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Study of Clinical Profile of Patients with Upper Gastrointestinal Symptoms and their Association with Endoscopy at a Tertiary Care Centre

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Abstract

Introduction: Upper endoscopy, also referred to as Esophagogastroduodenoscopy (EGD), is performed by passing a flexible endoscope through the mouth into the esophagus, stomach, and duodenum. The gut is accessible with endoscopy, which can diagnose causes of pain, nausea and vomiting, bleeding, weight loss, altered bowel function, and fever[1]. **Aims and Objectives:** To study indications and findings of patients undergoing upper gastrointestinal (GI) endoscopy, to make association of endoscopic findings in these patients presenting with different upper GI symptoms and to document the demographics of subjects undergoing upper GI endoscopy at a tertiary care centre. **Materials and Methods:** It was a prospective observational study carried out at the Department of Medicine at Dr Vasantrao Pawar Medical College and Hospital, with due permission from the ethics committee for the period of August 2017 to November 2019. All the patients who were found with upper GI symptoms and underwent endoscopy after giving informed consent were included in the study. Total of 136 patients presenting with upper GI symptoms fulfilling the criteria were included in the study and their endoscopic findings were associated. **Results:** Out of total 136 patients, maximum number of the patients belonged to 51-60 years age group (21.3%). There was male preponderance (61.8% were male 38.2% were female). The most common GI symptom was hemetemesis/malena (40.4%) followed by nausea/vomiting (27.9%). Esophagitis (37%) was the most common endoscopic finding followed by esophageal varices (33%). Out of 45 patients who had esophageal varices 32 (71%) were treated with Endoscopic Variceal Ligation (EVL) and they responded well. **Conclusion:** Through this study it was concluded that most of the patients presenting with upper GI symptoms were among the elderly age group (51-60 years). Upper GI bleed was the most common symptom and indication for endoscopy followed by nausea/vomiting. The common endoscopic finding among hematemesis/malena patient was esophageal varices and most of them responded well to Endoscopic Variceal Ligation.

Keywords: Endoscopic Variceal Ligation, Gastrointestinal Endoscopy, Hematemesis, Malena, Upper Gastrointestinal Symptoms

1. Introduction

Upper endoscopy, also referred to as esophago-gastroduodenoscopy (EGD), is performed by passing a flexible endoscope through the mouth into the esophagus, stomach, and duodenum. The gut is accessible with endoscopy, which can diagnose causes of pain, nausea and vomiting, bleeding, weight loss, altered bowel function, and fever[1]. Flexible endoscopy is more sensitive than conventional radiology in the assessment of the majority of gastro-duodenal conditions[2].

Dyspepsia is termed as a common symptom for the prevalence of 5 to 20% for outpatient consultation with tertiary care hospital[3]. Dyspepsia may be the early symptom for various diseases such as peptic ulcer, cholelithiasis, esophageal carcinoma, gastric carcinoma denoted as organic dyspepsia, but sometimes no lesions are found known as functional dyspepsia[4].

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The incidence of upper gastrointestinal bleeding is 40 to 150 cases/1,00,000 adults. More than 3,50,000 patients are hospitalised each year in united states for upper gastro-intestinal bleeding and mortality rates are 5-11%[5]. Advancements in the medical intervention with upper gastro-intestinal bleeding were carried out with endoscopic profile and were associated with epidemiological terminologies in case of Upper Gastrointestinal patients[6].

Dysphagia refers to a subjective sensation of difficulty in swallowing swallowing[7]. The exact prevalence of dysphagia is uncertain, but it is estimated to be 6–9% in all age groups and 16–22% in patients above 50 years old[8]. Dysphagia was observed to significantly impact the quality of life in affected individuals, with patients reporting panic and anxiety about eating as well as developing depression[9].

The lack of medical personnel, including those trained in upper endoscopy and limited facilities, can limit the ability for appropriate evaluation for patients with upper gastrointestinal complaints. Expert guidance and diagnosis are a must to avoid complications in GI bleeding cases which can lead to crucial circumstances such as morbidity and mortality[10].

2. Aims and Objectives

To study indications and findings of patients undergoing upper Gastrointestinal (GI) endoscopy, to make association of endoscopic findings in these patients presenting with different upper GI symptoms and to document the demographics of subjects undergoing upper GI endoscopy at a tertiary care centre.

3. Material and Methods

It was an observational study carried out at the Department of Medicine at Dr. VPMC and Hospital after ethics committee approval, for the period of August 2017 to November 2019. All the patients who were found with upper GI symptoms and underwent endoscopy after giving informed consent were included in the study. Total of 136 patients presenting with upper GI symptoms fulfilling the criteria were included in the study.

3.1 Inclusion Criteria and Exclusion Criteria

- Patients of both sexes, above 18 yrs of age who presented to the tertiary care centre with upper gastrointestinal symptoms, undergoing endoscopic evaluation were included in the study.
- Patients who did not give consent were excluded.

3.2 Pre-procedure Details

- Detailed history was taken; patients were asked regarding associated symptoms like pain during swallowing, substernal pain, nausea, vomiting, hematemesis, fever.
- Routine laboratory tests were done prior to the procedure.
- Patients were explained regarding the procedure in their own language and informed written consents were obtained.
- The upper GI endoscopy was performed by the Gastroenterologist at the tertiary care centre with flexible endoscope {Company: Olympus(Axeon) Model: GIF-LV1}

3.3 Endoscopy Procedure Details

- Before upper gastrointestinal endoscopy, the patient was kept nil by mouth for at least 4 hours, a local anesthetic was given to numb the throat. An intravenous (IV) needle was inserted if a sedative needs to be given.
- During upper gastrointestinal endoscopy, an endoscope was carefully passed through the mouth, into the upper gastrointestinal tract upto the pylorus. The images were transmitted to a video monitor which was observed by the gastroenterologist and images were stored and observations were documented.
- The observations were documented for each patient. Also records of endoscopic interventions, if done in any patient were documented.
- The patients were allowed to resume their normal diet and medications, if no symptoms or complications were present.

4. Results

Out of total 136 patients, majority of patients (21.3%) belonged to 51-60 years age group that is 5th decade of life. Majority were males (61.8%) and females were 38.2%. Majority of the patients (40.4%) presented with hematemesis/malena followed by nausea/vomiting (27.9%), epigastric pain and others as described above in (Table 1).

Table 1. Upper GI symptoms requiring endoscopic evaluation and their percentage occurrence

Symptom	No. of Patients	Percentage
Hematemesis/malena	55	40.4
Nausea/ Vomiting (recurrent)	38	27.9
Abdominal pain (epigastric)	33	24.3
Dysphagia	26	19.1
Retrosternal burning with regurgitation	24	17.6
Dyspepsia	14	10.3
Anorexia/weight loss	12	8.8

Table 2. Endoscopic findings in patients presenting with upper gastrointestinal symptoms

Endoscopic findings	No. of Patients	Percent
Esophagitis	50	37%
Esophageal Varices	45	33%
Normal	36	26%
Antral Erosions	25	18%
Hiatus Hernia	16	12%
Duodenal Ulcer	14	10%
GIST*	6	4%
Malignancy	4	3%
GAVE**	4	3%
Achalasia Cardia	1	1%
Mallor-Weiss Tear	1	1%

*Gastrointestinal Stromal Tumour (GIST)

** Gastric Antral Vascular Ectasia (GAVE)

Among the patients who presented with hematemesis/ malena most common endoscopic finding was esophageal varices. Similarly among dyspepsia patient most common finding was Esophagitis, among anorexia/weight loss majority had normal endoscopic findings, among abdominal pain patients most common finding was Esophagitis, among dysphagia patients most common finding was hiatus hernia, among retrosternal burning/ regurgitation most common finding was esophagitis (Table 3). 71% of the patients who had esophageal varices were treated with Endoscopic Variceal Ligation (EVL).

5. Discussion

Upper gastrointestinal endoscopy remains the prime modality of assessment to identify the cause for various gastrointestinal symptoms like recurrent nausea/ vomiting, hematemesis/malena, regurgitation, epigastric pain, anorexia/weight loss, etc.

A total of 136 were evaluated with help of detailed history, clinical examination, blood investigations, USG abdomen and upper GI endosopy.

In this study most of the patients presenting with upper gastrointestinal symptoms to the tertiary care hospital were among the elderly age group. Few young age groups patients also presented with upper GI symptoms (<40 years).

In the current study, majority of the patients belonged to 51-60 years of age group (21.3%), maximum number

Table 3. Endoscopic findings in correlation with different upper gastrointestinal symptoms

	Malignancy	Antral Erosions	Achalasia Cardia	Duodenal Ulcer	Esophageal Varices	Esophagitis	GAVE	GIST	Mallor-Weiss Tear	Hiatus Hernia	Normal	Total
Nausea/ Vomiting	0	10	0	8	0	12	2	3	0	0	3	38
Hematemesis/ malena	0	0	0	0	45	0	0	0	0	0	10	55
Dysphagia	2	0	1	0	0	4	0	0	0	15	4	26
Abdominal pain	0	6		0	0	20	0	0	1	1	5	33
Anorexia/ weight loss	2	0	0	0	0	0	0	0	0	0	10	12
Dyspepsia	0	3	0	2	0	6	1	1	0	0	1	14
Retrosternal burning with regurgitation	0	6	0	4	0	8	1	2	0	0	3	24
Total	4	25	1	14	45	50	4	6	1	16	36	202

of patients were of above 40 years age (76.5%) and less number of patients (23.5%) were below 40 years age. In contrast to the current study the majority of the patients in the study of Kumar *et al.*,[11] belonged to 41-50 years age group.

Out of 136 patients who presented with upper GI symptoms 84 were male (61.8%) and 52 were female (38.2%). So there was male predominance in this study. Similar results were found in Kumar *et al.*,[11] in which out of 150 patients, 105 were male (70%) and 45 were female (30%). Similar results were also found in Jain *et al.*,[12] in which out of 118 patients, 92 were male (77.9%) and 26 were female (22.1%).

In our study the most common presenting symptom was hematemesis/malena. In the study conducted by Kumar *et al* ., most common presenting symptom was hematemesis/malena (malena> hematemesis). 74% patient had hematemesis/malena who presented with upper GI bleed. Majority of patient had malena (64%).

In this study 45 patients (33%) had esophageal varices on endoscopy. Out of 45 patients, 32 (71%) were treated with Endoscopic Variceal Ligation (EVL) due to large size and increased chances of bleeding. In 13 patients EVL was not required due to small size and no bleeding tendency.

6. Conclusion

Through this study it was concluded that most of the patients presenting with upper GI symptoms was among the elderly age group (51-60 years). Most the patients presenting with upper GI symptoms were male. Upper GI bleed was the most common symptom and indication for endoscopy followed by nausea/vomiting. The common endoscopic finding among hematemesis/malena patient was esophageal varices and most of them responded well to Endoscopic Variceal Ligation.

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