

Original Research Article

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Study of persistent post laparoscopic cholecystectomy symptoms: a 6 month long follow up of 62 patients

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ABSTRACT

Background: Majority of patient undergoing laparoscopic cholecystectomy for symptomatic gall stone disease is either cured or show improvement in their pre-operative symptoms. However, in few patients these preoperative symptoms may still persist and may continue to bother them even after surgery. The aim of this study is to evaluate and manage these patients with persistent post cholecystectomy symptoms.

Methods: 62 patients of diagnosed symptomatic cholelithiasis had undergone laparoscopic cholecystectomy at a tertiary care hospital. They were evaluated with a questionnaire both before and; 3 months and 6 months after surgery. The symptoms present pre-operatively and the symptoms that persisted after laparoscopic cholecystectomy or emergence of any new symptoms were taken into consideration.

Results: Out of 62 operated patients, 38 patients (61.3%) were relieved of their symptoms after cholecystectomy on follow up after 3 months whereas 24 patients (38.7%) had persistence of their symptoms. However, at 6 months follow up 16 out of these 24 patients showed improvement of their symptoms. Pain in right hypochondrium and non-specific dyspepsia were the commonest symptoms that were persistent. Thus, in this study 54 (87.1%) patients had complete relief after laparoscopic cholecystectomy and were satisfied with the treatment and in 08 (12.90%) patients the symptoms were not relieved.

Conclusions: All the patients undergoing laparoscopic cholecystectomy should be evaluated in detail regarding their symptoms, psychiatric illnesses and be investigated thoroughly so as not to miss any other organic cause for their symptoms and should be counseled regarding persistence of their symptoms even after laparoscopic cholecystectomy.

Keywords: Cholecystectomy, Dyspepsia, Postoperative pain

INTRODUCTION

Introduction: Symptomatic gallstone disease remains one of the major causes for inpatient admission. In India, the estimated prevalence of gallstone disease is reported to be 2% to 29%.^{1,2} The advent of laparoscopic cholecystectomy has revolutionized the post-operative course in these patients in terms of postoperative pain, hospital stay and quality of life. Treatment of symptomatic gallbladder stones with cholecystectomy is followed by cure or improvement of symptoms in about

90% of patients.^{3,4} However, in 20-30% of patients significant pain and dyspeptic symptoms still persist.^{5,6} The presence of pain or discomfort and dyspeptic symptoms may have a common etiology in form of gall stone disease or undefined underlying functional gastrointestinal disorders. Therefore, it becomes difficult to treat these symptoms as there is a thin line of demarcation between these two conditions, particularly functional gastrointestinal disorders, if they persist even after the operation. In such circumstances, the indication for cholecystectomy many a times may be vague and the

desired outcome after surgery is not achieved. In this study pre-operative and post-operative symptoms are compared to know the degree of improvement of symptoms after cholecystectomy and to find out the causes of persistent postcholecystectomy symptoms.

METHODS

The present study was carried out in a tertiary care hospital and 62 patients of either gender with an age range of 18-70 years with symptoms of upper abdominal pain, dyspepsia, flatulence and bloating and sonographically diagnosed cholelithiasis were included in the study. Patients undergoing cholecystectomy for other diseases (cholangitis or choledocholithiasis or other associated common bile duct pathology, those with history of abdominal malignancy, psychiatric diseases, sickle cell disease, liver cirrhosis, etc.), laparoscopic to open conversion, pregnancy, asymptomatic gall stone disease and acalculous cholecystitis were excluded from the study. Using a performa various demographic, clinical features, radiological and pathological features were evaluated. Histories of hysterectomy and psychiatric disturbances were evaluated. Questionnaires were administered to patients before surgery and one month after surgery. Patients were followed up in routine outpatient review for six months. The symptoms that were present pre operatively and of them the symptoms that persisted after laparoscopic cholecystectomy or emergence of any new symptoms were taken into consideration.

Statistical analysis

Simple comparisons of preoperative symptoms between patients with persistent symptoms after laparoscopic cholecystectomy and those with successful outcome were performed by chi-square / t test. The quantitative data

was expressed in terms of mean and standard deviations. Chi square and t-test was applied to observe the differences between proportions. P value <0.05 was considered significant.

RESULTS

A total number of 62 cases of symptomatic gall stone disease were included in this study. Majority of study subjects were in the age group of >40-50 years (29.03%) and female gender were predominant (70.97%).

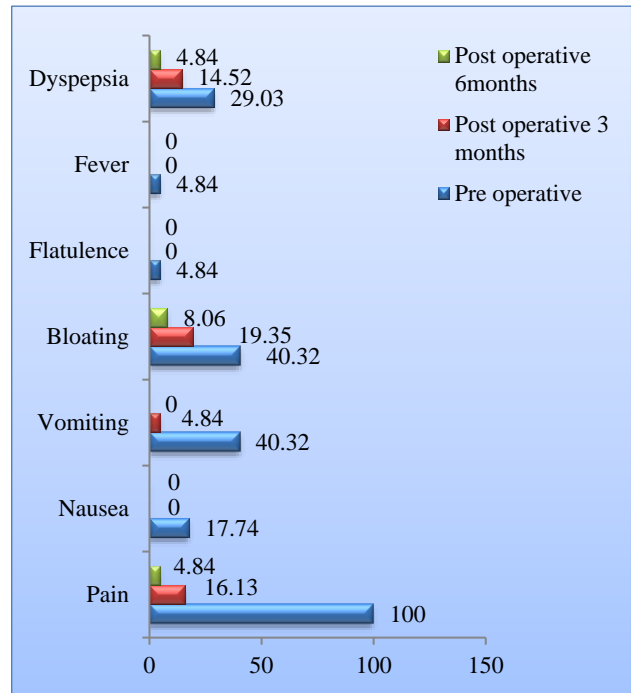


Figure 1: Presence of symptoms during preoperative and postoperative period at 3 months and at 6 months.

Table 1: Improvement of symptoms after 3 and 6 months post laparoscopic cholecystectomy.

Symptoms	Pre-Op	Post-Op (3 months)	Percent improvement	P value	Post-Op 6 months	Percent improvement	P value
Pain	62/62	10/62	83.8%	<0.01*	3/62	95.16%	<0.01*
Nausea	11/62	0	100%	<0.01*	-	-	-
Bloating	25/62	12/62	80.0%	<0.07#	5/62	80.0%	<0.07#
Flatulence	3/62	0	100%	<0.01*	-	-	-
Fever	3/62	0	100%	<0.01*	-	-	-
Dyspepsia	18/62	9/62	50.0%	<0.068#	3/62	83.34%	<0.056#

On evaluating the distribution of study subjects based on the symptoms experienced pre-operatively, all patients had pain, about 17.74% reported nausea, 40.32% reported vomiting, 40.32% reported bloating, 29.03% reported dyspepsia, 4.83% reported flatulence and 4.83% of them reported fever.

The distribution of study subjects-based post-operative symptoms till 3 months. The patients reported pain in 16.12%, 12% reported vomiting, 48% reported bloating and 50 % reported dyspepsia. While the distribution of study subjects-based post-operative symptoms till 6

months patients reported pain in 4.83%, 16% reported bloating and 22.22% reported dyspepsia (Figure 1).

The preoperative symptoms and their persistence, percentage of improvement and p value after 3 months and 6 months respectively is shown in Table 1.

In post-operative period, on follow up there was 100% improvement in symptoms like nausea, flatulence and fever in all the subjects. There was significant improvement in preoperative pain, bloating and dyspepsia. However, in 8 patients (12.90%) the symptoms of pain, bloating and dyspepsia persisted.

Table 2: Persistent of symptoms compared with histopathology.

Histopathology	Patients	Persistence of symptoms at 3 months	Persistence of symptoms at 6 months
Acute cholecystitis with cholelithiasis	14	02	01
Chronic cholecystitis with cholelithiasis	43	21	07
Cholelithiasis	05	01	00

In this study, the persistence of symptoms postoperatively at 6 months was found to be more in patients where the histopathology report suggested chronic cholecystitis with cholelithiasis (Table 2).

Therefore, in the study 54 (87.1%) patients had complete relief after laparoscopic cholecystectomy and were satisfied with the treatment and in 08 (12.90%) patients the symptoms did not relieve of which 1 patient had choledocholithiasis confirmed on MRCP who was treated by ERCP.

DISCUSSION

Gallstone disease still remains one of the major causes of abdominal morbidity.^{7,8} For uncomplicated gallstone disease, laparoscopic cholecystectomy is the preferred method of removing the gallbladder.⁹ Cholecystectomy is must as recurrence of stone in a diseased gallbladder and complications arising from gall stones are well known. Cholecystectomy is safe and provides complete relief in majority of patients.¹⁰ Invention of laparoscopic surgery has made laparoscopic cholecystectomy as gold standard treatment. Age and gender are un-modifiable risk factors for occurrence of gallstone disease and the statement regarding occurrence of gall stone in fatty, fertile female of forty still holds true. An increased incidence was observed in the 4th and 5th decade in present study, which is suggestive of early occurrence of gallstone disease in Indian population.¹¹ Pain is the commonest clinical presentation of cholelithiasis.⁵ In this study majority of patients presented with pain in right upper quadrant

(37.1%) and epigastric pain (37.1%) whereas 25.80% had pain in both right hypochondriac and epigastrium. There was 83.9% improvement in pain after 3 months post operatively and after 6 months, significant improvement of 95.16% was seen in pain. The persistent pain is commonly dull aching in character and may be related to food intake. The suggested reasons behind persistent pain include psychological causes, or sphincter of Oddi dysfunction, biliary reflux into stomach. Sometimes retained stones in CBD may give rise to biliary colic and or jaundice which should be thoroughly investigated.⁶ Spillage of stones during laparoscopic cholecystectomy in the peritoneal cavity or in the port tract may also cause post cholecystectomy pain.¹²

In the present study nausea and vomiting was present in 11 patients (17.74%). In symptomatic gallstone disease nausea and vomiting may accompany pain. Intense pain can be associated with nausea and vomiting. In cholelithiasis vomiting can be present due to reflux pyloric spasm.¹³ In this present study, there was 100% improvement in nausea postoperatively. This might be probably due to overall less number of patients having nausea as compared to other studies. In present study only 3 patients were having fever as a presenting symptom that can be attributed to associated cholecystitis.

In this study, about 25 patients presented with bloating and or dyspepsia as a common symptom. Dyspepsia describes a range of symptoms arising from the upper gastrointestinal tract that includes upper abdominal pain or discomfort, heartburn, gastric reflux, and nausea or vomiting. The cause may be related to gastric and duodenal ulcers (strongly associated with the bacterium *H pylori*), GORD, oesophagitis and oesophageal or gastric cancers. In many cases, the cause is unknown (functional dyspepsia).^{14,15} The incidence of dyspepsia in the present study is 18 i.e. 29.03%. After laparoscopic cholecystectomy there was 50% of improvement in dyspepsia. This improvement was not statistically significant (p value = 0.068). These patients were followed up till 6 six months.

On follow-up of patients till 6 months the improvement in dyspepsia postoperatively was 83.34%. Bloating and non-specific dyspepsia are not adequate indications and have poor outcome in gallstone disease after laparoscopic cholecystectomy. These patients will need a further confirmation for diagnosis like peptic ulcer disease, biliary disorders such as choledocholithiasis, functional illnesses such as IBS, and psychiatric diseases. The patients should be carefully evaluated preoperatively and the presence of dyspeptic symptoms in a patient with gallstones does not imply that the gallstones are necessarily the cause of his or her symptoms.

The persistence of symptoms postoperatively at 6 months was more in patients whose histopathology report was chronic cholecystitis with cholelithiasis which implies

longer the duration of symptoms, more are the chances of postoperative persistent symptoms.

CONCLUSION

All the patients undergoing laparoscopic cholecystectomy should be evaluated in detail regarding their symptoms, psychiatric illnesses and be investigated thoroughly so as not to miss any other organic cause for their symptoms and should be counselled regarding persistence of their symptoms even after laparoscopic cholecystectomy.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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