

A Study of Abdominal Symptoms and Their Outcome after Cholecystectomy: Original Article

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Citation

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Abstract

Introduction:

Abdominal symptoms of cholelithiasis are observed to persist even after cholecystectomy, which is the measure taken for a symptomatic disease the relation of which is often unclear.

Aim: To study abdominal symptoms and their outcome after cholecystectomy.

Materials and Methods:

This study was conducted in a rural tertiary care hospital in Central India from January 2011 to December 2012; 68 patients with abdominal symptoms of cholecystitis underwent cholecystectomy. Pre- and postoperative questions were asked and reduction or increase in symptoms was noted.

Results:

Out of 68 patients, 46 were females and 22 males. Abdominal symptoms of pain and heartburn were relieved in 52 out of 58 patients; nausea was relieved in 41 out of 54 and vomiting in 6 out of 9 patients.

Conclusion:

Abdominal symptoms are reduced significantly after cholecystectomy.

INTRODUCTION

Patients suffer from persistent abdominal symptoms even after cholecystectomy. The relationship between abdominal symptoms and cholecystitis is often unclear. Symptoms of abdominal pain, nausea, food intolerance, and others are common¹. Cholecystectomy is a common abdominal surgical operation performed to relieve the symptoms. Dissatisfaction with the operation ranges from 7% to 47%.^{2,3,4} Persistence of symptoms even after cholecystectomy is highly discouraging for surgeons.^{1,2,5,6} More commonly, however, an etiologic agent is not revealed by extensive evaluation. Inflammation and scarring of the papilla of Vater, biliary motility dysfunction^{7,8}, and elongation of the cystic duct remnant are suspected to play a part in post-cholecystectomy symptoms, but the evidence to support this role is controversial.^{9,10}

A variety of symptoms which are mentioned above are associated with gall stones but not all of these are relieved after surgery, raising doubts whether these symptoms were, in fact, due to cholecystitis or due to other factors.^{11,12} The symptoms may arise even after a successful cholecystectomy

and are then referred to as

AIM

Our aim was to study abdominal symptoms and their outcome after cholecystectomy.

METHODS AND MATERIALS

A cross-sectional study was undertaken on patients attending the Surgery OPD for abdominal symptoms of cholelithiasis. One hundred patients were enrolled in the study within 2 years, from January 2011 to December 2012; 32 out of them were excluded as they did not fulfill the inclusion criteria.

Permission was obtained from the institutional ethics committee.

Inclusion criteria: Patients who had abdominal symptoms with cholelithiasis confirmed by ultrasonography (USG) and were willing to giving consent for the study.

Exclusion criteria: Patients not willing to giving consent for the study or not returning back for follow-up, patients with any complications during or after surgery and patients

with associated psychological factors with persistence of abdominal pain undergoing psychiatric management, endoscopically proven GERD, esophagitis, peptic ulcer etc., patients with diabetes, patients on corticosteroids, patients above 80 years of age, severe debilitating illness, cirrhosis of liver, pancreatitis, appendicitis, recent ERCP, patients on NSAIDs and patients who were unable to answer the questionnaire.

The questionnaire constituted complaints of nausea, belching, food intolerance, heartburn, flatulence, vomiting, pain; and whether reduction or increase in symptoms was noted. Patients were followed up in routine outpatient review or by telephone interview after 6 months of surgery.

RESULTS

We found that pain and heart burn were present in 58 patients and were relieved in 52 patients after surgery, persisting in only 6 patients. In the preoperative phase, nausea was present in 54 patients; it was relieved postoperatively in 41 patients and continued in 13 patients. Belching was present in 45 patients and was relieved in 40 patients postoperatively. Food intolerance was present in 27 patients preoperatively and was relieved in 23 patients after cholecystectomy. Flatulence persisted in only 12 out of 54 patients. Vomiting was present in 9 patients preoperatively and was relieved in 6 patients after gall bladder surgery.

Table 1

Symptoms in the preoperative phase and 6 months after cholecystectomy

Symptoms	No. of patients showing symptoms preoperatively	Patients relieved of abdominal symptoms	No. of patients showing symptoms postoperatively
	No.	No. (%)	No. (%)
Pain	58	52 (89.7)	6 (10.3)
Nausea	54	41 (76)	13 (24)
Belching	45	40 (88.9)	5 (11.1)
Food Intolerance	27	23 (85.2)	4 (14.8)
Heart burn	58	52 (89.7)	6 (10.3)
Flatulence	54	42 (77.8)	12 (22.2)
Vomiting	9	6 (66.7)	3 (33.3)

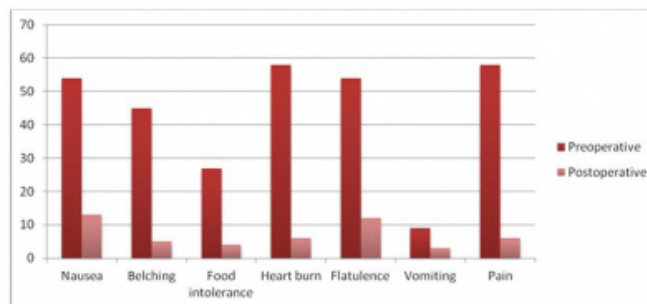
Table 2

Male-to-female ratio of cholecystectomy patients

	Males	Females
Cholecystectomy patients	32%	68%

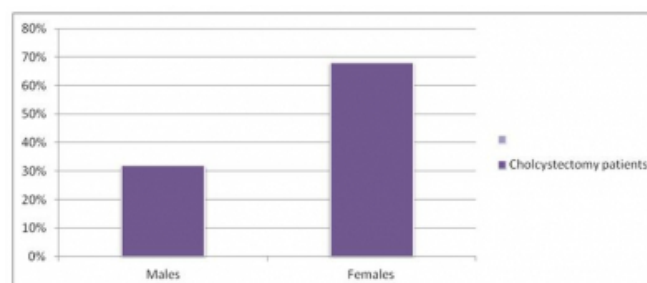
Graph 1

Comparison of symptoms in the preoperative phase and after 6 months of cholecystectomy



Graph 2

Male-to-female ratio of patients with symptomatic cholelithiasis



DISCUSSION

Elective cholecystectomy is performed in 70% of patients with symptomatic disease. Even after surgery, a significant group of patients complain about the symptoms and there is a risk of mortality in 0.2 % of the patients. So it is a high-risk surgery. There are also chances of common bile duct injury in 0.5%, so the decision should be judicious. In our prospective study, we tried to evaluate the outcome of abdominal symptoms in cholecystectomy.^{3,26}

An Irish study by Qureshi et al. showed that there were 77% females suffering from cholecystitis. After cholecystectomy, the pain persisted in 25%, 3% had nausea, 2% vomiting, 1% food intolerance and there was prevalence of flatulence in 13%.²⁶

Mertens et al. concluded in their study done in the Netherlands that 73.3% (out of 129 patients) were females and after cholecystectomy 66.5% had pain, 39.3 % nausea, 14.8% vomiting, 15% heart burn and 36% flatulence.²⁷

From a Scottish study by Luman et al. it can be derived that 80% patients were females, wherein 13 patients reported the same pain as before surgery; 60% reported nausea preoperatively and it was relieved in 94%; 80% had no

complaints of food intolerance after surgery. Out of the study group of 97 patients, 49 had heart burn before surgery and it remained in 10 patients.²⁸

A study done on 197 patients in Pakistan revealed that there were 71% females. There was complete relief in pain, nausea, vomiting, and flatulence, and food intolerance was relieved in 92.5%. None of the patients complained of heart burn.²⁹

The male-to-female ratio was 1:4 in a study by Niranjana et al.; out of 113 patients, 99% had abdominal pain, out of which 96% got relieved. This study revealed that 62% had nausea and 96% were relieved of nausea, 48% had vomiting and it was relieved in 96% patients, belching was relieved in 64%, heart burn in 59% of the patients who complained of it before surgery and the flatulence was relieved in 61%.¹²

Vander et al. concluded that in 57 patients having abdominal pain, a reduction was observed in 60%, 91% were relieved of nausea, 85% were relieved of vomiting and 56% were relieved of food intolerance after gall bladder surgery.¹³

In a study done by Ros and Zambon, postoperative flatulence and pain were present in 52% and 59%, respectively.⁵

In our study, complaints of pain and heart burn were present in 58 patients and remained in only 6 patients. In the preoperative phase, nausea was present in 54 patients and it continued in 13 patients. Belching persisted in 5 patients postoperatively. Food intolerance continued in 4 patients out of 27 patients after surgery. Flatulence was relieved in 42 out of 54 patients whereas vomiting was relieved in 6 out of 9 patients after gall bladder surgery.

CONCLUSION

Abdominal symptoms seen in cholecystitis, such as pain, heartburn, vomiting, flatulence etc., are generally relieved after cholecystectomy. Not all the patients have all the symptoms as common ones are pain, nausea, heartburn and flatulence. This study found different percentages of symptoms among the 68 patients. Different studies have different conclusions and outcomes and no standard has been established as yet. The reasons for that could be patients

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