

Clinical Indication of Upper Gastro-Intestinal Endoscopy in Rural Hospital and Its Outcome

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I. Introduction

Upper gastrointestinal symptoms like heartburn, belching, dyspepsia are increasing in modern world due to changes in food habits and increased use of refined food. In this regard Upper gastro intestinal endoscopy (UGIE) carries utmost importance in diagnosis and treatment and is a common indication inpatients of upper gastrointestinal complaints with normalultrasonography/CT abdomen. Since theprocedure is done with local anesthetic, it can be done on all patients who come with upper gastrointestinal symptoms on outpatient basis.

Upper gastrointestinal scope is flexible fiber optic cable with camera attached at tip, which is insertedthrough mouth and is passed uptothe duodenum. The common endoscopic indications aregastritis,esophagitis, gastroesophageal reflux disease, pepticulcers disease, esophageal varices according to previous studies¹.

Dyspepsia is defined as a chronic or frequently recurring epigastric pain or discomfort, which is believed to originate in the gastroduodenal region²and is a common problemimpacting on the patient's quality of life.This may be associated with other upper gastro-intestinal (GI) symptoms, such as heartburn, postprandial fullness, and early satiety as shown in previous articles.

Upper gastrointestinal bleeding that is bleeding into esophagus, stomach or duodenum, account for one of common indications for upper gastrointestinal endoscopy after dyspepsia. The common causes for upper gastrointestinal bleeding are peptic ulcer disease, esophageal varices(among cirrhotic patients),Mallory Weiss tear and Porto- hypertensive gastropathy³.

Upper gastro intestinal endoscopy provides baseline data on the age distribution of major upper gastrointestinal diseases among the population. The influence of demographic changes on the pattern of these diseases can be evaluated against ourfindings in the future⁴.

This study was done to identify different causes of upper gastrointestinal endoscopy in rural hospital and incidence of the same in the modern world, in comparison with previous study.

II. Methodology

This was a retrospective study in Adichunchanagiri hospital and research centre, BG Nagara, Mandya district,Karnataka , India from 2017 to 2019 on a study population of 911 considering all patients who had come with anemia, dyspepsia, suspected gastrointestinal bleed, dysphagia , malena . The upper gastrointestinalendoscopy was done in our gastroenterology department –the patients who were selected were aged morethan 15 years, both genders were included, written consent was taken along with indications and complications of procedure were explained to the patient in their own understandable language.Furthermore an independent investigator unaware of the resultof the study was appointed to assess the appropriateness of esophagogastroduodenoscopyaccording ASGE 1992 criteria⁵.Patients who were excluded from the study were the one who were already diagnosed with illness in previous endoscopy and those who were on antiH.pylori treatment regimen and also those who had more than one endoscopic finding .The data was collected using Microsoft excel software and was classified into indications for performing the endoscopy and their obtained results .The results were further classified into age and sex.

III. Results

A total of 911 patients who underwent UGIE during the three-year study period were analyzed. Among them 645 were males (70.8%) and 266 were females (29.1%). None of the patients were on aspirin or proton pump inhibitors. Patients underwent esophago gastro dudodenoscopy mainly because of dyspepsia 265(29%)and pain abdomen 247(27.1%),followed by gastroesophageal reflux symptoms 112(12.29%), dysphagia 107(11.74%),suspected varices 72 (7.9%), gastrointestinal bleeding 64(7.02%),anemia had the least of all indication 44(4.82%).The indication for upper gastrointestinal endoscopy was considered appropriate according to ASGE criteria, endoscopy was normal in 319 (35%)patients. Erosive gastritis is the most frequent diagnosis 147(16.13%),followed by non-erosive gastritis 129(14.16%),followed by esophagitis 109(11.96%),esophageal varices 44 (4.82%),carcinoma of esophagus 33 (3.62%),erosive duodenitis and duodenal ulceration in 31 patients (3.4%) each, gastric ulcer 24 (2.63%), hiatus hernia 21 (2.3%),carcinoma of stomach 8 (0.87%). The maximum number of people who underwent the procedure were within 20 – 60 year age group and there was decreasing trends before and after this age group.

Indications	Number (n)	Percentage (%)
Dyspepsia	265	29
Dysphagia	107	11.74
Reflux symptoms	112	12.29
Suspected GI bleed	64	7.02
Suspected varices	72	7.9
Anemia	44	4.82
Pain abdomen	247	27.1

Outcomes	Number (n)	Percentage(%)
Erosive gastritis	147	16.13
Erosive duodenitis	31	3.4
Esophagitis	103	11.96
Duodenal ulcer	31	3.4
Gastric ulcer	24	2.63
Esophageal varices	44	4.82
Carcinoma of esophagus	33	3.62
Carcinoma of stomach	8	0.87
Hiatal hernia	21	2.3
Normal	319	35
Non erosive gastritis	129	14.16
others	21	2.3

Age distribution (years)	Number (n)	Percentage (%)
<20	16	1.7
21-40	293	32.16
41-60	396	43.4
61-80	194	21.29
>80	12	1.3

IV. Discussion:

Gastrointestinal (GI) diseases are sources for substantial morbidity and mortality and cost in developing as well as in developed countries⁶.The purpose of the study is to find out the common indication for esophagogastroduodenoscopy. Dyspepsia and abdominal pain were the single most common reason for performing endoscopy in this study and pattern has remained the same compared to two decades ago⁷. Dyspepsia has increased by 3.3% more in my study compared to the study done 20 years back by Lieberman et al⁷,probably due to increasing use of NSAID and modern lifestyle.

The study documented that erosive gastritis(16.13%)and Non - erosive gastritis (14.16%),esophagitis(11.96%) and esophageal varices as the main common diseases encountered in upper esophagoscopy. Gastritis is a heterogeneous pathological condition, responsible for the incidence of many gastrointestinal diseases accounting to 62% which is backed by western literature⁸. Gastritis is the most common pathology reported in this study which is similar to study done in sudan by Elhadi AA et al⁹. The only difference is the prevalence of gastritis in this setting is mainly due to alcohol consumption and also due NSAID abuse.

Reflux symptoms have decreased by 5% compared to studies done two decade ago by Lieberman et al , gradually owing to increase use of proton pump inhibitors and other acid suppressive medications⁷.In recent studies there has been evidence H.pylori colonization to have conferred protection against acid reflux (GERD) probably due to H.pylori induced hypochlorhydria particularly among the cag A strains¹⁰.

V. Conclusion:

We have demonstrated increased frequency of gastrointestinal diseases such as gastritis(erosive and non-erosive), gastro esophageal reflux disease as a frequent endoscopic findings and dyspepsia was the main indication to perform endoscopy in our hospital .Compared to previous decade there has been gradual rise in GERD which can be attributed to changes in lifestyle and/or a high fat diet with lack of exercise, leading to obesity.Preventive measures should be adopted to cope with the situation and to prevent the serious complications of gastritis and esophageal diseases especially GERD in our population.

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