Laparoscopic Cholecystectomy–An Audit at LUH/Jam.

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ABSTRACT

Objective
To evaluate the results of laparoscopic cholecystectomy in symptomatic gall stones disease emphasizing on complications, morbidity and mortality.

Patients and Methods
This descriptive retrospective study was carried out in department of general surgery Liaquat University Hospital Jamshoro, Sind. Notes of all patients who underwent laparoscopic cholecystectomy in the department over an 18 month’s period were reviewed. Demographics as well as details of cases of conversion to open operation and complications were noted on a designed performa. Data were analyzed using SPSS10.

Results
Out of 120 patients, 107 (85%) were females and 18 (15%) were males. The age ranged from 17 to 60 years (Mean 40 years). Six (9.9%) patients had bile leak, 3 (3.9%) developed port site wound infection, 3 (3.9%) developed collection in Morrison pouch and in 3 (3.9%) stones were recovered from epigastric port site wound. There were two cases of bile duct injury and one case of colonic injury. Conversion rate was 10% and one patient died in post-operative period.

Conclusion
Though laparoscopic cholecystectomy is a safe and effective treatment for gall stone disease, our study showed relatively high complication rate. It may be because of learning curve, as it remains a procedure with the potentials for serious complications. Thus we need to have a structured training program involving stepwise progression of training. (Rawal Med J 2011;36:7-9).

Keywords
Laparoscopic cholecystectomy, bile duct injury, bile leak.
INTRODUCTION
Laparoscopic cholecystectomy (LC) has caught the imagination of surgical community and we have moved from a position of skepticism to the point where instrument makers are unable to keep pace with the surgical demand.\textsuperscript{1,2} Gall stone disease is one of the most common condition encountered in general surgical practice especially in adult population.\textsuperscript{3} Its prevalence in the United States is around 10\% to 15\% amongst white males and in Europe around 18.5\%.\textsuperscript{4} In urban setting of our country, it is the third commonest cause of admission.\textsuperscript{5,6} LC, since its introduction in the late 1980s, after its rapid acceptance has become the gold standard for the treatment of gall stones and is being ranked the commonest operation performed world wide.\textsuperscript{7,8} It is a minimally invasive procedure, is less traumatic and results in short period of hospital stay and early recovery. In addition to efficacy and safety of the procedure, it results in fewer intra abdominal adhesion and a better cosmetic outcome.\textsuperscript{8} LC can be performed safely as a day case procedure,\textsuperscript{9} but this technique can be associated with a higher incidence of complications.\textsuperscript{10} This study was performed to evaluate the efficacy of LC, its complications, morbidity and mortality at our institution.

PATIENTS AND METHODS
This descriptive retrospective study was carried out in surgical unit II Liaquat University Hospital Jamshoro, Sind over a period of 18 months from January 2007 to June 2008. Operative and clinical notes of all patients who underwent LC were reviewed. Demographics such as age and gender were recorded. All cases of conversion to open operation and morbidity and mortality were noted. Patients who had jaundice, mass or dilated CBD (>10 mm in diameter) and patients who were positive for hepatitis B or C virus were excluded. Standard four ports were used and pneumoperitoneum was created by open method. Data were analyzed with SPSS 10.

RESULTS
A total of 120 patients underwent LC during the study period. There were 102 (85\%) females and 18 (15\%) males, with a female to male ratio of 5.6:1. The age ranged from 17 to 68 (Mean 40 years). Majority of patients (75\%) had multiple stones and 29 (23.3\%) had single stone while. Adhesions were present in seven (5.6\%) patients. Six (9.9\%) had
bile leak, 3 (3.9%) developed port site wound infection, 3 (3.9%) developed collection in Morrison pouch and in 3 (3.9%) patients stones were recovered from epigastric port site wound. There were two cases of bile duct injury (1.6%). Conversion rate was 10% and one patient (0.833) died. The drain was placed in Morrison’s pouch in 50 (41.6%) patients. The post operative hospital stay was 2-8 days, with mean of 3 days.

**DISCUSSION**

In developed countries less than 20%\(^1\) of the total cholecystectomies are performed by open method but in Pakistan, open procedure is still common because of scarcity of skill and apparatus.\(^1\)\(^2\) LC has been associated with an increase in the incidence of bile duct injuries,\(^1\)\(^1\) and some serious complication like injury to aorta by verses needle or trocar have been reported.\(^1\)\(^3\)

Majority of the patients in our study were female which is consistent with national and international studies.\(^1\)\(^0\),\(^1\)\(^1\) There is a significant variation in the published conversion rates (from 3.6-13.9%) for LC world wide.\(^1\)\(^4\)-\(^1\)\(^7\) This is probably because of difference in patient selection as well as difference in institutional and individual practice. The conversion rate is high amongst studies from developing countries\(^3\),\(^1\)\(^8\),\(^1\)\(^9\) when compared to the studies from developing countries\(^1\)\(^1\),\(^1\)\(^3\) Our study showed a conversion rate of 10%. The reason of conversion was dense adhesion in 4 cases and dilated CBD in two cases. The other reason reported in the literature is hemorrhage in Calot’s triangle, slipped liga chip, partial transaction of the CBD, injury to the stomach, instrument failure and bilio digestive fistula.\(^1\)\(^8\)-\(^2\)\(^0\) We encountered hemorrhage in Calot’s triangle in two patients, slipped liga clips in one, CBD injury in two and instrument failure in two patients.

In our study, 10 (8.3%) gall bladders were perforated. Port site wound infection occurred in two (1.6%) patients. This is reported to be 2.2% and 1.63% respectively.\(^2\)\(^1\) These results may be because of fewer number of patients included in the study or relatively deficiency in training of medical and paramedical staff. There should be stepwise progression of the training which should be first introducing trainees to laparoscopic surgery through a basic laparoscopic surgery course and the procedure of laparoscopic appendectomy. Vital to the whole training process is a system of audit built into the training program, not only during the initial training phase but also after the registrar has
been cleared to operate independently. A study has since concluded that at least 15 cases have to be performed for adequate training in LC.

The conversion rate was significantly higher in men compared to women. One possible contributing factor for this is the higher proportion of cholecystitis and cholangitis among male patients when compared to female patients. This observation was also made by Tarcoveanu et al.\textsuperscript{23} Nevertheless, this alone cannot account for the conversion rate among our male patients. It may be that there are other confounding factors involved which would require multivariate analysis. We excluded patients from study who were previously operated on abdomen and who had acute cholecystitis. However, Lo et al found that delayed LC did not reduce conversion rate and complications in patients with acute cholecystitis.\textsuperscript{24}

CONCLUSION

LC is a safe and effective procedure with relatively higher rate of morbidity and mortality reflecting our learning curve. The challenge faced by all general surgical departments relates to how best to train junior surgeon in a safe and effective manner.

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REFERENCES


