Original Article

Pattern of Diagnosis of Upper Gastrointestinal Tract Endoscopy-Experience in a Private Centre

Md. Sohel Rana[1], Md. Mahfuj-Ul-Anwar[2], Md. Golam Rabbani[3], Syeda Shahnaz Nasrullah[4], AKM Zahedul Islam[5], Md. Oliul Islam[6]

1. Junior Consultant
   Department of Surgery
   Rangpur Medical College Hospital
2. Assistant Professor
   Department of Medicine
   Rangpur Medical College
3. IMO
   Department of Surgery
   Rangpur Medical College Hospital
4. Assistant Professor
   Department of Surgery
   Rangpur Medical College
5. Resident Surgeon
   Casualty
   Rangpur Medical College Hospital
6. Registrar
   Department of Surgery
   Rangpur Medical College Hospital

Correspondence to:
Md. Sohel Rana
Junior Consultant
Department of Surgery
Rangpur Medical College Hospital
Mobile: 01712-685510
E-mail: drsrana29@gmail.com

Abstract

Background:
Upper gastrointestinal endoscopy (UGIE), is a valuable tool in the diagnosis and management of diseases affecting the esophagus, stomach, and upper part of the duodenum. The advantage of direct visual inspection is obvious and establishing causes of UGI diseases leads to more efficient treatment and consequently decreases morbidity and mortality. There are many reports in the literature on the indications and findings of UGIE mainly from the tertiary level teaching hospital. However, scanty data are available from a single private center.

Objective:
This study aims to determine the current pattern of endoscopic findings of patients undergoing UGIE at a private center in Rangpur city.

Methods:
This was a cross-sectional study of patients undergoing UGIE at Metrolab imaging and diagnostic centre, a private center of Rangpur city from 1st April 2019 to 30th October 2021. In Bangladesh UGIE service is offered in all tertiary level hospitals and private centers especially divisional or large cities. Most of the endoscopic procedures are performed by gastroenterologists and hepatologists in our country but a few surgeons are performing endoscopic procedures with ERCP.

Results:
The total number of patients was 1515. The majority of the patients (25%) were in the age group of 50-59 years. 46% of patients were endoscopically normal. Non-erosive gastritis was the most frequent endoscopic finding (23%), followed by erosive gastritis (19%). The prevalence of gastric carcinoma was comparatively low (4%).

Conclusion:
This study provides an evidence-based platform for health advocacy in regard of disease diagnosis. The accurate diagnosis would facilitate prompt and accurate treatment as well as reduce morbidity period and mortality.

Keywords: Upper gastrointestinal endoscopy (UGIE), gastritis, peptic ulcer disease (PUD), malignancy

Introduction:

Upper gastrointestinal endoscopy (UGIE), is a valuable tool in the diagnosis and management of diseases affecting the esophagus, stomach, and upper part of the duodenum.[1] It is considered the investigation of choice in cases of dyspepsia, reflux symptoms, patients associated with alarm features like dysphasia, persistent vomiting, haematemesis/melaena, anemia, and weight loss.[2,3] The advantage of direct visual inspection of the esophagus, gastric and duodenal mucosa is obvious. Biopsy specimens can be taken for histological and microbiological examination.[4] UGIE has been found to be both effective and relatively safe procedure that can be performed at large medical centers, small rural hospitals, outpatient clinics or even private offices.[5] Establishing causes of UGI diseases leads to more efficient treatment and consequently decreases morbidity and mortality rates.

There are many reports in the literature on the indications and findings of UGIE mainly from the tertiary level teaching hospital. However, scanty data are available from a single private center. This study aims to determine the current pattern of endoscopic findings of patients undergoing UGIE at a private center in Rangpur city.

Methods:

This was a cross-sectional study of patients undergoing UGIE at Metrolab imaging and diagnostic centre, a private center of Rangpur city. Each patient was clinically evaluated and investigated before the procedure. All patients were given explanatory statements of the procedure and consented prior to endoscopy. And ethical clearance was also taken from Principal, Rangpur Medical College prior to conduct the study. Demographic data eg. age, sex and occupation of the patients were taken. UGEI was performed using the Olympus CV-260 video scope. Study participants were given 10% lidocaine (xylocaine) throat spray with 2% lidocaine jelly at the tip of the scope. The areas examined were the esophagus, stomach, and upper parts of the duodenum. Mucosal biopsies were performed when necessary. Endoscopic findings of each participant were recorded.

Results:

A total of 1515 patients underwent UGIE from the 1st April 2019 to 30th October 2021. The patients consisted of 712(47%) males and 813(53%) females and the mean age was 46 Years (±standard deviation of 15.132) while patients age ranged from children to old age , those in the sixth decade of life constituted the largest cohort (25%), followed by those in the fifth and seventh decades of life (17% and 18% respectively)(Table-I).

Table-I: Age distribution of patients that presented for Upper Gastro-intestinal Endoscopy

Age (Years)	Frequency (n=1515)	Percentage
10-19	30	1.9
20-29	240	15.9
30-39	255	16.9
40-49	255	16.9
50-59	375	24.7
60-69	270	17.8
70-79	90	5.9
Total	1515	100

Table-II: Pattern of diagnosis among patients with upper gastro-intestinal condition

Diagnosis	Frequency (n=1515)	Percentage
Normal	697	46
Non-erosive gastritis	349	23
Erosive gastritis	287	19
PUD	15	1
GOO due to malignancy	60	4
GOO due to healed DU	45	3
Gastric malignancy without obstruction	9	0.6
Polyp (stomach and duodenum)	8	0.5
Oesophageal malignancy	10	0.7
Oesophagitis	22	1.5
Portal hypertensive gastropathy	11	0.7
Others	2	

As Table-2 showed, about half 697(46%) of the patient was normal followed by non-erosive gastritis 349 (23%) and erosive gastritis 287(19%). The total Case of GOO was around one-fourteenth (7%). Among which GOO due to malignancy constituted 60(4%) and GOO due to benign cause appears 45(3%). The least number of cases for pathology in the stomach is due to PUD 15(1%). Other than these a fraction of cases was recorded for both polyp (stomach and duodenum) 8(0.5%) and esophageal growth 10(0.7%).

Discussion:

This study was aimed to document the demographic characteristics, indications, and endoscopic findings of patients undergoing UGIE at a tertiary level private center. Based on the clinical epidemiological approach of criterion-referenced validity, we sought to determine the usefulness and limitations of the clinical approach (only) in the diagnosis of various upper gastro-intestinal conditions by comparing clinic-based diagnosis with endoscopy. Criterion-referenced validity has been considered as "the best and most obvious way of appraising validity".[6] Our findings with regard to non-erosive gastritis as the most common UGI condition and the difference in the age distribution of early and late gastric cancers are in line with current knowledge.[1,7-9] The finding was that 697 patients (46%) were endoscopically normal, these patients may have been suffering from functional dyspepsia or non-ulcer dyspepsia.[10,11]

Non-erosive gastritis was the most frequent endoscopic finding (23%), followed by erosive gastritis (19%). The prevalence of gastric carcinoma (4%) was comparatively low than previous study.[11] In the case of PUD, the rate of diagnosis was 1%, the generally low level of sensitivity and the positive predictive value obtained in this study highlights the poor association between clinical and endoscopic diagnosis. Clinical diagnoses are generally non-specific in nature. This is not unexpected as it may be clinically difficult to distinguish precisely between several conditions, for example, acute gastric ulcer, gastritis, gastro-duodenitis, or even ulcerated gastric cancers.[12]

Conclusion:

Advance technological procedures in disease diagnosis and its management has come at a time when the ability of the Bangladesh health care system to provide expensive services to all patients is increasingly constrained. The use of endoscopy for Upper GI conditions would increase the accuracy of diagnosis, facilitate prompt and accurate treatment as well as reduce morbidity period and mortality. It is important to also note that the availability of UGIE would result in cost-effectiveness in the case of management as the incidence of failed treatment resulting from an "empirical" non-evidence-based approach would be reduced.

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