

Clinical Indication of Upper Gastrointestinal Endoscopy and its outcome

Masud Rana¹, Kamrun Nahar², Nazmun Nahar³, Mainuddin Ahmed⁴, Tahreema Salam⁵, Sabina Akter⁶, Faruk Ahmed⁷, Salauddin Mamun Chowdhury⁸

¹Associate Professor, Department of Gastroenterology, Chittagong Medical College, Chattogram, Bangladesh

²Assistant Professor, Department of Gynecology & Obstetrics, Abdul Malek Ukil Medical College, Noakhali, Bangladesh

³Consultant (Gynecology & Obstetrics), Health View Maternity and Child Hospital, Taherabad, Chattogram, Bangladesh

⁴Assistant Professor, Department of Anaesthesiology, Abdul Malek Ukil Medical College Noakhali, Bangladesh

⁵Lecturer, Department of Pharmacology, Shaheed Tajuddin Ahmad Medical College, Gazipur, Bangladesh

⁶Registrar, Department of Gynaecology & Obstetrics, BRB Hospitals, Panthapath, Dhaka, Bangladesh

⁷Assistant Professor, Department of Pediatrics, Abdul Malek Ukil Medical College, Noakhali, Bangladesh

⁸Associate Professor, Department of Medicine, Abdul Malek Ukil Medical College, Noakhali, Bangladesh

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*Corresponding author: Masud Rana

Associate Professor, Department of Gastroenterology, Chittagong Medical College, Chattogram, Bangladesh

Email: drmasud.amumc@gmail.com

Abstract

Introduction: Upper gastrointestinal (GI) symptoms are the commonest complaints among the patients for which they seek medical attention. Diseases associated with these symptoms are leading causes of morbidity and mortality worldwide. **Objective:** To assess the clinical indication of upper gastrointestinal endoscopy and its outcome. **Materials and Methods:** This was a retrospective study was conducted at Department of Gastroenterology, Abdul Malek Ukil Medical College Hospital, Noakhali, Bangladesh from January 2020 to December 2020. Six hundred two (602) patients were included. All patients who had come with anemia, dyspepsia, suspected gastrointestinal bleed, dysphagia, malena were included in this study. 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. **Results:** Total 602 patients who underwent UGIE during the one year study period were analyzed. Among them 326 were males (54.2%) and 276 were females (45.8%). None of the patients were on aspirin or proton pump inhibitors. 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. The patients underwent esophagogastroduodenoscopy mainly because of dyspepsia 226 (37.5%) and pain abdomen 163 (27.07%), followed by gastroesophageal reflux symptoms 92 (15.2%), dysphagia 48 (7.9%), suspected varices 30 (4.9%), gastrointestinal bleeding 23 (3.8%), anemia had the least of all indication 20 (3.3%). Among the indication for upper gastrointestinal endoscopy was considered appropriate according to ASGE criteria, endoscopy was normal in 268 (44.5%) patients. Erosive gastritis is the most frequent diagnosis 78 (12.9%), followed by non-erosive gastritis 42 (6.9%), followed by esophagitis 40 (6.6%), duodenal erosions 38 (6.3%) duodenal ulcer 36 (5.9%), gastric ulcer 30 (4.9%), esophageal varices 21 (3.4%), carcinoma of esophagus 16 (2.6%), carcinoma of stomach 12 (1.9%), hiatus hernia 11 (1.82%) others 10 (1.8%). **Conclusion:** In conclusion, upper gastro-intestinal endoscopy is a simple, safe, more reliable and valuable tool with easy learning curve, it enables direct visualization of the upper GI tract and when combined with histopathological examination helps in diagnosing as well as therapeutic interventions for patients with various pathologies. 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.

Keywords: Clinical indication, upper gastrointestinal, endoscopy, outcome.

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INTRODUCTION

Upper gastrointestinal (GI) symptoms are the commonest complaints among the patients, for which they seek medical attention. Diseases associated with

these symptoms are leading causes of morbidity and mortality worldwide [1]. Upper Gastrointestinal (UGI) symptoms are among the commonest complaints for which patients seek medical attention, with the annual

prevalence of dyspepsia approximating 25% [2]. Diseases associated with dyspepsia are leading causes of gastrointestinal morbidity and mortality globally. Peptic ulcer disease, gastroesophageal reflux disease and cancers affect millions of people worldwide [3]. Prevalence of upper gastro-intestinal symptoms (mostly commonly upper abdominal pain or discomfort) varies from approximately 8-54%, while the prevalence of heartburn varies from 10-48%, regurgitation varies from 9-45% and 21-59% for both [4]. Gastrointestinal endoscopy (UGIE) is one of the most commonly performed endoscopic procedures and provides valuable information in patients with gastroduodenal disorders. It gives a better diagnostic yield over radiology particularly in the investigation of upper gastrointestinal bleeding, inflammatory conditions of the UGI track like esophagitis, gastritis and duodenitis as well as the diagnosis of Mallory Weiss tears and vascular malformations [5]. Appropriate diagnostic indications for UGIE include: evaluation of an upper abdominal symptom that persists despite an appropriate trial of therapy, upper abdominal symptoms associated with alarm features that have been suggested as indicators of high risk for a serious disease [6, 7]. The common upper GI symptoms are dyspepsia, dysphagia, gastrointestinal bleeding, progressive unintentional weight loss, persistent vomiting or of unknown cause, anaemia or epigastric mass [8]. Endoscopy is recommended as the first line of investigation for the patients presenting with upper gastro-intestinal symptoms [9]. Upper GI endoscopy is a procedure that uses a small, flexible camera with a light source to examine the upper GI tract [10]. It gives an excellent view of mucosal surfaces of the oesophagus, stomach, and proximal duodenum. Observations are made looking for focal benign or malignant lesions diffuse mucosal changes, luminal obstruction, motility, and extrinsic compression by contiguous structures.

MATERIALS AND METHODS

This was a retrospective study was conducted at Department of Gastroenterology, Abdul Malek Ukil medical College Hospital, Noakhali, Bangladesh from January to December 2020. Six hundred two (602) patients were included. All patients were included in this study who had come with anemia, dyspepsia, suspected gastrointestinal bleed, dysphagia, malena were included in this study. The upper gastrointestinal endoscopy was done in our gastroenterology department the patients who were selected were aged more than 15 years and less than 95 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. Patients who were excluded from the study

were the one who were already diagnosed with illness in previous endoscopy and those who were on anti H.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.

Inclusion Criteria

Patients above the age of 15 years with stable general conditions presenting with dyspepsia, dysphagia, odynophagia, nausea and vomiting, pyrosis, occult GI bleeding, cirrhosis (both outpatients and patients referred from other hospitals).

Exclusion Criteria

1. Age <15 years and >95 years.
2. Massive upper gastrointestinal bleeding.
3. Corrosive poisoning.
4. Unconscious and unstable patients.

RESULTS

Total 602 patients who underwent UGIE during the one year study period were analyzed. Among them 326 were males (54.2%) and 276 were females (45.8%). None of the patients were on aspirin or proton pump inhibitors in **fig-1**.

Table-1 shows the maximum number of people who underwent the procedure were within 20 – 60 years age group and there was decreasing trends before and after this age group.

Table-2 shows the patients underwent esophago gastro dudodenoscopy mainly because of dyspepsia 226 (37.5%) and pain abdomen 163(27.07%), followed by gastroesophageal reflux symptoms 92(15.2%), dysphagia 48(7.9%), suspected varices 30 (4.9%), gastrointestinal bleeding 23(3.8%), anemia had the least of all indication 20(3.3%).

Table-3 shows the indication for upper gastrointestinal endoscopy was considered appropriate according to ASGE criteria, endoscopy was normal in 268(44.5%) patients. Erosive gastritis is the most frequent diagnosis 78(12.9%), followed by non-erosive gastritis 42(6.9%), followed by esophagitis 40(6.6%), duodenal erosions 38(6.3%) duodenal ulcer 36(5.9%), gastric ulcer 30(4.9%), esophageal varices 21(3.4%), carcinoma of esophagus 16 (2.6%), carcinoma of stomach 12 (1.9%), hiatus hernia 11 (1.8%) others 10(1.8%).

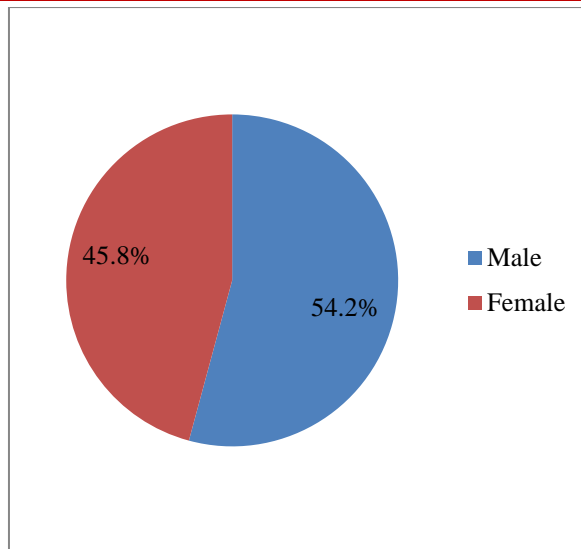


Fig-1: Sex distribution patients of the study.

Table-1: Age distribution of the GI patients (N=602)

Age distribution (years)	Number(n)	Percentage (%)
15-20	30	4.9
21-40	194	32.2
41-60	262	43.5
61-80	98	16.2
>80	18	2.99

Table-2: Indications of the GI patients (N=602)

Indications	Number(n)	Percentage (%)
Dyspepsia	226	37.5
Pain Abdomen	163	27.0
Reflux symptoms	92	15.2
Dysphagia	48	7.9
Suspected varices	30	4.9
Suspected GI bleed	23	3.8
Anemia	23	3.8

Table-3: Outcome of the GI patients (N=602)

Outcomes	Number(n)	Percentage (%)
Normal	268	44.5
Erosive gastritis	78	12.9
Non erosive gastritis	42	6.9
Erosive duodenitis	38	6.3
Esophagitis	40	6.6
Duodenal ulcer	36	5.9
Gastric ulcer	30	4.9
Esophageal varices	21	3.4
Carcinoma of esophagus	16	2.6
Carcinoma of stomach	12	1.9
Hiatal hernia	11	1.82
Others	10	1.8

DISCUSSION

Gastritis was the most frequent endoscopic finding in our patients, followed by duodenitis. Gastrointestinal (GI) diseases are sources for substantial morbidity and mortality and cost in developing as well as in developed countries [11]. The purpose of the study is to find out the common indication for esophagogastroduodenoscopy. Many of the patients in this study were in their middle age or older and probably on NSAIDs for degenerative joint and bone diseases which predispose more to the development of gastric ulcers. There is no absolute contraindication for upper gastrointestinal endoscopy. Major complications such as perforation or aspiration are rare, occurring in less than 1 per 1000 cases [3]. In this study, 326 were males (54.2%) and 276 were females (45.8%). None of the patients were on aspirin or proton pump inhibitors. This might be due to smoking and lifestyle factors are more common in males compared to females. 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 in shows **table-1**. 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 ago [12]. **Table-2** shows the patients underwent esophagogastroduodenoscopy mainly because of dyspepsia 226 (37.5%) and pain abdomen 163(27.07%), followed by gastro esophageal reflux symptoms 92(15.29%), dysphagia 48(7.9%), suspected varices 30 (4.9%), gastrointestinal bleeding 23(3.8%), anemia had the least of all indication 20(3.3%). Dyspepsia has increased by 11.6% more in my study compared to the study done 20 years back by Liebermanetal [12] probably due to increasing use of NSAID and modern lifestyle. **Table-3** shows the indication for upper gastrointestinal endoscopy was considered appropriate according to ASGE criteria, endoscopy was normal in 268(44.5%) patients. Erosive gastritis is the most frequent diagnosis 78(12.9%), followed by non-erosive gastritis 42(6.9%), followed by esophagitis 40 (6.6%), duodenal erosions 38(6.3%) duodenal ulcer 36(5.9%), gastric ulcer 30(4.9%), esophageal varices 21(3.4%), carcinoma of esophagus 16 (2.6%), carcinoma of stomach 12 (1.9%), hiatus hernia 11(1.8%) others 10(1.8%). Gastritis is a heterogeneous pathological condition, responsible for the incidence of many gastrointestinal diseases accounting to 62% which is backed by Western literature [13].Gastritis is the most common pathology reported in this study which is similar to study done by Elhadi AA et al [14]. The only difference is the prevalence of gastritis in this setting is mainly due to NSAID abuse. Reflux symptoms have decreased by 2% compared to studies done two decade ago by Lieberman et al, gradually owing to increase use of proton pump inhibitors and other acid suppressive medications [7]. 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 strains [15]. In otherwise healthy patients with a history of chronic ulcer, definitive anti-ulcer procedure (vagotomy and drainage, highly selective vagotomy) may also be considered. Perforated gastric ulcers are treated with an omental patch, wedge resection of the ulcer, or a partial gastrectomy and re- anastomosis [16]. 5-8% of patients of peptic ulcer disease presents with gastric outlet obstruction. UGI endoscopy is recommended to determine the site, cause, and degree of obstruction [8,16]. Biopsy was taken from the site to evaluate for the cause and found to be benign in nature. Patients were managed conservatively with nil per oral, nasogastric tube insertion for decompression and regular saline wash to reduce the oedema. Gastroesophageal reflux disease (GERD) is the most common benign disorder of stomach and esophagus, which occurs when there is retro-grade flow of gastric contents through lower esophageal sphincter (LES), which results from the failure of endogenous anti-reflux mechanisms. GERD most commonly manifest as heart burns, which can gradually worsen causing complications like strictures, ulcers, metaplasia, dysplasia, carcinoma and pulmonary disease [17]. Patients with GERD were sent for manometry studies and followed up with gastroenterologist advice.

CONCLUSION

In conclusion, Upper gastro-intestinal endoscopy is a simple, safe, more reliable and valuable tool with easy learning curve, it enables direct visualization of the upper GI tract and when combined with histopathological examination helps in diagnosing as well as therapeutic interventions for patients with various pathologies. 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. We have demonstrated increased frequency of gastrointestinal diseases such as gastritis, gastro esophageal reflux disease as a frequent endoscopic findings and dyspepsia was the main indication to perform endoscopy in our hospital. 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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