

Clinical Study of Upper Gastrointestinal Endoscopy Findings in Patients with Dyspepsia

Basavaraja C, Mahadev, Rakshith

Abstract: *Background:* Dyspepsia is the commonest symptom in general population. The present study was aimed to study the profile of upper GI endoscopy findings in dyspeptic patients which helps in better early treatment, thereby reducing the morbidity and mortality rate. *Methodology:* A cross sectional study was conducted in Department of General surgery among 120 patients aged more than 20 years presenting with uninvestigated dyspepsia. Patients who were operated before for gastro - intestinal conditions, who came for follow up and unfit for endoscopy, were excluded for the study. Variables like age, gender, symptoms and signs of dyspepsia, details regarding habits were collected. Upper GI endoscopy was done to know the findings. Data was entered in excel sheet and analysed using SPSS software. *Results:* Among 120 cases, 57.5% were males and 42.5% were females. Mean age of patients in our study group was 44.48 + 17.71 years. Most common symptoms among the patients were heart burn (80%), 58 patients (48.33%), nausea & vomiting (48.3%), epigastric pain (48.3%), indigestion (40.83%). Loss of weight was seen in 16 (13.33%) patients, pallor in 34 cases (28.33%) and epigastric tenderness in 68 cases (56.67%). There was history of smoking, tobacco and alcohol consumption also. Endoscopic finding was Normal in 23 patients (19.17%), gastritis was seen in 59 cases (49.17%), Peptic Ulcer in 41 patients (34.17%), esophagitis in 11 patients (9.17%), UGI Malignancy in 6 patients (5%), esophageal candidiasis in 4 patients (3.33%). *Helicobacter pylori* was present among 51 (42.5%) cases. *Conclusion:* Though the incidence of malignancy was low, endoscopy in patients more than 50 years may help in early diagnosis and reduced morbidity of these patients.

Keywords: Dyspepsia, Endoscopy, Gastritis, Ulcer

1. Introduction

Of all the symptoms of upper gastrointestinal tract, dyspepsia is the commonest symptom in general population.¹ Dyspepsia is a poorly characterized condition thought to originate from anatomic or functional disorders of the upper GI tract.²⁻⁴ Dyspepsia is not a diagnosis, but constellation of symptoms related to the upper gastrointestinal tract including epigastric discomfort, bloating, indigestion, early satiety, belching or regurgitation, nausea, heartburn and anorexia.⁵ The prevalence of dyspepsia is rampant, imposing high medical resources and economic burden.⁶ Globally, the prevalence of dyspepsia is 20 - 30% but in India the prevalence is estimated to be around 30 to 49%.^{7,8} Dyspepsia accounts for 4-5% of general practitioner consultation and 20-40% of gastroenterological consultation.⁹ An international committee of clinical investigations (Rome IV Committee) defined Dyspepsia with one or more of the following symptoms like postprandial fullness, early satiation and epigastric pain or burning.¹⁰

Dyspepsia is also linked to serious gastrointestinal pathological state like malignancy, stricture or ulcer. The dyspepsia patients are considered as high risk if age > 50 years with new onset of dyspepsia, familial history of cancer, sudden weight loss, hematemesis, Melena, dysphagia and Persistent vomiting.¹⁰ Endoscopy can help in early diagnosis and treatment of dyspepsia as well as early detection of malignancy in patients with dyspepsia and thus reducing the morbidity and a better outcome.⁹ The risk of GI malignancy is predominantly Related to age and so as per ACG guideline routine endoscopy to investigate dyspepsia should be performed in patients aged 55 and over.¹¹ Previous studies indicate that endoscopy showed significant elevation in symptoms score, quality of life, and minimal use of PPI's [10]. In this scenario, the present study was aimed to study the profile of upper GI endoscopy findings in dyspeptic

patients which helps in better early treatment, thereby reducing the morbidity and mortality rate.⁶

Objective

To study various upper gastrointestinal endoscopic findings among patients presenting with dyspepsia

2. Methodology

A cross sectional study was conducted in Department of General surgery among 120 patients aged more than 20 years presenting with uninvestigated dyspepsia.

Inclusion Criteria:

- 1) Patients aged more than 20 years presenting with dyspeptic symptoms
- 2) Patients willing to take part in the study

Exclusion Criteria:

- 1) Patients who underwent endoscopy came for follow up
- 2) Previously operated for gastro - intestinal conditions
- 3) Patients unfit for endoscopy

Data was collected after detailed informed consent. Variables like age, gender, symptoms and signs of dyspepsia, details regarding habits were collected. Upper GI endoscopy was done to know the findings. Data was entered in excel sheet and analysed using SPSS software. Results expressed in tables as frequency and percentages. Institutional Ethics Committee approval was taken before the start of study.

3. Results

Of the 120 patients included in the study 69 (57.5%) were males and 51 (42.5%) were females. The most common age group in the study was found to be more than 60 years (24.2%) followed by 20-29 years (20%) and 30 - 39 years

(20%). The minimum age was 17 years and maximum age was 85 years. Mean age of patients in our study group was 44.48+17.71 years.

Table 1: Details of the patients presenting with Dyspepsia

Variable		Frequency (n)	Percentage (%)
Age	<20 years	9	7.5%
	21 - 30 years	24	20%
	31 - 40 years	24	20%
	41 - 50 years	17	14.2%
	51 - 60 years	17	14.2%
>60 years	29	24.2%	
Gender	Male	69	57.5%
	Female	51	42.5%
Symptoms and Signs	Epigastric pain/discomfort	58	48.33%
	Heartburn	96	80%
	Nausea and vomiting	58	48.33%
	Indigestion	49	40.83%
	Loss of weight	16	13.33%
	Pallor	34	28.33%
	Epigastric tenderness	68	56.67%
Habits	Smoking	64	53.33%
	Alcohol	68	56.67%
	Tobacco chewing	68	56.67%

Symptom of epigastric pain was observed in 58 patients (48.33%), heart burn in 96 patients (80%), nausea & vomiting in 58 patients (48.33%), indigestion in 49 (40.83%) patients. Loss of weight was seen in 16 (13.33%) patients, pallor in 34 cases (28.33%) and epigastric tenderness in 68 cases (56.67%). In the study smoking was seen in 64 patients (53.33%), tobacco consumption was seen in 68 patients (56.67%), alcohol consumption in 68 patients (56.67%). (Table 1)

Endoscopic finding was Normal in 23 patients (19.17%), gastritis was seen in 59 cases (49.17%), Peptic Ulcer in 41 patients (34.17%), esophagitis in 11 patients (9.17%), UGI Malignancy in 6 patients (5%), esophageal candidiasis in 4 patients (3.33%). Other lesions included hiatus hernia, gastric polyp and malloryWeiss tears. (Table 2)

Table 2: Endoscopic finding of patients presenting with dyspepsia

Endoscopic findings*	Frequency (%)	Male (69)	Female (51)
Normal	23 (19.17%)	13	10
Gastritis (acute/chronic)	59 (49.17%)	38	21
Peptic ulcer	41 (34.17%)	20	21
esophagitis	11 (9.17%)	5	6
Malignancy	6 (5%)	4	2
Esophageal candidiasis	4 (3.33%)	2	2

*multiple findings

Table 3: Biochemical and microbiological results of the study participants

	Male	Female
Positive Rapid urease test	26	25
HPE	35	23
HP	26	25

When rapid urease test was performed to confirm the H. pylori infection it was found that 26 males and 25 females had positive results. Histopathological examination was

performed and it was suggestive among 35 males and 25 females. (Table 3)

4. Discussion

Dyspepsia is a most common complaint presenting to primary care physicians, surgeons and gastroenterologists. Dyspepsia can overlap with many conditions such as GERD, peptic ulcer disease (PUD), irritable bowel syndrome (IBS), pancreatitis sometimes unstable angina and malignancy.

Treating dyspepsia is a real challenge since it involves huge financial burden, patient's dissatisfaction and the risk of mismanagement leads to missing the high - risk patients who are potentially curable in early stage of their diseases. Upper gastrointestinal (GI) endoscopy is the investigation of choice to evaluate the cause of dyspepsia.⁵

Because of recurrent complaints in half of the patients, patient's quality of life, and social life is affected directly or indirectly. In addition to medical services used for dyspeptic patients, loss of labor and productivity lead to considerable financial burden.¹²

In our study, male preponderance was higher which was similar to other studies.^{13, 14}The increased male subjects in our study might be due to high alcohol intake, smoking and pan chewing among the men, which orchestrate a pivotal role in the development of dyspepsia. The mean age was 44.48 + 17.71 years which is similar to other studies^{15, 16}with very few presenting before the age of 20 years, peaking in the elders (>60 years). Whereas a UK audit showed even higher mean age of 64.4, probably owing to easily accessible health services and timely prophylactic measures.¹⁷

The most common endoscopic finding in our study was gastritis followed by peptic ulcer which is similar to study conducted by Rajendran et al.⁶ Endoscopy findings were normal in 23 (19.17%) patients which almost similar to 20 - 50% in another study.¹⁸and a study done by Ghamar et al in Iran it was 35%.¹⁹

The results of our study were consistent with previous studies conducted by Gadoet al¹³and Sumathiet al,²⁰ where they reported, alcohol, smoking and pan chewing are the major risk factors associated with dyspepsia.

Treating dyspepsia is a real challenge since it involves huge financial burden, patient's dissatisfaction and the risk of mis-management leads to missing the high - risk patients who are potentially curable in early stage of their diseases. .

5. Conclusion

Prevalence of large number of inflammatory lesions as a result of increased acid production, a remarkable prevalence of H pylori infection and low incidence of malignancy in the study group suggests that the uninvestigated patients with dyspepsia may be initially managed medically. Endoscopy may be undertaken in patients with recurrent symptoms or medical management failure.

References

- [1] Kannan RR, Nandhini CC, Singh CS. Evaluation of dyspepsia with upper gastrointestinal endoscopy - single centre study from South India. *Int J Scie Res* 2019; 8 (2): 450 - 4.
- [2] Holtmann G, Stanghellini V, Talley NJ. Nomenclature of dyspepsia, dyspepsia subgroups and functional dyspepsia: clarifying the concepts. *BaillieresClinGastroenterol* 1998; 12: 417 - 33.
- [3] Rabeneck L, Wray NP, Graham DY. Managing dyspepsia: what do we know and what do we need to know? *Am J Gastroenterol* 1998; 93: 920 - 4.
- [4] Stanghellini V, Tosetti C, Barbara G, et al. Management of dyspeptic patients by general practitioners and specialists. *Gut* 1998; 43 (Suppl 1): 21 - 3.
- [5] Yellapu R, Boda S. Upper gastrointestinal endoscopic findings of patients presenting with dyspepsia - a tertiary care centre experience. *Int J Contemporary Med Res* 2019; 6 (9): 136 - 9.
- [6] Rajendran K, Chidambaranathan S, Sathyanesan J, Palaniappan R. Spectrum of upper gastrointestinal endoscopy findings in patients with dyspepsia and its relation to alarm symptoms. *Int J Med Health Res* 2018; 4 (10): 175 - 7.
- [7] Grainger SL, Klass HJ, Rake MO. Prevalence of dyspepsia: the epidemiology of overlapping symptoms. *Postgrad Med J*.1994; 70: 154 - 161.
- [8] Ghoshal UC, Abraham P, Bhatt C. Epidemiological and clinical profile of irritable bowel syndrome in India: report of the Indian Society of Gastroenterology Task Force. *Indian J Gastroenterol*.2008; 27: 22 - 28.
- [9] Desai SB, Mahanta B. A study of clinic - endoscopic profile of patient presenting with dyspepsia. *Clinical Epidemiology and Global Health* 2018; 6: 34 - 8.
- [10] Drossman DA. Functional gastrointestinal disorders: history, pathophysiology, clinical features and Rome IV. *Gastroenterology*, 2016; 0016 - 5085 (16) 00223 - 7.
- [11] Talley NJ, Vakil N. Guidelines for management of dyspepsia. *Am J Gastroenterol*.2005; 100 (10): 2324 - 2337.
- [12] Chowdry SM, Javed A, Shawl MR. Spectrum of endoscopic findings of dyspepsia patients – a single centre, retrospective, observattio study. *Int J Health Clin Res* 2021; 4 (7): 179 - 81.
- [13] Gado A, Ebeid B, Abdelmohsen A. Endoscopic evaluation of patients with dyspepsia in a secondary referral hospital in Egypt. *Alex J Med*.2015; 51: 179 - 84.
- [14] Thomson ABR, Barkun AN, Armstrong D, Chiba N, Whites RJ, Daniels S. The prevalence of clinically significant endoscopic findings in primary care patients with un investigated dyspepsia: the Canadian Adult Dyspepsia Empiric Treatment - Prompt Endoscopy (CADET - PE) study. *Aliment PharmacolTher*.2003; 17: 1481 - 91.
- [15] Agbakwuru EA, Fatusi AO, Ndububa DA et al. Pattern and validity of clinical diagnosis of upper gastrointestinal diseases in south - west Nigeria. *Afr Health Sci*.2006; 6: 98 - 103.
- [16] Danbauchi SS, Keshinro IB, Abdu - Gusau K. Fifteen years of upper gastrointestinal endoscopy in Zaria (1978 - 1993). *African journal of medicine and medical sciences*.1999; 28: 87 - 90.
- [17] Hearnshaw SA, Logan RF, Lowe D, Travis SP, Murphy MF, Palmer KR. Acute upper gastrointestinal bleeding in the UK: patient characteristics, diagnoses and outcomes in the 2007 UK audit. *Gut*.2011; 60 (10): 1327 - 35.
- [18] Gillen D, McColl KEL. Does concern about missing malignancy justify endoscopy in uncomplicated dyspepsia in patients aged less than 55? *Am J Gastroenterol* 1999; 94: 75-9.
- [19] Ghamarchehreh ME, Shahverdi E, Khedmat H, Ghafoorian A, Amini M. Endoscopic findings in patients with dyspepsia in Iran. *Int J Digestive Diseases* 2016; 2 (3): 30 - 6.
- [20] Sumathi B, Navaneethan U, Jayanti N. Appropriateness of indications for diagnostic upper GI endoscopy in India. *Singap Med J*.2008; 49 (12): 970.