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Original Research Article

Study on incidence of hiatus hernia in patients undergoing upper gastrointestinal endoscopy for upper gastrointestinal symptoms in a secondary care hospital

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ABSTRACT

Background: Hiatus hernia refers to condition in which elements of the abdominal cavity, most commonly the stomach, herniate through the oesophageal hiatus into the mediastinum. Hiatal hernia is a frequent finding during upper gastrointestinal endoscopy. Type I hiatal hernia is the sliding hiatal hernia, which accounts for more than 95% of all hiatal hernias with the remaining 5% being paraesophageal hiatal hernias taken together. Surgical therapy is recommended for patients with severe and refractory GERD symptoms such as poor compliance to long-term medical therapy and young patients wishing to avoid lifetime medical treatment. The objective of this study was to identify the associated symptoms and to determine diagnostic accuracy of endoscopic evaluation in patients with hiatus hernia.
Methods: Current retrospective study comprised of 250 patients who presented with complaints of upper gastrointestinal symptoms and underwent upper gastrointestinal endoscopy in JSS hospital, Chamarajnagar during the period of October 2018 to May 2020.
Results: Out of 250 patients, 162 males (64.8%) and 88 females (35.2%) were part of the study, who presented with upper GI symptoms, 12 (4.8%) patients were diagnosed with hiatus hernia. Out of these 12 cases, 9 patients (75%) were found to be having sliding type of hiatus hernia and 3 patients (25%) having rolling type.
Conclusions: Early diagnosis and timely management or surgical intervention reduces morbidity associated with hiatus hernia and acid reflux. Hence, all patients presenting with persistent upper gastrointestinal symptoms should undergo upper GI endoscopy managed accordingly.

Keywords: Hiatus hernia, Upper gastrointestinal endoscopy, Upper gastrointestinal symptoms

INTRODUCTION

Hiatus hernia refers to a condition in which elements of the abdominal cavity, most commonly the stomach, herniate through the oesophageal hiatus into the mediastinum.[1] Hiatal hernia is closely related to reflux symptoms, reflux esophagitis, Barrett's oesophagus and oesophageal adenocarcinoma.[2] Patients with hiatal hernia are significantly more likely to present with GERD symptoms such as heartburn, acid regurgitation, epigastric pain, dyspepsia, nausea, bloating, and belching.[2,4] Hiatal hernia is a frequent finding during upper gastrointestinal endoscopy.[3] There are 4 types of hiatus hernia. Type I hiatal hernia is the sliding hiatal hernia, which accounts for more than 95% of all hiatal hernias with the remaining 5% being paraesophageal hiatal hernias taken together.[2] Surgical therapy (either open or laparoscopic) could be given to hiatal hernia

patients with severe and refractory GERD symptoms based on the generally accepted indications for antireflux surgery: poor compliance to long-term medical therapy, requirement of high doses of drugs and young patients wishing to avoid lifetime medical treatment.[2]

Current retrospective study has been conducted amongst patients, who presented with upper gastrointestinal symptoms, who were further evaluated with upper gastrointestinal endoscopy, to diagnose and note the incidence of Hiatus hernia, therefore identifying the associated symptoms and diagnostic accuracy of endoscopic evaluation in patients with hiatus hernia.

METHODS

Current retrospective study comprised of 250 patients who presented with complaints of upper gastrointestinal symptoms and underwent upper gastrointestinal endoscopy in JSS hospital, Chamarajnagar during the period of October 2018 to May 2020. Informed consent was taken for both the procedure as well as for research purpose. After obtaining adequate history and general examination, patients were taken up for fibre optic upper GI endoscopy and results were analysed and tabulated using microsoft excel. Patients were kept nil per oral for 6 hours or fasting over-night. Patients were made to lie down in the left lateral position, and pharyngeal spray comprising of 10% xylocaine was sprayed topically into the oral cavity and the pharynx, and asked to retain the same for 10-15 minutes before swallowing it, to act as local anaesthesia. Endoscopy was carried out using fibre optic flexible oesophagogastroduodenoscopy (olympus). Mouth guard was placed, and the lubricated scope was passed over the dorsum of the tongue and under direct vision into the oesophagus. Subsequently the endoscope was advanced with clear view of the lumen. During the whole procedure, examination of oesophagus, stomach up to second part of duodenum was done to look for any abnormal findings such as herniating contents, laxity of oesophageal hiatus, thinning out of membranes, gastroesophageal reflux or ulcers. Once again visualised while withdrawing the endoscope, and also care taken to suction out any air or gastric contents. Entire procedure was recorded by photography and videography for purpose of documentation and further follows up.

Inclusion criteria

Patients above the age of 16 years, stable general condition presenting with dyspepsia, dysphagia, chest burn, nausea, vomiting, acid regurgitation, excessive belching, bloating sensation, epigastric pain, and haematemesis (both outpatients, inpatients and patients referred from other hospitals) were included in this study.

Exclusion criteria

Exclusion criteria for current study were; paediatric patients <16 years of age, patients presenting with massive upper GI bleed, corrosive poisoning, unconscious, unstable patients, patients previously detected with upper GI cancer, anaemia due to chronic disease, and patients with intentional weight loss.

RESULTS

Out of 250 Patients, 162 males and 88 females were part of the study, who presented with upper GI symptoms. After adequate history, clinical examination and upper GI endoscopy, the results were found to be as follows; amongst the 250 patients, 12 patients were diagnosed with hiatus hernia and the mean age group of all the patients who underwent upper GI endoscopy was 48 years and those who were diagnosed with hiatus hernia was 62 years. Amongst those diagnosed with hiatus hernia, 9 patients (75%) were males and 3 patients (25%) were females.

In current study, amongst the 12 patients with hiatus hernia, the most common upper gastrointestinal symptom complained by the patient was dyspepsia or heartburn, which was reported by 89% of the patients, and the next most common symptom being upper abdominal pain or pain in the epigastric region, as complained by 78% of the patients with hiatus hernia. Apart from these, other symptoms that were found in patients with hiatus hernia were excessive belching (44%), vomiting (23%) and decrease in appetite (12%). Amongst the 12 diagnosed cases of hiatus hernia, based on the two types of classifications of hiatus hernia, 9 patients (75%) were found to be having sliding type of hiatus hernia and 3 patients (25%) having rolling type. Based on another classification, 8 patients (67%) with type I hiatus hernia, 1 patient (8%) with type II, 1 patient (8%) with type III and 2 patients (17%) with type IV hiatus hernia.

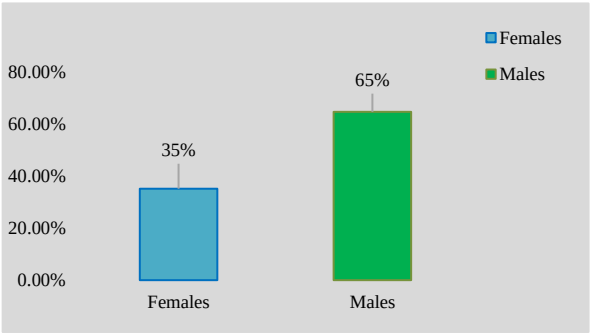

Figure 1: Sex ratio.

DISCUSSION

Oesophagoduodenoscopy (OGD) is the most commonly performed endoscopic procedure.[5] Upper gastrointestinal (GI) endoscopy now assumes a prominent role in the diagnosis and therapy of upper GI diseases.[4] It provides adequate visualisation of the oesophagus, gastroesophageal junction, stomach, duodenal bulb and second part of duodenum up to ligament of treitz.

Retroversion of the gastroscope in the stomach is essential to obtain complete views of the gastric cardia and fundus. In current study, patients underwent upper GI endscopy mainly for symptoms such as dyspepsia, upper abdominal pain, belching, vomiting, and decreased appetite apart from other upper gastrointestinal symptoms, and 4.8% of the total people in this study were found to be having hiatus hernia.

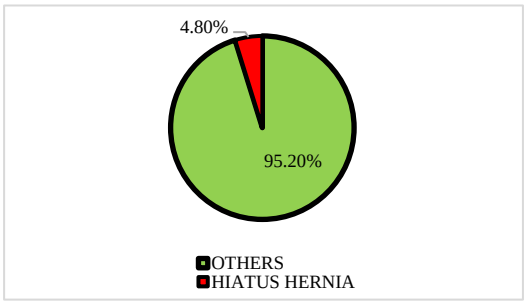

Figure 2: Incidence of hiatus hernia.

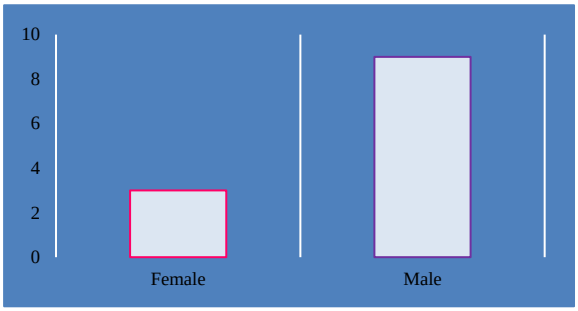

Figure 3: Sex distribution of hiatus hernia.

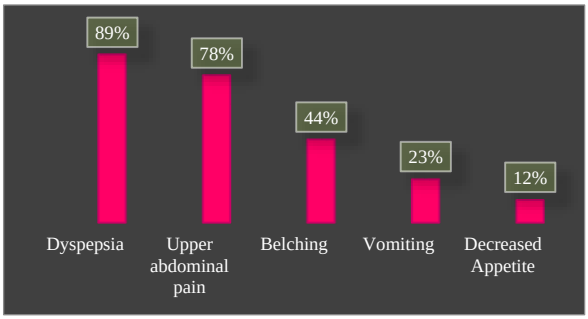

Figure 4: Frequency of symptoms in hiatus hernia.

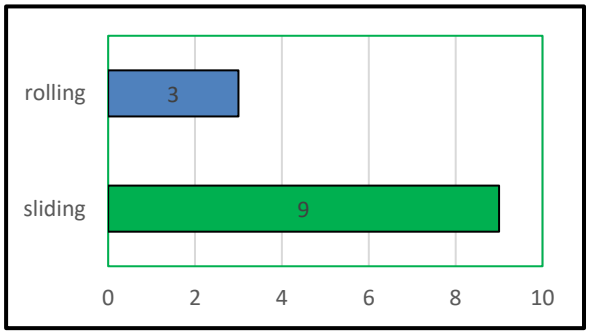

Figure 5: Classification one.

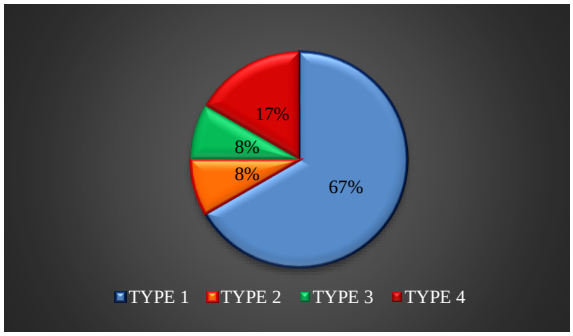

Figure 6: Classification two.

Hiatal hernia is a condition in which parts of the abdominal contents, mainly the GEJ and the stomach, are proximally displaced above the diaphragm through the oesophageal hiatus into the mediastinum.[6] Normally, the distal portion of the oesophagus is anchored to the esophageal hiatus by the phrenoesophageal ligament. This ligament/membrane is essential in maintaining the competence of GEJ and preventing the migration of GEJ and/or stomach into the posterior mediastinum by sealing off potential spaces between the esophageal hiatus and the distal portion of the esophagus.[7,8] During normal swallows, the esophageal body shortens due to the contraction of the esophageal longitudinal muscles and the phrenoesophageal ligament/membrane is stretched. However, the phrenoesophageal ligament/membrane becomes progressively lax by losing the amount of elastic tissues with aging, possibly through wear and tear due to repetitive stress of swallowing, thus predisposing to the development of hiatal hernia.[9,10]

There are two major types of hiatal hernia: sliding hiatal hernia and para-esophageal hiatal hernia/rolling hernia. Depending on how one subdivides the para-esophageal hiatal hernias, hiatal hernia can be categorized into three or four types, which would be the most comprehensive classification.[1,11,12] In current study majority of the diagnosed hiatus hernia cases (67%) were of type 1, that is characterized by widening of the esophageal hiatus and laxity of the phrenoesophageal ligament/membrane allowing GEJ and some portion of the stomach, especially the gastric cardia, to be displaced above the diaphragm having a defect size <2 cm, and type IV which is characterized by herniation of other abdominal organs (spleen, colon, pancreas, etc.) through the esophageal hiatus into the posterior mediastinum comprising 17% of the patients and having a larger defect size.

Patients categorized under type I, II, and III were managed conservatively with lifestyle modifications, antacids, prokinetics, H2-receptor antagonists and proton pump inhibitors and followed up at regular intervals in case of worsening of symptoms. Whereas, patients belonging to the category of type IV, having a larger defect size, with more persistent and severe symptoms were managed with surgical intervention where they

underwent anti reflux surgery such as Nissen's fundoplication.

In current study, we understood that both the presence and size of the hiatal hernia were important, and majority of patients with severe esophagitis were having hiatal hernia[2] and as there is a close relationship between hiatal hernia and reflux esophagitis, Barrett's oesophagus and oesophageal adenocarcinoma largely due to the disruption of many of the antireflux mechanisms that leads to increased oesophageal acid exposure[2], it is very important to use oesophagoduodenoscopy as an early diagnostic tool, and provide appropriate and adequate treatment, with timely surgical intervention if need be so as to prevent extreme complications of hiatus hernia and prolonged acid reflux.

OGD is usually appropriate when a patient's symptoms are persistent despite empirical therapy or associated with warning signs such as intractable vomiting, anaemia, weight loss, dysphagia or bleeding.[5]

CONCLUSION

Early diagnosis and timely medical management or surgical intervention reduces the morbidity associated with hiatus hernia and acid reflux. Hence, all patients presenting with persistent upper gastrointestinal symptoms, most commonly being dyspepsia or upper abdominal pain, should undergo upper GI endoscopy early and managed accordingly.

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

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