

SURGICAL AUDIT - LAPAROSCOPIC CHOLECYSTECTOMY IN A FREE CAMP AT PRIVATE SECTOR HOSPITAL

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ABSTRACT:

BACKGROUND & OBJECTIVE: Laparoscopic Cholecystectomy is usual method for the treatment of gall bladder stone disease and is practiced all over the world due to many benefits like fasten the recovery time. Furthermore, it reduced the post-operative pain and period of hospital stay. To conduct Surgical Audit and evaluate safety of Laparoscopic cholecystectomy.

METHODOLOGY: This prospective study was conducted in a private hospital at Hyderabad during free camps of Laparoscopic Cholecystectomy. Four camps were arranged in 2016 - 2019.

Total number of 190 patients underwent Laparoscopic Cholecystectomy during the study period. The patient's age falls between 12–65 years. A detailed history, relevant investigation and Cardiac fitness were evaluated. All patients underwent four ports Lap-Chole. Data was collected assessed and audit was performed and safety was evaluated.

RESULTS: Total 190 patients operated females 88.45% and males 11.55%. 115 (60.50%) were in the range of 30-35 years followed by 55 (28.95%) patients in the range of 40-50 years.

8 (4.20%) patients were converted to open cholecystectomy, 4 due to bleeding from liver bed, 3 patients due to difficult dissection in calots triangle and 1 due to Emphyema of gall bladder.

10 patients (5.50%) had Trocar site bleeding, 10 patients (5.50%) had gall bladder injury, in 4 cases had spillage of stones and 72 patients (38.50%) developed umbilical port site infection 1 patient develop port site hernia. No mortality was recorded in this study.

CONCLUSION: Our Surgical Audit proves that Laparoscopic Cholecystectomy is a safe procedure on the basis of only 4.2% intra operative and 5.5% postoperative complications and gaining wide spread popularity among our population due to less pain, less hospital stay. We recommend other private hospitals to extent such services to our poor population with symptomatic cholelithiasis.

KEYWORDS: lap- chole, Surgical Audit, Safety.

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INTRODUCTION:

Laparoscopic Cholecystectomy is a gold standard treatment option accepted globally for the gall bladder stone disease. Many trials have demonstrated the advantages of the laparoscopic procedure including decreased post-operative pain, recovery time, duration of hospital stay and early return to work^[1].

Cholelithiasis is a common surgical condition causing significant morbidity to patients, and financial burdens on patient's economy^[2].

It is estimated that in United States of America about one million patients have Cholelithiasis and is the most common cause of admission to the hospital. Its annual cost is around five billion US dollars^[2]. Previously the more popular treatment for symptomatic gall stones was open operation through sub costal incision to remove the gall bladder till late 80s. Open cholecystectomy needs a longer hospital stay and period of recovery^[3]. Presently more than 83.3% of cholecystectomy is done laparoscopically^[4]. In Pakistan also patients are benefited from this minimal invasive surgery (MIS), which has been documented in many studies over the last 15 years^[5,6].

In order to curtail financial burden of our poor population free camps were arranged annually to provide relief to needy patients. All the expenses are funded by the local donations.

METHODOLOGY:

This prospective observational study and audit was conducted in a private sector hospital at Hyderabad city. The study has been approved by the ethical review committee of Hajiani Day & Night Hospital Hyderabad. Patients were registered from different parts of Hyderabad city and nearby small towns like Matari, Sangher, Thatta and Tharparker districts of Sindh. Publicity of the camps was made by newspapers and displaying banners in city and suburbs. Four camps were arranged on annual basis in the year 2016, 2017, 2018 and 2019. Patients were registered and relevant investigations like blood complete picture, blood sugar, liver function test, urine detailed report, HbsAg, Anti HCV, coagulation profile and ultrasound abdomen were carried out. The patients with confirmation of cholelithiasis were

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then enrolled with well-prepared file which included all necessary information along with cell phone number. Patients were called on the day of surgery and were admitted after anesthesia fitness. Two to three patients were operated on daily basis. All the enrolled patients were operated within the period of 20-25 days. All the arrangements were beard through donations which included discharge medicines. All the patients were operated under general anesthesia; laparoscopic cholecystectomy was done with four port technique. Data was collected which included patient demographics, operative findings, conversion rate, operative & post-operative complications, length of hospital stay and mortality.

RESULT:

One hundred ninety patients were registered and underwent laparoscopic cholecystectomy. Age ranged from 12-65 years. Males were 22 (11.55%) and females were 168 (88.45%). Regarding age distribution 115 (60.50%) patients were between 30-35 years, 55 (28.95%) patients were between 40-50 years, 19 (10.00%) patients were between 55-60 years and 01 patient was of 12 years (See Table-I).

Out of 190 patients 08(04.20%) cases were converted to open cholecystectomy, 04 due to bleeding from liver bed, 03 patients due to difficult dissection in calot's triangle and 01 due to Empyema of gall bladder (see Table-II).

Intra operatively 08 patients (04.40%) had Trocar bleeding, 10 patients (05.50%) had gall bladder injury, and 10 patients (2.20%) had a spilled stone. Post operatively 72 (39.56%) patients had umbilical port infection and only 01 patient reported after six months with port site hernia. There was no recorded mortality in this study (Table-III).

178 patients (93.68%) have chronic cholecystitis and 12 patients (06.32%) have acute cholecystitis. For histopathology see (Table-IV).

In 95% of the cases operative findings were correlated with ultrasonic report. In 5% of cases operative findings did not matched with the ultrasound report on the basis of gall bladder

wall thickness, number of stones single/multiple and any other associated problem not reported by ultrasonologist. None of the patients had stone in common bile duct.

Table-I: Patients demographics (n=190).

Gender	Patients No	Patient %
Male	22	11.55
Female	168	88.45
Age		
12 years	01	0.55
30-35 years	115	60.50
40-50 years	55	28.95
55-60 years	19	10.00

Table-II: Outcome of patients (n=190).

Out come	Patients No	%
Laparoscopic cholecystectomy	182	95.80
Converted Open cholecystectomy	08	04.20
Cause of Conversion		
Bleeding	04	50.00
Difficult Dissection	03	37.50
Empyema	01	12.50

Table-III: Intra/ post-operative complications (n=182).

Complication	No. of Cases	%
Trocar Site Bleeding	08	04.40
Gall Bladder injury	10	05.50
Spilled Gall Stones	10	05.50
Umbilical Port site infection	72	39.56
Port site Hernia	01	0.55

Table-IV: Histopathology (n= 190).

Diagnosis	No. of Cases	%
Chronic Cholecystitis	178	93.68
Acute Cholecystitis	12	06.32

DISCUSSION:

Laparoscopic Cholecystectomy is a gold standard treatment accepted in the developed world for symptomatic cholelithiasis. In our country still open cholecystectomy is in practice in some remote areas due to non-availability of facility and high cost.

Hence Laparoscopic Cholecystectomy is a

financial burden and cost effective for our poor community as compared with the conventional open cholecystectomy. However, it must be realized that the overall cost is reduced due to short hospitalization, less analgesic requirements and early return to work ^[7, 8, 9]. Lombardo et al also reports an overall reduced cost on the basis of above observations ^[10]. In our audit, a privilege is given to our poor

population and all the expenses are funded by the donations.

In our study the number of female patients (88%) were high due to the disease being more prevalent in females also reported in other studies^[10,11,12,13].

Obvious benefits of laparoscopic cholecystectomy like less pain and need for post-operative analgesia, short post-operative hospital stay, early discharge to home and early return to work was also observed in our study. In our study 93% of the patients were discharged within 24 hour and only 7% patients within 48hours post operatively compared to reports by other studies^[13,14].

In our study conversion to open cholecystectomy was in 8 patients (4.40%) due to bleeding from liver bed, difficult dissection and empyema gall bladder, similar findings were reported by another local study by Malik A.^[15]. However 14% conversion rate is reported by Michael et al recently using a scoring system^[16].

In our study the reported port site infection is very high (38.50%) at the 1cm umbilical port probably due to large size and retrieval of gall bladder specimen without pouch. However allow incidence of only 3.23%, 2% and 8% respectively are reported in other studies^[17,18].

In our study we observed laparoscopic cholecystectomy is a safe procedure with less intra and postoperative complications and is well tolerated by the patients. Ven de groot et al has also reported similar observations in a recent study^[18]. Vishal gupta et al also reported safe laparoscopic cholecystectomy is his study^[19]. In another study Ven de graat et al also observed safety of LC regarding less CBD injuries^[20].

CONCLUSION:

Our Surgical Audit proves that Laparoscopic Cholecystectomy is a safe procedure on the basis of only 4.2% intra operative complications and 5.5% post-operative complications and gaining wide spread popularity among our population due to less pain, less hospital stays and early return to the work. We recommend other private sector hospitals to extent such services to our poor population with symptomatic cholelithiasis.

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Authors' Contribution:

Abdul Ghani Soomro: Substantial contributions to the conception or design of the work or the acquisition, analysis, or interpretation of data for the work.

Tufail Ahmed Baloch: Final approval of the version to be published.

Moin-ul-Islam: Final approval of the version to be published.

Syed Asad Ali: Help in data collection analysis and final draft of study. Drafting the work or revising it critically for important intellectual content.

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