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ROLE OF UPPER GASTROINTESTINAL ENDOSCOPY IN PATIENTS WITH SYMPTOMATIC GALLSTONE DISEASE – A PROSPECTIVE, DESCRIPTIVE STUDY

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Keywords:

Endoscopy, Gallstone, Cholecystectomy, Postcholecystectomy syndrome.

Abstract

Introduction: Many patients with symptomatic cholelithiasis report persisting abdominal pain after cholecystectomy, suggesting alternative causes of these symptoms. The current study was conducted to determine the co-incidence of gallstones with different upper GI pathologies and to evaluate the role of upper GI endoscopy in patients with symptomatic gallstone disease.

Materials & Methodology: This prospective, descriptive study was conducted in Shija Hospitals & Research Institute from 1st January to 31st December, 2014. Patients of both sexes and any age with symptomatic gallstone disease were included in the study. Patients with acalculus cholecystitis, jaundice and pancreatitis were excluded from the study.

Result: Total 89 patients were included in the study. Mean age of presentation was 44.37 years. Upper GI endoscopy revealed different abnormal pathologies in 23 patients (25.8%). Gastritis was most common (12.4%) pathological finding. Oesophageal cancer & gastric cancer were detected in single patient each. The management plan had to be changed in 7.9% of patients based on the upper GI endoscopy findings (P value <0.001).

Conclusion: Upper GI endoscopy in symptomatic gall stone disease can be helpful to diagnose other upper GI pathologies and hence may help in better patient management.

Introduction

Gallstone disease is one of the common medical problems leading to surgical intervention[1]. The term 'symptomatic gallstone' is widely used to describe symptoms arising secondary to presence of gallstone[2]. Persistence of original complaints in post cholecystectomy patients can be due to deficient preoperative evaluation of other co-morbidities that causes the same symptomatology. Many upper GI pathologies associated with cholecystitis such as gastritis, peptic ulcer and hiatus hernia cause persistence of upper abdominal discomfort and dyspepsia in post cholecystectomy patients[3]. The current study was conducted to determine the co-incidence of gallstones with different upper GI pathologies and to evaluate the role of upper GI endoscopy in patients with symptomatic gallstone disease.

Materials and methods

This prospective, descriptive study was conducted in Shija Hospitals & Research Institute from 1st January to 31st December, 2014. Patients of both sexes and any age with symptomatic gallstone disease were included in the study. Patients with acalculus cholecystitis, jaundice and pancreatitis were excluded from the study. Approval for the study was taken from the Institutional Ethical Committee and Scientific Committee. Written informed consent was taken from all the participants. Confidentiality of participants was maintained. The results of the study were interpreted using SPSS statistical software (version 21.0). Descriptive analysis of data was done by calculating mean, standard deviation and percentage. Fisher's exact test was used to compare categorical variables among two groups. P value of <0.05 was taken as significant.

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Results

Total 89 patients were included in the study. Mean age of presentation was 44.37 ± 15.52 years. Male: Female ratio was 1:3 (Table 1).

Table 1. Gender distribution of study population.

Gender	Number	%
Male	21	23.6
Female	68	76.4
Total	89	100

Upper GI endoscopy revealed different abnormal pathologies in 23 patients (25.8%). 33.3 % of male and 23.5% of female had abnormal upper GI endoscopy findings (Table 2). There was no significant difference between oesophago-gastro-duodenoscopy (OGD) finding of male and female.

Table 2. Gender distribution of OGD finding.

Gender	Normal finding	Abnormal finding	P value
Male (n=21)	14 (66.7%)	7 (33.3%)	0.587
Female (n=68)	52 (76.5%)	16 (23.5%)	0.853
Total (n=89)	66 (74.2%)	23 (25.8%)	

Gastritis (Figure 1) was most common (12.4%) pathological finding. Oesophageal cancer (Figure 2) and gastric cancer (Figure 3) were detected in single patient each (Table 3).

Table 3. OGD findings.*

Findings	Number of patients	Percentage	P value
Hiatus hernia	2	2.2	0.065
Oesophagitis	2	2.2	0.065
Gastritis	11	12.4	<0.001
Duodenitis	5	5.6	0.001
Antral ulcer	2	2.2	0.065
Antral erosion	2	2.2	0.065
Antral polyp	1	1.1	0.258
Oesophageal cancer	1	1.1	0.258
Gastric cancer	1	1.1	0.258
Vocal cord palsy	1	1.1	0.258
Normal	66	74.2	

*5 patients had more than one pathology

The management plan had to be changed in 7.9% (n=7) of patients based on the upper GI endoscopy findings (P value <0.001).

Table 4. Relation of OGD finding and management plan.

OGD finding	Management plan not changed	Management plan changed
Normal (n=66)	66 (100%)	0 (0%)
Abnormal (n=23)	16 (69.6%)	7 (30.4%)
Total (n=89)	82 (92.1%)	7 (7.9%)

P value <0.001

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Figure 1. Gastritis.

Figure 2. Oesophageal cancer.

Figure 3. Gastric cancer.

Discussion

Post-cholecystectomy syndrome consists of a group of abdominal symptoms that recur and/or persist after cholecystectomy [4]. It is defined as early if occurring in the post-operative period and late if it manifests after months or years. Although this term is used widely, it is not completely accurate, as it includes a large number of disorders, both biliary and extra-biliary in origin that may be unrelated to cholecystectomy[5]. The frequency of post-cholecystectomy syndrome varies in 6% and 47%[6,7].

To identify the cause of right upper quadrant (RUQ) pain, upper GI endoscopy has important role as it evaluates the mucosa for signs of disease from the esophagus through the duodenum and allows direct visualization of the ampulla of Vater[8]. Patients with symptomatic gallstones and negative OGD remain asymptomatic after cholecystectomy, while patients with positive OGD findings remain symptomatic[9].

Many studies have emphasized on the potential therapeutic role of upper gastrointestinal tract endoscopy in the presence of overlapping upper GI symptoms. Most studies have shown that middle aged females are the most common age group having symptomatic gallstone disease[10]. In our study also, most (76.4%) were female. Gastritis is the most common abnormal OGD finding in our study which is similar to other study results[11,12].

Rassek et al.[13] conducted a study in which 589 of 960 patients underwent gastroscopy ahead of elective cholecystectomy. Although, 56% had normal gastroscopy, 11.3% (113 patients) underwent a change in plan of management because of the OGD findings and 11 patients were discharged after conservative medical therapy (1.1%). Thybusch et al.[12] conducted a study in which endoscopy of the upper digestive tract was performed in 338 consecutive patients undergoing cholecystectomy. Nearly 50% of patients had pathological findings on OGD examination. These findings varied from peptic ulcers (6.8%), gastric erosions (1.8%), gastritis (25.7%), polyps (3.2%), hiatus hernias (4.7%), oesophagitis (3%) and gastric cancer (0.6%). The management plan had to be changed in 8.3% of patients based on those OGD findings. Rashid et al.[14] conducted a retrospective study in which the routine use of OGD resulted in detection of other coexisting pathologies in about one third (33%) of patients. All of these OGD findings lead to a change in the management plan for these patients. Also they noticed that, the recurrence or persistence of symptoms was significantly higher in patients who were not scoped prior surgery (33 %) in comparison to patients who were scoped where only (3.3%) had recurrent or persistent symptoms. In our study upper GI endoscopy revealed different abnormal pathologies in 25.8% patients. The management plan had to be changed in 7.9% of patients based on the upper GI endoscopy findings.

Conclusion

The identification of patients most likely to benefit from cholecystectomy is critically important. Upper GI endoscopy in symptomatic gall stone disease can be helpful to diagnose other upper GI pathologies and hence may help in better patient management.

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