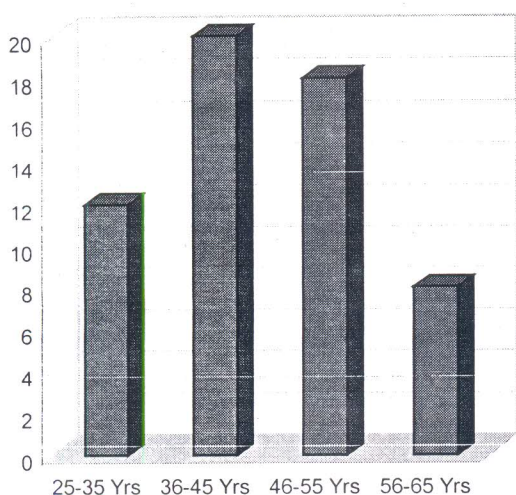


Fig. 2



Postoperative drainage done in 40(66.6%) of cases. Post operative pain managed by a single injection of narcotic analgesia followed by an injectable NSAID at night. 30%(n=18) patients required second injection of NSAID while 70% (n=42) required oral NSAIDs. Oral sips were allowed within 24hours. The peri-operative antibiotics were continue for 48 hours. Hospital stay ranges from 2-7days. There was no CBD clipping, Gut injury or mortality recorded in this series.

**Discussion:**

The age incidence in this study ranges from 25-65years with a mean age of 45 which is comparable with M.S.Ahmed et al<sup>4</sup> data in 1996 in which they depicted a figure of 42.1 in their experience of 100 cases at Lahore General hospital Lahore. A similar figure i.e. 42 years have been mentioned by S.H.Gondal et al<sup>3</sup> in 1996 at Fatima Jinnah Medical college in their 100 consecutive non selected cases. A similar figure has been reported by Iqbal J.A et al<sup>5</sup> and Aurangzeb et al<sup>2</sup> in 1995.

The sex distribution in the series remained 15:1(F:M). Female preponderance in this study is comparable with S.H.Gondal et al<sup>3</sup> in 1996 in which they reported a figure of 18:1 while in literature figure ranges from 7:1 by M.S.Ahmed et al<sup>4</sup> in 1991 to 4:1 by Schirmer et al<sup>6</sup> in 1991 and Peter et al<sup>7</sup> in the same year. It reflects a relatively wide female to male ratio in the Pakistani population as compared to the data of the Europe and USA.

Most of the patients 80% (n=48) belong to the urban area i.e an indicator of awareness of the procedure more in the cities than in the villages. This fact has been reported by some other national authors as well.

Distribution of presenting symptoms is illustrated in figure no 1. The most common mode of presentation was

pain in right hypochondrium and dyspepsia in 88% of patients. About 98% of patients in this series were having symptomatic gallstones that is comparable with the national<sup>3,4</sup> and international series<sup>6</sup>. 6 (10%) patients were having acute symptoms. Laparoscopic cholecystectomy in these patients were considered contraindicated initially but better training and experience and good assistance have made it possible that laparoscopic cholecystectomy can be performed in acute cholecystitis within 72 hours<sup>5,8</sup>.

Very high conversion rate of this series i.e 16.6% signifies the fact that these were the initial experience of the surgeons. The conversion rate mentioned by Salky et al<sup>9</sup> in 1991 in their initial series were 13% and Bailey<sup>10</sup> in 1991 and Barteau<sup>11</sup> in 1992 reported very high conversion rate i.e 33% in their initial series. Mean operative time in this series remain 70 minutes which is comparable with a study of Hawasali<sup>12</sup> et al in 1991 in his series of initial 50 cases in which he mentioned a figure of 68.3 minutes, similar values were depicted by Goodman<sup>13</sup> in 1999 and S.H.Gondal<sup>3</sup> in 1996.

Complication rate in this series remained 8.3%. In this series no major complication was noticed, wound infection noted in 1(1.6%) patient. Wound infection is considered the most common complication in laparoscopic cholecystectomy<sup>14,15</sup>.

Going to different series it ranges from 0.1% to 3% as M.S.Ahmed<sup>4</sup> et al in their study reported a figure of 3% in 1996. Bile leakage noticed in 4 (6.6%) cases that remained unexplained. Luschka<sup>16</sup> demonstrated small billiary radicals entering directly into Gall Bladder bed nearly 100 years ago in 25-30% of patients. Peters<sup>7</sup> in 1991 speculated that injury to these small ducts results in small amount of bile leakage and subsequent collection in laparoscopic cholecystectomy.

We put drains in 40 (66.6%) patients during our study. The issue of use of routine tube drain has not been resolved since the time of Langenbuch. The controversy has raged in the literature since 1930 when Spivak<sup>17</sup> referred the cholecystectomy without drain an ideal procedure. However Artz<sup>18</sup> in 1975 considered cholecystectomy without drain would be medico-legally unacceptable. Den Besten<sup>19</sup> in 1986 thought it necessary to put a drain to reduce the potential hazards of postoperative sub hepatic collection. John in 1991 argued that the controversy resulted from the fact that majority of studies have fault in their design.

100% of the patients were provided with narcotic analgesia in the immediate post operative period with 30%(n=18) demanded another non narcotic analgesia injection 8 hours later which is comparable with a study by a Schirmer et al in 1991 in which he depicted a figure of 36% in a series of 102 patients and similar figures were mentioned by A.R.Bhutta et al<sup>20</sup> in 1999 in their study of 106 cases.

Mean hospital stay was 48 hours in our study, which is comparable with nation and international literature.

Similar figures were depicted by Kelly et al in 1993, S.H.Gondal<sup>3</sup> in 1996, Gadacs et al<sup>21</sup> in 1991 and Berci et al<sup>22</sup> in 1991.

No major bile duct, Gut injury noticed in the series. Mortality rate remains 0% during the study period because of the fact that early conversion was undertaken whenever difficulty was faced.

#### Conclusion:

It is concluded from the study that life-threatening complications can be avoided if early conversion be considered in situations like excessive bleeding, inflammation and unclear anatomy of the callot's triangle. So we recommend that early conversion should be undertaken by the beginners in laparoscopic cholecystectomy to avoid serious complications in our setup.

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