



Spectrum of upper gastrointestinal endoscopy findings in patients with dyspepsia and its relation to alarm symptoms

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Abstract

Background: Dyspepsia is a frequent condition encountered in the outpatient department of gastroenterology and is the most common indication for upper gastrointestinal endoscopy.

Aims and Objectives: The aim of this study was to evaluate the spectrum of endoscopic findings in patients with dyspepsia and correlate with alarm symptoms.

Materials and Methods: This is a hospital-based prospective study conducted at outpatient clinic of Surgical Gastroenterology Department during 2016-2018. Patients with symptoms of dyspepsia were selected and referred for upper gi endoscopy. The spectrum of endoscopic findings was also noted and was compared with the alarm symptoms.

Results: A total of 300 patients with dyspepsia had upper gastrointestinal tract endoscopy. Out of these 250 were males and 50 were females. Most common non-alarming symptoms are nausea and epigastric pain. The most common alarm symptom was persistent vomiting. Clinically significant endoscopic findings were seen in stomach followed by esophagus and duodenum. Gastritis was the commonest finding seen in 40% of subjects. Dyspeptic patients with alarm symptoms had a higher frequency of gastric cancer followed by esophageal cancer.

Conclusion: Most of the dyspepsia patients has significant endoscopic findings. Gastritis was the most common finding and alarm symptoms increase the malignancy risk.

Keywords: dyspepsia, upper GI endoscopy, alcohol, gastritis, alarm symptoms, gastric cancer

Introduction

Dyspepsia is not a diagnosis, but constellation of symptoms related to the upper gastrointestinal tract. The prevalence of dyspepsia is rampant, imposing high medical resources and economic burden. Dyspepsia encompasses an array of symptoms like nausea, bloating sensation, epigastric burning sensation and pain, indigestion and heartburn^[1,4].

Globally, the prevalence of dyspepsia is around 20-30% and in India the prevalence is touted to be around 30 to 49%^[5,6]. An international committee of clinical investigations (Rome IV Committee) defined Dyspepsia with one or more of the following symptoms like postprandial fullness, early satiation and epigastric pain or burning^[7].

Dyspepsia is also linked to serious gastrointestinal pathological state like malignancy, stricture or ulcer^[8]. The dyspepsia patients are considered as high risk if age > 50 years with new onset of dyspepsia, familial history of cancer, sudden weight loss, hematemesis, Melena, dysphagia and Persistent vomiting^[9].

Upper GI endoscopy is a valid diagnostic tool for the diagnosis of dyspepsia where the radiology examination gives negative results. The risk of GI malignancy is predominantly

Related to age and so as per ACG guideline routine endoscopy to investigate dyspepsia should be performed in patients aged 55 and over^[9]. Previous studies indicate that endoscopy showed significant elevation in symptoms score, quality of life, and minimal use of PPI's^[10]. In this scenario, the present study was aimed to study the profile of upper GI endoscopy findings in dyspeptic patients and association of other alarm symptoms which helps in better early treatment, thereby reducing the morbidity and mortality rate.

Patients and Methods

Patients with dyspepsia with or without alarm symptoms attending the outpatient clinic of Gastroenterology Department during the period 2016-2018 were selected for study.

Patients with dyspeptic symptoms, with an age group of > 18 years. Patient with alarm symptoms (Table.1), previously diagnosed and treated cases of gastric ulcer, duodenal ulcer, and complicated peptic ulcer with a presentation of dyspeptic symptoms and patients willing to undergo upper GI endoscopy were included in the study.

Table 1: Alarm Symptoms associated with Dyspepsia

S.No	Alarm symptoms
1	Age above 50 years
2	Family history of upper GI malignancy in a first-degree relative
3	Unexplained weight loss
4	GI bleeding or iron deficiency anemia
5	Dysphagia
6	Persistent vomiting

Patients who had an upper GI endoscopy for indications other than dyspepsia and not willing for endoscopy were excluded from the study. All the relevant data were collected prospectively.

In this study, a total 300 patients were recruited and the data was entered in MS-Excel sheet for analysis.

Results

In our study, out of 300 study subjects, 250 were males and 50 were females. Maximum of these were in age groups between 25 to 55 years accounting for 60%, followed by less than 25 years accounting for 10% and more than 55 years of age accounting for 30%.

In this study, most common symptom was nausea/vomiting accounting for 50%, followed by weight loss (20%) and GI bleeding (20%). Most common alarming symptoms were persistent vomiting followed by anorexia and significant weight loss. Less common symptoms encountered in our study were dysphagia, jaundice and odynophagia.

The most common risk factor observed in our study were alcohol intake (45%), smoking (40%) and pan chewing (15%). The most common endoscopic findings were seen in stomach encompassing 52%, esophagus (20%) and duodenum (10 %). In this study, the normal endoscopic findings were seen in 18% of the cases.

In our study (Table 2), the most common findings were gastritis accounting for 40% followed by reflux esophagitis 21 %, Duodenitis 13 %. Out of 300 patients, nineteen patients had upper GI malignancies (6.3%). The most common carcinoma was gastric carcinoma (5%) followed by esophageal cancer (1.3%).

Table 2: Diagnostic Outcome of endoscopy among the dyspeptic subjects

S.No	Endoscopic diagnosis of dyspepsia	Percentage (%)
1	Gastritis	40
2	Reflux esophagitis	21
3	Duodenitis	13
4	Upper GI malignancies	6.3
5	Endoscopy negative dyspepsia	18
6	Others	1.7

In our study, increase in number of alarm symptoms increase risk of malignancy. Out of thirty-five patients with alarm symptoms, fourteen had malignancies (40%), whereas in dyspepsia without alarm symptoms, only five (1.8%) had malignancy. In our study, dyspepsia with alarm symptoms displayed increased risk of malignancy. Whilst, dyspepsia without alarm symptoms elicited decreases risk of malignancy

Table 3

S.No	Alarm Symptoms	Number of patients	Malignant
1	Dyspepsia with alarm symptoms	35	14(40%)
2	Dyspepsia without alarm symptoms	265	5(1.8%)

In nineteen malignancies, twelve seen in males (63%), seven in females (37%).

Discussion

Dyspepsia is usually referred as a chronic or frequent pain or discomfort which is mainly located in the upper abdomen [11]. Rome III criteria define dyspepsia as one or more of the following symptoms for three months within the initial six months of symptom onset: (i) postprandial fullness (ii) early satiety and (iii) epigastric pain or burning.

Dyspepsia overlaps significantly with peptic ulcer disease, GERD, functional disorders such as irritable bowel syndrome, malignancy, drugs, pancreatitis, biliary disease, vascular disease and motility disorders.

Treating dyspepsia is a real challenge since it involves huge financial burden, patient's dissatisfaction and the risk of mismanagement leads to missing the high-risk patients who are potentially curable in early stage of their diseases. Upper gastrointestinal (GI) endoscopy is the investigation of choice to evaluate the cause of dyspepsia. Based on endoscopic findings, Dyspepsia will be classified into two groups (i) Functional (ii) Specific disease related. The most common cause of dyspepsia is functional disorders in many studies [12, 15].

The present study was focused to evaluate the spectrum of upper gastrointestinal (GI) endoscopy findings in dyspeptic patients with or without alarm symptoms.

In our study, male preponderance was higher which line with other studies done by Gado *et al* [12] and Thomson *et al* [13]. The increased male subjects in our study might be due to high alcohol intake, smoking and pan chewing among the men, which orchestrate a pivotal role in the development of dyspepsia.

In our study, the common risk factors associated with dyspepsia are alcohol intake followed by smoking and pan chewing. Moreover, increased number of malignancies were reported in male dyspeptic patients. The results of our study were consistent with previous studies conducted by Gado *et al* [12] and Sumathi *et al* [14], where they reported, alcohol, smoking and pan chewing are the major risk factors associated with dyspepsia. In females, the most common cause for dyspepsia was functional such as irritable bowel syndrome.

In the present study, the normal endoscopic finding was seen in 18% of the cases. Gado *et al* [12] reported normal findings in 65% patients with dyspepsia. Manes *et al* [15] reported in 376 patients (53.2%), the endoscopic examination did not show any abnormalities. The lower normal endoscopic findings in our study was due to selective referral of refractive dyspepsia patients to our tertiary center.

In this study, higher parentage of endoscopic findings is seen in stomach followed by esophagus and duodenum. In this

study, the most common pathology encountered was gastritis followed by reflux esophagitis and Duodenitis. Similar findings were seen in the study conducted by Mubarik *et al* [16] was the gastritis was common finding in GI endoscopy.

Further in the case of malignancy, gastric carcinoma was more prevalent followed by few cases of esophageal cancer. The results were in concordance with the previous study done by Dinesh *et al* [17] which had the high frequency of gastric carcinoma followed by esophageal cancer.

In our study, subjects with alarm symptoms reported high frequency of malignancy as that of the subjects without alarm symptoms. Sumathi *et al* [14] also reported high incidence of malignancy in cases associated with alarm symptoms with dyspepsia. Among all the alarm symptoms, anorexia with unexplained significant weight loss is the most commonly related symptoms to malignancies.

The risk of malignancy is low in young patients without alarm features [18]. In younger patients (< 50 years), treating them with PPIs (proton pump inhibitors) or performing noninvasive Helicobacter Pylori infection tests followed by treating with Anti H. Pylori in positive patients is the ideal approach.

In elderly patient with new onset of dysphagia, endoscopy is the first line of investigation to rule out life threatening diseases like upper GI malignancies. Though one-fourth of patients with malignancy and dyspepsia do not report alarm symptoms [19], our study supports the correlation of alarm symptoms with the risk of upper GI malignancies in dyspeptic patients.

Conclusion

Thus, we conclude that dyspepsia is a common clinical event in the upper GI disorder. The frequency of male subjects is higher and gastritis is the common pathology. Further, the risk of malignancy was higher in subjects with alarm symptoms particularly in elderly patients. The upper GI endoscopy is the best investigation tool for evaluating dyspepsia. Though it is an invasive procedure and involves in huge financial burden, it is justifiable to do upper GI endoscopy in dyspeptic patients with alarm symptoms. Even in endoscopy negative patients, the advantage of a negative endoscopy is a reduction in anxiety, an increase in patient satisfaction and reassurance that improve the quality of life [20, 21].

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