ORIGINAL ARTICLE

Frequency and reasons of un-willingness for laparoscopic cholecystectomy in patients with symptomatic gallstones

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Abstract

Objective: To determine the frequency and reasons of un-willingness for laparoscopic cholecystectomy in symptomatic gallstones patients in our population.

Material and Methods: This prospective descriptive cross sectional study was conducted at the Department of Surgery, Khyber Teaching Hospital, Peshawar from 30th December, 2019 to 30th December, 2020. Patients fulfilling the inclusion criteria requiring surgery for ultrasound proven symptomatic gallstones were booked and admitted through out-patient department (OPD). A written informed consent from patients was obtained after explaining the aims of the study and reasons of un-willingness of laparoscopic cholecystectomy was recorded. Data entered and analyzed. Reasons of un-willingness presented in the form of frequency and percentage and also stratified with age, gender, family history, residence, educational status and socio-economic status in order to see effects of modifiers. Post-stratification chi-square test applied keeping P < 0.05.

Results: Out of 163 patients, 111(68.1%) patients showed un-willingness for Laparoscopic Cholecystectomy. As per reasons for unwillingness, 20(12.3%) patients had false perception, 34(20.9%) patients had fear, 42(25.8%) patients had financial issues, 14(8.6%) patients had low education.

Conclusion: It is concluded that false perception, fear and financial problems are the main reason of un-willingness for Laparoscopic cholecystectomy in our population. Laparoscopic cholecystectomy is the current standard surgical procedure for the management of symptomatic gallstones. So proper awareness amongst patients prior to this procedure might change their perception about laparoscopic cholecystectomy.

Keywords: Symptomatic gallstones, laparoscopic cholecystectomy, open cholecystectomy

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Introduction:

The prevalence of gallstones disease in Pakistan varies from 5 to 15% with a predominant in the female population and is increasing day by day.[1]

Laparoscopic cholecystectomy had replaced the open procedure for gallstones surgery, which is mostly due to its improved results and advantages for patients. Laparoscopic surgical procedures are now-a-days the procedure of choice for many surgical procedures. Adam Gyedu et al, concluded in their study that knowledge about laparoscopy and its advantages was lacking among patients presented to the teaching hospital. Once, patients were counseled regarding the benefits and outcomes of laparoscopic surgeries, they become willing even if the resources were limited and even if they needed to pay more for it.[2]

Patients satisfaction is an important indicator of health care and quality. Laparoscopic surgery has been prospected as the future of surgery. Afuwape et al, concluded that 62.6% of patients who presented to surgical out-patient department had no knowledge about laparoscopic surgeries, 29.3% of patients were having positive perceptions and 70.7% were having a negative

perceptions regarding laparoscopic surgeries. The level of education was a significant contributory factor in-appropriate perception of laproscopic surgery and there is a need for public health education to encourage the patients for this modern intervention.[3]

The rationale of study: We live in an era of surgical advancement that has seen the improvement and devolvement of various types of laparoscopic procedures. In spite of all the advantages and advancements of laparoscopic surgical procedures, most of the symptomatic gall stones patients presented to our hospital are reluctant for laparoscopic cholecystectomy. The patients are properly counseled and informed about the advantages and improvements of recent laparoscopic procedures and the disadvantages of open procedures, but still, they are unwilling to laparoscopic procedures and opt for open procedures.

No exact data is available about the frequency and reasons for un-willingness for laparoscopy in the current literature. This study will be conducted with the main objectives to find out the frequency and identify the reasons for unwillingness for laparoscopic cholecystectomy in symptomatic gallstones patients in our population after identification of reasons among patients, these patients can be properly counseled accordingly and will be educated about the advantages of modern laparoscopic procedures these patients will then be able to give consent for these laparoscopic procedures and will get benefits from modern and minimally invasive procedures instead of the traditionally open procedures in future.

Material and Methods:
This prospective descriptive cross-sectional study was conducted at the Surgical "D" Unit, Khyber Teaching Hospital, Peshawar, from 30th December 2019 to 30th December 2020.

After taking permission from the ethical committee, patients aged 15 years to 65 years, requiring surgery for ultrasound-proven symptomatic gallstones were booked and admitted through Out-patient department for the study. Patients who had undergone any upper abdominal surgery confirmed on history and physical examination, unfit for laparoscopic surgery were excluded from the study.

163 sample size was calculated using the WHO sample size formula, keeping 70.7%[9] proportions of negative perception with a 95% confidence interval, and a 7% margin of error. A non-probability consecutive sampling technique was used.

Detailed history, clinical examination, and routine investigations like CBC, ECG, X-ray chest, blood sugar, HBsAg, and Anti HCV of patients were done in each case pre-operatively. Written informed consent from patients was obtained after explaining the aims and objectives of the study to be conducted. The demographic data including patient name, age, gender, address, socio-economic status, education status, duration of the disease, and reasons for un-willingness was noted. All information such as age, gender, residence, educational status, socio-economic status, duration of disease, family history, frequency, and reasons of unwillingness was collected by using a pre-designed questionnaire and analyzed by using SPSS 20. Categorical variables were expressed in frequency and percentages while continuous in mean and standard deviation.

Post-stratification chi-square test was applied keeping $P < 0.05$. All values were presented in the form of tables, charts, and graphs.

Results:
Among 163 patients 68(41.7%) were female and 95(58.3%) were male. The mean age was 42.74±11.842. 80(49.1%) patients were in the range of 15-45 years of age group and 83(50.9%) patients were in the range of 46-65 years of age group.

90(55.2%) patients had a family history of the disease whereas 73(44.8%) had no family history of the disease. 96(58.9%) patients were from urban areas and 67(41.1%) patients were

Table 1: Reasons of unwillingness for laparoscopic cholecystectomy

Unwillingness	Reasons	Frequency	Percent
Yes	False Perception	20	12.8
	Fear	34	20.9
	Financial issues	42	25.8
	No knowledge	14	8.6
No		52	31.9
Total		163	100.0

Table 2: Post-Stratification of unwillingness for laparoscopic cholecystectomy

	Unwillingness		
Modifiers	**No**	**Yes**	**P-Value**
Age in years	15-45	26(12.8 %)	54(36.3 %)
	46-65	26(13.2 %)	57(37.7 %)
Gender	Female	18(7,5 %)	50(34.2 %)
	Male	34(20.9%)	61(37.4 %)
Family History	No	29(16.0 %)	44(39.2 %)
	Yes	23(10.3 %)	67(34.5 %)
Residence	Rural	16(9.4 %)	51(49.5 %)
	Urban	36(14.8 %)	60(26.3 %)
Socioeconomic Status	Poor	31(14.4 %)	45(32.2 %)
	Middle Class	9(1.71 %)	22(17.3%)
	Rich	12(4.1 %)	44(30.3%)

from rural areas. 56(34.4%) patients were rich, 76(46.6%) patients were poor background while 31(19.0%) patients were from middle class families.

111(68.1%) patients showed un-willingness and the reasons for unwillingness for laparoscopic cholecystectomy are shown in table No.1.

Un-willingness was cross-tabulated with age groups, gender groups, family history, residence, and socio-economic status in Table No. 2 respectively.

Discussion:

Gallstone diseases are one of the most common public health problems and its overall prevalence varies between 10% to 20%, with a higher prevalence in developed countries, women, and older age group.[9] Its prevalence in UK populations is about 20%, the United States about 15%, for which about 60,000 to 70,000 cholecystectomies are performed annually at a cost of about $6.5 billion.[10,11]

Various studies have been conducted in various institutes on laparoscopic cholecystectomies which has gained significant safety and efficacy than open cholecysrectomies.[12-16]

The mean age was 42.74±11.842. 80(49.1%) patients were in the range of 15-45 years of age group and 83(50.9%) patients were in the range of 46-65 years of age group and has no significance on unwillingness for laparoscopic cholecystectomy as P-value is 0.872. Although studies have been examined that laparoscopic cholecystectomy for older patients with symptomatic gallstones is feasible and effective due to its low morbidity and mortality.[17-21]

Mohammad Taghi et al, concluded in a study that patients who did laparoscopic surgeries were having rapid recovery, better cosmetic results, less post-operative pain, fewer chances of wound infection, incisional hernias and discharge on the same day of surgery as compared to those patients who underwent open surgery for gall stones.[22] The use of injectable analgesics in the case of laparoscopic cholecystectomy is considerably less than in open cholecystectomy.[23]

In our study 96(58.9%) patients were from urban areas and 67(41.1%) patients were from rural areas. 56(34.4%) patients were rich, 31(19.0%) patients were from middle class and 76(46.6%) patients were poor families. 111(68.1%) patients showed unwillingness while the remaining 52(31.9%) patients expressed willingness for Laparoscopic Cholecystectomy. Patients Satisfaction is an important indicator of health care and quality.

Fouogue JT et al, concluded in a study that 90% of the patients were globally satisfied with their laparoscopic surgeries and the health care during and after the procedures.[24] In our study the percentage of willingness is low which may be due to fear and financial issues.

In other study concluded that 62.6% of patients had no knowledge about laparoscopic surgeries,

29.3% of patients were having positive perceptions and 70.7% were having negative perceptions regarding laparoscopic surgeries. The level of education was a significant contributory factor to the inappropriate perception of laparoscopic surgery and there is a need for public health education to encourage the patients for this modern intervention.[3] In our study, 111(68.1%) patients showed unwillingness for Laparoscopic Cholecystectomy. As per reasons for unwillingness, 21(12.8%) patients had false perception, 34(20.9%) patients had fear, 42(25.8%) patients had financial issues, 14(8.6%) patients had low education while 52(31.9%) patients had no issues at all.

Quality of life and the financial consequences of elective surgery are significant factors in their decision for laparoscopic cholecystectomy. Despite a paucity of data, a significant number of patients opted for medical treatment instead of surgery for symptomatic gallstones.[25] In our study patients were willing for surgery instead of medical therapies and quality of life and financial consequences were also significant factors.

There is no local study available for comparison and single center research is the limitation of our study.

Conclusion:
False perception, fear, and financial issues, were the main issues of un-willingness for laparoscopic cholecystectomy.

So proper awareness amongst patients prior to this procedure might change their perception of laparoscopic cholecystectomy in our local population.

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Role and contribution of authors:
Muhammad Amin, collected the data, references and did the initial write up.

Munir Ahmad, collected the data and helped in introduction and discussion writing.
Sohail Amad, critically review the article and made final changes.

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