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Endoscopic Evaluation of Patients with Dyspepsia in a Tertiary Care Hospital in Bangladesh

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Dyspepsia is another word for indigestion. It is a very prevalent medical condition. It is exposed as bloating, abdominal pain and nausea. Aim of the study was to evaluate gastrointestinal endoscopic findings in patients having dyspepsia. This cross-sectional study took place in Kushtia Medical

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College during the period of April 2022 to April 2023. The total population of this study was 66 patients attending OPD or admitted in the hospital with dyspepsia. Structured questionnaire was used to collect the necessary information. Convenient method of sampling was used as the sampling technique, which denotes non-probability method of sampling. Mean age of respondents was 41.51 (± 15.46) years. In case of distribution of the respondents, according to their age, 30.3% and 21.2% patients were in 36-45 years and 26-35 years age group respectively. Regarding gender, equal number of patients belonged to both genders, that is 50% males as well as 50% females. According to their personal history, 30.3% patients had a history of PPI and H_2 antagonist drugs intake. On the other hand, smoking history was present in 15 respondents. In addition, among all the respondents, 68.2% patients complained about epigastric pain. In endoscopic evaluation, 12.1% respondents had peptic ulcer disease who were in 36-45 years of age group, in contrast, it was less common (1.5%) in aged group respondents (66-75 yrs).

Keywords: Endoscopy; dyspepsia; peptic ulcer disease; gastrointestinal; cancer.

1. INTRODUCTION

The fourth commonest and the 2nd leading cancer that causes death in the world is gastric cancer [1]. The high rate of this danger is mostly due to sedimentary lifestyle and unhealthy habituations. High rate of mortality and morbidity is significant in young aged people. One of the commonest symptoms of early or advanced gastric cancer is dyspepsia [2].

Discomfort or pain in upper abdomen, over-fullness along with bloating after taking meal refers to dyspepsia [3]. On the other hand, the symptoms including heart burn, acid regurgitation and belching were not included in dyspepsia according to the changed report of Rome I and Rome II [3]. Despite being a common symptom, it was evident that, very few epidemiological information of dyspepsia was found. The prevalence in western countries ranges from 25% to 40% [4]. In spite of taking preventive measures, in United Kingdom, 30,000 patients are admitted to a hospital, among them, 3000 die with upper gastrointestinal hemorrhage every year [5].

The study regarding prevalence of dyspepsia in Bangladesh is not satisfactory. In the year of 1987, it was found that, 41.4% prevalence of dyspepsia was found in rural communities [6].

Very few patients have underlying yet significant causes of dyspepsia. Life-threatening organic causes are mostly present in elderly patients. Major causes of dyspepsia are gastroesophageal reflux (with or without esophagitis), Helicobacter pylori infection, medications such as NSAIDS, functional dyspepsia, chronic peptic ulcer disease (PUD), and malignancy [7]. Among all other causes, peptic ulcer disease is renowned as the commonest organic cause of dyspepsia [8].

Factors exaggerating dyspepsia include smoking, consumption of nonsteroidal anti-inflammatory drug (NSAID), socio-economic status, poor hygiene and so on [9].

The patients having dyspepsia may have some alarming symptoms, for example, unexplained weight loss, recurrent vomiting, progressive dysphagia, odynophagia, gastrointestinal blood loss, along with family history of upper gastrointestinal cancer. These patients are recommended to undergo upper endoscopic evaluation. On the contrary, noninvasive testing for *H. pylori* infection, followed by eradication has decreased the suggestive number of endoscopic evaluations [10]. Hence, early diagnosis and treatment of dyspepsia can reduce the risk of gastric cancer as dyspepsia is noticed at early and advanced stage of gastric cancer [11]. Different steps can be taken as well as life style modification, giving pharmacological and alternative agents according to guideline. These steps all together will help a person to allow him to lead a better life [12].

2. MATERIALS AND METHODS

This cross-sectional study took place in Kushtia Medical College during the period of April 2022 to April 2023. The total population of this study was 66 patients attending OPD or admitted in the hospital with dyspepsia. Structured questionnaire was used to collect the necessary information. Sampling was done by convenient technique.

We performed frequency analysis as a descriptive analysis to observe the socio-demographic variables as well as clinical characteristics of the study.

All continuous data were presented as mean ± standard deviation (SD). After the data was collected, data were compiled and edited accordingly. Finally, to fulfill the research objectives, different descriptive analyses were conducted using Statistical Package for Social Sciences version 25.

2.1 Inclusion Criteria

- Patients with dyspepsia due to any cause
- Patients with post-prandial fullness
- Patients with early satiety
- Patients with epigastric pain or burning

2.2 Exclusion Criteria

- Patients <16 years of age
- Refuse to give consent
- Mentally unstable patients

3. RESULTS

3.1 Socio-demographic Characteristics

Table 1 shows distribution of the respondents according to their age. It is evident that, 30.3% and 21.2% patients were in 36-45 years and 26-35 years age group. Mean age of respondents was 41.51 (± 15.46) years.

Fig. 1 shows distribution of respondents according to their gender. It is found that, equal number of patients belonged to both genders, that is 50% males as well as 50% females.

Table 2 resembles distribution of respondents according to their personal history. Among them, 30.3% patients had a history of PPI and H_2 antagonist drugs intake. On the other hand, smoking history was present in 15 respondents.

3.2 Clinical Characteristics

Table 3 demonstrates clinical characteristics of the respondents. Among all the respondents 68.2% patients complained for epigastric pain. Moreover, 65.25% patients had nausea whereas, only 2% patients complained for GI bleeding and food intolerance.

Table 4 demonstrates endoscopic findings of the respondents according to their age. It is evident that 12.1% respondents had PUD who were in 36-45 years of age group, in contrast, it was less common (1.5%) in aged group respondents (66-75yrs). Furthermore, 13.6% respondents in 36-45yrs of age group had normal endoscopic findings, whereas, only 1.5% respondents had normal endoscopic finding in 66-75 years of age group.

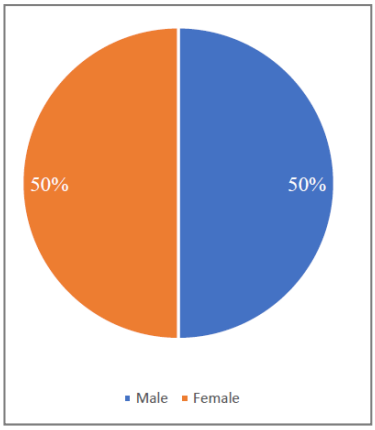

Fig. 1. Distribution of respondents according to their gender (n=66)

Table 1. Distribution of the respondents according to their age (n=66)

Age group (years)	Frequency (%)
16-25	10 (15.2)
26-35	14 (21.2)
36-45	20 (30.3)
46-55	11 (16.7)
56-65	7 (10.6)
66-75	2 (3)
>75	2 (3)
Mean age (± SD)	41.51 (± 15.46)
Range	16-80

*****SD: Standard Deviation*

Table 2. Distribution of respondents according to their personal history (n=66)

Personal history	Frequency (%)
Use of PPI and H_2 antagonist	20 (30.3)
None	16 (24.2)
Smoking history	15 (22.7)
Betel nut consumption	8 (12.1)
Aspirin & NSAID intake	7 (10.6)

**PPI: Proton Pump Inhibitor; H_2 antagonist: Histamine 2 receptor antagonist; NSAID: Non-Steroidal Anti-Inflammatory Drug*

Table 3. Clinical manifestation of the respondents (n=66)

Traits	Present [N (%)]	Absent [N (%)]
Dysphagia	9 (13.6%)	57 (86.4%)
Nausea	43 (65.25)	23 (34.8%)
Repeated vomiting	4 (6.1%)	62 (93.9%)
Epigastric pain	45 (68.2%)	21 (31.85)
Abdominal bloating	7 (10.6%)	59 (89.4%)
Postprandial fullness	18 (27.3%)	48 (72.7%)
Weight loss	10 (15.2%)	56 (84.8%)
GI bleeding	2 (3%)	64 (97%)
Food intolerance	2 (3%)	64 (97%)

**GI: Gastrointestinal*

Table 4. Endoscopic findings of the respondents according to their age (n=66)

	16-25yrs	26-35yrs	36-45yrs	46-55yrs	56-65yrs	66-75yrs	>75yrs
Normal Findings	5 (7.5%)	7 (10.6%)	9 (13.6%)	6 (9.1%)	2 (3%)	1 (1.5%)	1 (1.5%)
PUD	5 (7.5%)	6 (9%)	8 (12.1%)	3 (4.5%)	3 (4.5%)	1 (1.5%)	0 (0%)
Erosive gastroduodenitis	0 (0%)	1 (1.5%)	1 (1.5%)	0 (0%)	2 (3%)	0 (0%)	0 (0%)
GI Growth	0 (0%)	0 (0%)	2 (3%)	0 (0%)	0 (0%)	0 (0%)	1 (1.5%)
GOO	0 (0%)	0 (0%)	0 (0%)	2 (3%)	0 (0%)	0 (0%)	0 (0%)

**PUD: Peptic ulcer disease; GI: Gastrointestinal; GOO: Gastric outlet obstruction*

4. DISCUSSION

In spite of being a common clinical problem, half of the patients with dyspepsia have no detectable lesion for their symptoms. Peptic ulcer disease (PUD), esophagitis and cancer are the most common causes of dyspepsia. Endoscopy is suggested by most of the doctors for diagnosis [13-15].

In this study mean age of respondents was 41.51 (± 15.46) years. In previous study, mean age of respondents found similar which was 43.8±14.2 years [15].

Furthermore, in this study, equal number of patients belonged to both genders, that is 50% males as well as 50% females. In other similar study, 52.24% patients were male and 47.76% patients were female having dyspepsia [14].

In this study, no respondent gave any history of alcohol consumption. On the contrary, a previous study occurred in India showed that 70% of respondents were habituated with alcohol consumption [15].

Among all the respondents, 68.2% patients complained for epigastric pain. In previous similar study, 92% patients complained for epigastric pain [16].

It is evident that, in endoscopic evaluation 12.1% respondents had PUD who were in 36-45 years of age group. In previous study, 5.7% patients were affected with PUD in the 30-50 years of age group. On the other hand, in this study, only 1.5% patients among 26-45 years of age group were found with erosive gastroduodenitis. In contrast, in the same previous study, only 0.4% patients of 30-50 years age group had erosive gastroduodenitis in their endoscopic

evaluation [13]. In a Sri Lankan study, 3.6% patients had endoscopic finding of PUD and 16.2% patients had endoscopic finding of erosive gastroduodenitis [17].

However, it was a cross sectional study and sample was collected by convenient method, in the result the sample size was small. Due to lack of resources and funding, data collection might not be satisfactory.

5. CONCLUSION

For evaluation of dyspepsia, associated with alarming symptoms, despite being an invasive procedure, endoscopy is regarded as a gold standard modality. However, prospective studies with large size population are more preferable for better and further clarification.

CONSENT

As per international standard or university standard, patient(s) written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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