

Demonstration of Gall Bladder Surgery in Patients Coming to Tertiary Care Hospital: Population Awareness

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ABSTRACT

Objective: To demonstrate gall bladder surgery in patients for population awareness.

Study Design: Retrospective study

Place and Duration of Study: Department of Surgery, Abbottabad International Medical Institute, Abbottabad from 1st October 2020 to 30th September 2021.

Methodology: Two hundred patients with clinical symptoms of gall bladder stones were admitted. Each patient demographic, clinical, biochemical analysis and radiological imaging was performed for confirmation of gall stones and their size. The age was divided in to two sub groups for better demonstration. Pre and post operative complications were documented and compared within ages. Surgical Laparoscopic procedure was opted as a first choice for cholecystectomy.

Results: The mean age of the patients as 32.3±4.4 with 70% being females. Majority of the patients were complained bloating and right upper quadrant pain. Around 91.8% of the patients were operated through laparoscopic. The mean time for operation was 50 minutes in both age groups. The post operative complications suggested as lower respiratory tract infection as more common in post operative cases of older adults where as younger adults had higher frequency of superficial thrombophlebitis. No case of mortality was documented.

Conclusion: Gall bladder surgery is a safe procedure which can timely save lives.

Keywords: Gall bladder, Awareness, Tertiary care hospital

INTRODUCTION

Gall bladder surgery required due to gall stones is a mandatory process. It can occur at any age however more prone in females who are obese and above the age of forty years. Literature supports that 14-27% of gall stone cases are of people above the age of 50 years.¹ The gold standard applied for surgical removal of gall bladder is laparoscopic. The process is named as laparoscopic cholecystectomy. The incidence of gall stones increases as age increases. Therefore, the surgical procedure is more common in adults than younger groups which are initially treated with medication against gall stone.²

The people developing gall stones or polyps requires immediate surg in many of the circumstances, however the rate of mortality or morbidity escalates in cases of cholecystectomy with advanced age.³⁻⁵ There is an urgent requirement of general public to understand and aware about consequences of delayed or no cholecystectomy. The application of laparoscopic surgery is highly significant due to conversion of a simple cholecystectomy cases into a complicated one with increase in age.^{6,7} Some studies have also reported that surgical removal of gall bladder through laparoscopic technique in adults is comparatively safer than younger groups.⁸⁻¹⁰

The present study was designed for proving a demonstration to patients suffering from cholestasis. The purpose of this study was to provide awareness to general public about safer and efficient proceeding involved. The expected results were that more of the people will be convinced to opt this procedure which directly will assist in saving their life from the unbearable consequences of this inflamed or perforated gall bladder.

MATERIALS AND METHODS

This retrospective study was designed for demonstrating the general public over gall bladder surgery. This awareness demonstration was conducted at Department of Surgery, Abbottabad International Medical Institute, Abbottabad from 1st October 2020 to 30th September 2021. Ethical approval as well as consent of each patient was gained prior the study sampling. There were 200 patients between 21-60 years were enrolled. Within these adult individuals a sub category of age was generated

as younger adults and older adults. Patients having clinical symptoms of gall stones were clinically examined and ultrasonographical imaging was performed. This was further followed by MRCP tests for complete examination of gall bladder and stones. Blood tests and imaging was performed at fasting. Patients having gall stone in common bile duct were undergone endoscopic-retrograde cholangiopancreatography (ERCP). ERCP timing was managed post active symptoms resolution. Gall stone removal was performed by the Laparoscopic methos except in cases were complication lead to open surgery requirement. A standard 4 port technique was applied for Laparoscopic procedure. A sub-umbilical cannula was intervened and mono-polar electro cauterization was used for dissection of gall bladder from liver bed. Titanium clips were used for ligation of cystic duct as well as cystic artery. After intra operative cholangiography performance closed suction drain was placed. Two kinds of data were collected, one which was pre-operative while the other one was post operative. The pre-operative data included duration of surgery, bleeding, biliary leakage. Complications were determined by post operative outcomes. Chi square test was applied though SPSS usage version 25.0. A value less than 0.05 was taken as significant.

RESULTS

There were almost 110 patients within 21-35 years and 90 within the age group of 36-60 years and mean age was 32.3±4.4 years. There were 70% females and 30% males (Table 1). The clinical positivity was generated initially by their common symptoms. Majority of the patients were complained bloating and right upper quadrant pain. This was followed by meal intolerances (Fig. 1).

Around 91.8% of the patients were operated through laparoscopic procedure with only a few shifted to open surgery. The reason for conversion of surgical procedure was due to either failure to adequate visualization of the biliary tract or intense case of fibrosis which were having uncontrolled bleeding (Table 2).

The mean time for operation was similar for both age groups as 50 minutes while the range time varied with insignificant difference between the two age groups. It was 40 -100 minutes in ages between 21-35 years while ranged as 30-90min for ages above (Fig. 2).

The complications suggested as lower respiratory tract infection as more common in post operative cases of older adults where as younger adults had higher frequency of superficial thrombophlebitis. There was no case of mortality with almost similar mean hospital stay in both age groups (Table 3).

Table 1: Distribution of age and gender among clinically positive gall stone cases (n=200)

Variables	No.	%
Age (years)		
21-30	80	40.0
31-40	50	25.0
41-50	40	20.0
51-60	30	15.0
Gender		
Female	140	70.0
Male	60	30.0

Table 2: Type of surgical procedure opted

Type of Surgery	Age between 21-35 years		Age between 36-70 years	
	No.	%	No.	%
Laparoscopic	101	91.8	82	91.1
Open	9	8.18	8	8.8

P value <0.05

Table 3: Post operative complications in cholecystectomy cases

Variable	Age between 21-35 years (n=110)		Age between 36-70 years (n=90)	
	No.	%	No.	%
Complication	14.5% (n=16)		17.7% (n=16)	
Lower respiratory tract	13	81.25	4	25.0
Superficial thrombophlebitis	3	18.75	12	75.0
Bile leak	3	18.75	1	0.63
Primary hemorrhage	1	0.63	3	18.75
Mortality	-	-	-	-
Resumption to normal diet				
Day 1-2	110	100.0	90	100.0
Hospital Stay				
1-18 days	Mean 4 days	-	Mean 4 days	-

P value<0.05

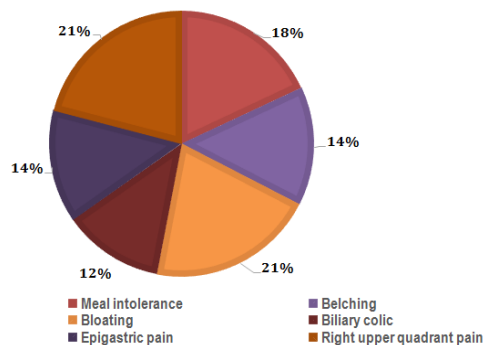


Fig 1: Clinical symptoms correlated to cholestasis

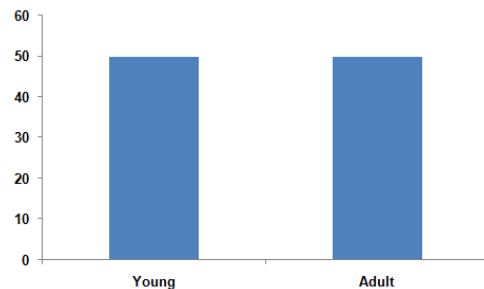


Fig 2: Mean operative time for surgery within enrolled cases

DISCUSSION

Gall stones are hard material that build up inside gall bladder over the period of time due to high amount of cholesterol and bilirubin and cause sudden pain when it blocks the bile duct.¹¹⁻¹³ Public and common lay man awareness and knowledge is still a daunting challenge and a major concern both for policy makers and health care practitioners. Different studies showed varied results. Study conducted in 2018 in Saudi Arabia showed that majority of the study participants had no idea about complications related to gallstones. Approximately 70% of the study participants never attended any awareness campaign, training or educational session regarding lifestyle modifications and prevention strategies to minimize the risk of cholelithiasis.^{14,15}

Various attempts are also made to emphasize the socioeconomic background and level of awareness related to gall bladder diseases. A cohort study conducted in Denmark to determine the level of knowledge and awareness about gallstones and its related complications. This study also showed that similar results that majority of the respondents were unaware of its sign/symptoms and its consequences.¹⁶ Likewise, study performed in India and Iraq demonstrated the similar results, in which majority of the study respondents were unaware but few participants had satisfactory level of knowledge related to the disease.^{17,18}

Public health awareness program should be initiated by the government to minimize the disease burden. This could be done both by electronic and print media as well as through social media. Doctors and paramedical staff should also take consideration of early sign and symptoms of the disease to prevent life threatening and deadly consequences.

CONCLUSION

Gall bladder surgery is a safe and efficient procedure requiring laparoscopic technique in majority of cases. There is no variance of pre operative complication among age groups therefore recommended for all age patients for life saving.

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