

ORIGINAL ARTICLE

Endoscopic Findings in Persistent Dyspepsia in Secondary Care Hospital Setting in North Kashmir

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Abstract

Background: Dyspepsia is a common clinical problem and has a great impact on the patient's quality of life. More than half of patients presenting with dyspepsia have no detectable lesion for their symptoms. The common organic causes of dyspepsia include peptic ulcer, esophagitis and cancer. The diagnostic test of choice is endoscopy. Age specific thresholds to trigger endoscopic evaluation may differ by gender, availability of resources and regional disease specific risks.

Aim: The aim of the study was to determine the prevalence of significant endoscopic lesions in patients presenting with dyspepsia.

Materials and Methods: This was a retrospective study. Data on patients presenting with dyspepsia and scheduled for upper gastrointestinal (UGI) endoscopy between January 2011 and December 2016 was collected.

Results: Nine thousand five hundred and twenty five patients with persistent dyspepsia were assessed by Upper Gastrointestinal (UGI) endoscopy. 58.8% were male. The mean age was 41 years. Endoscopy revealed normal findings or miscellaneous irrelevant findings in 6967 patients (73.1%). Significant endoscopic findings were diagnosed in 2558 (26.9%). These included peptic ulcers in 493 patients (5.1%), esophagitis in 560 (5.9%), erosive Gastroduodenitis in 1069 (11.2%), Varices in 40 patients (0.4%) and UGI malignancy in 279 (2.9%).

Conclusions: The endoscopic diagnosis of persistent dyspepsia in our setting showed a predominance of functional disease. Every 4th person (26.7%) with persistent dyspepsia had organic lesions whereas UGI malignancy was an uncommon finding. The most frequent significant pathologies included erosive gastroduodenitis, esophagitis and peptic ulcer disease. Patients with recent onset of dyspepsia who are in the age group at risk of gastric malignancy should undergo early endoscopy. UGI endoscopy is simple procedure that can be undertaken for early diagnosis of benign as well as malignant lesions in patient presenting with dyspepsia

relevant to clinical practice as there is considerable overlap in symptom presentation making classification difficult in many patients presenting in primary and secondary care. For this reason, a clinically relevant definition of dyspepsia as predominant epigastric pain lasting at least 1 month is preferred. This can be associated with any other upper gastro intestinal symptom such as epigastric fullness, nausea, vomiting, or heartburn, provided epigastric pain is the patient's primary concern.⁹ The rapid introduction of new diagnostic criteria for dyspepsia has made very difficult or virtually impossible to compare prevalence rates from different periods or geographic regions.¹⁰ Because structural UGI tract diseases, such as peptic ulcer, erosive esophagitis, luminal strictures and malignancy can course with dyspepsia, esophagogastroduodenoscopy (EGD) is the diagnostic procedure of choice to differentiate patients with organic from those with functional dyspepsia.¹¹ Although it is possible to propose endoscopy as the initial strategy for dyspepsia,¹² the establishment of this procedure for every dyspeptic patient may not be practical approach, as the high prevalence of the syndrome will result in very high costs to any health system.¹³ Moreover, the diagnostic procedure and its cost effectiveness must be considering that a large number of uninvestigated dyspepsia are functional cases.¹⁴ More than half of the patients presenting with dyspepsia have no detectable cause for their symptoms.¹⁵ Once the decision has been made to investigate, the diagnostic

Introduction

Dyspepsia is defined as pain or discomfort in the upper abdomen. Dyspepsia is a prevalent complaint in general practice and gastrointestinal clinics,¹⁻⁵ with a prevalence of around 30% among adults in India.⁶ Dyspepsia represents up to 8.3% of all primary care physician visits and causes huge economic costs to patients and to the economy.⁷ Only 75% of the dyspepsia experts, 73% of gastroenterologists and 59% of primary care providers adhere to dyspepsia best practices; so "dyspepsia" means different things

to different providers. Without a common diagnostic language, general practitioners may be unable to provide adequate treatment following common dyspepsia guidelines.⁸ Rome definitions have been helpful in better-standardizing patients that are included in studies of dyspepsia but are less

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Table 1: Shows no. of Out Patient department (OPD) visits and no. of patients in whom endoscopy was done in 6 years period and sex distribution

Year	Total OPD visits	No. of patients	Males	Females
2011	360563	790	417	373
2012	397639	767	421	346
2013	430610	1850	1056	794
2014	480954	1500	922	578
2015	432615	2406	1460	946
2016	431617	2212	1327	885
Total	2533998	9525	5603 (58.8%)	3922 (41.2%)

test of choice is endoscopy. Patients in whom investigations have revealed no organic cause are classified as having functional dyspepsia or "non-ulcer dyspepsia".¹⁶

Cancer of the UGI tract is usually advanced at the time of diagnosis but a low threshold of suspicion for gastric malignancy in dyspeptic patients may result in earlier diagnosis and improved survival. However cancer accounts for only 1–2% of diagnoses at UGI tract and less in patients under the age of 50 years.

This study was undertaken to determine the prevalence of significant endoscopic lesions in patients presenting with persistent dyspepsia (> 8 weeks proton pump inhibitors [PPI] trial).

Material and Methods

This was a retrospective study carried out at Government District Hospital, Baramulla in North Kashmir over a period of six years from January 2011 to December 2016. Government District Hospital, Baramulla is a secondary-care Governmental hospital in north Kashmir. The hospital serves a population of nearly two million people. The endoscopy unit provides an open-access service and receives patients from outpatient clinics and other hospitals in the area. Patients are from a lower socioeconomic background. All patients presenting with persistent dyspepsia were included in the study. Endoscopic biopsy was done at the discretion of an endoscopist. Pathological examination was performed by expert pathologists.

Definitions

Dyspepsia is defined as predominant epigastric pain lasting at least 1 month. This can be associated with any other

Table 2: Year wise distribution of patients with persistent dyspepsia and EGD findings

Year	No. of patients	Normal EGD	Esophageal lesions	Gastric lesions	Duodenal lesions	Others
2011	790	553	71	68	90	8
2012	767	414	113	136	94	10
2013	1850	1339	174	186	129	22
2014	1500	1021	141	186	133	19
2015	2406	1862	173	194	147	30
2016	2212	1778	167	120	119	28
Total	9525	6967	839	890	712	117

upper gastro intestinal symptom such as epigastric fullness, nausea, vomiting, or heartburn, provided epigastric pain is the patient's primary concern. Persistent dyspepsia is defined as symptoms of dyspepsia persisting after two months of adequate PPI trial. Heartburn is not included in the diagnostic symptom criteria for dyspepsia. Significant endoscopic findings in the UGI tract were defined as those benefiting from specific treatment or those that are life threatening. The presence of any of the following lesions was considered as a significant finding in UGI endoscopy: peptic ulcer, esophagitis (with or without hiatal hernia), erosive gastritis or duodenitis, stricture, Barrett's esophagus, esophageal candidiasis, neoplasm, mass and polyps. The presence of any of the following lesions was considered as an irrelevant endoscopic finding: erythematous gastritis, atrophic gastritis and incidental miscellaneous abnormalities (portal hypertensive gastropathy, hiatal hernia without esophagitis and vascular ectasia).

Patients and exclusions

A total of 9525 patients underwent UGI endoscopy between January 2011 and December 2016. Data on patients presenting with persistent dyspepsia and scheduled for UGI endoscopy were collected. Patients who underwent UGI endoscopy for reasons other than dyspepsia such as dysphagia, UGI bleeding, or strong suspicion of cancer were excluded from the study. Patients with prior peptic ulcer were also excluded. Presence of systemic decompensated diseases (congestive heart failure, coronary heart disease, liver failure, diabetes mellitus, thyroid disease, acute or chronic respiratory failure, hematological diseases), presence of major psychiatric disorders, impediment to endoscopy and difficulty for the patient to understand the aims and procedures of the study were also excluded from the study. Those whose

procedures were not completed were excluded subsequently.

Data recording and statistics

A standardized data collection form (sheet) was completed for each patient. Recorded information included demographic data (age and gender) and endoscopic findings. Data were analyzed to assess presence of significant gastrointestinal lesions. The data from the patients were registered, and tabulated.

Results

Patients' characteristics

9525 patients with persistent dyspepsia were assessed by EGD. 5603 (58.8%) patients were male and 3922 (41.2%) were female. Ages ranged from 18 to 88 years with a mean age of 41 years.

Endoscopic findings

Endoscopy revealed normal findings or miscellaneous irrelevant findings in 6967 patients (73.1%). Endoscopy revealed significant pathology in 2558 patients (26.9%). Peptic ulcer was diagnosed in 493 patients (5.2%), duodenal ulcers in 403 (4.2%) and gastric ulcers in 90 (1%). Esophagitis was diagnosed in 560 patients (5.9%). Erosive gastritis was diagnosed in 760 (8.0%) patients and duodenitis was diagnosed in 309 patients (3.2%). Gastric malignancy was diagnosed in 40 patients (0.4%) and esophageal cancer in 239 (2.5%).

Discussion

Dyspepsia is a common clinical problem seen by both primary care physicians and gastroenterologists. Dyspepsia accounts for about 4–5% of all the general practitioner consultations and 20–40% of all gastroenterological consultations.¹⁷ Initial evaluation should focus on the identification and treatment of potential causes of symptoms such as gastro-esophageal reflux disease, peptic ulcer disease,

Table 3: Show the No. and percentage of patients and specific causes of dyspepsia

Findings of specific causes	Number	Percentages (%)
Normal	6967	73.1
Esophagus	839	8.8
Esophagitis	560	5.9
Varices	40	0.4
Carcinoma	239	2.5
Stomach	890	9.4
Gastritis	760	8.0
Gastric ulcer	90	0.9
Carcinoma	40	0.4
Duodenum	712	7.5
Duodenitis	309	3.2
Ulcer	403	4.2
Others	117	1.2
Total	9525	100

and medication side effects but also on recognizing those at risk for more serious conditions such as gastric cancer. Endoscopy is recommended as the first investigation in the work up of a patient with dyspeptic symptoms aged 60 years or more and is essential in the classification of the patient's condition as organic or functional dyspepsia and patients under 60 years EGD is done on case to case basis. Approximately 40% of dyspeptic patients have an organic cause, and only 20% of patients have significant gastroduodenal lesions, such as peptic ulcer.^{18,19} The most commonly reported major endoscopic abnormalities are: gastric ulcer (1.6–8.2%), duodenal ulcer (2.3–12.7%), esophagitis (0–23.0%), and gastric malignancy (0–3.4%).²⁰ Only in a few cases are dyspeptic symptoms caused by gastro-esophageal malignancy. While gastric or esophageal cancer is an unusual finding in patients with dyspepsia, excluding malignancy is a common reason given for performing endoscopy. Once an organic cause for symptoms has been excluded, a diagnosis of functional dyspepsia can be made.

In the present study Nine thousand five hundred and twenty five patients presenting with persistent dyspepsia at a secondary care hospital over a 6-year period were assessed. Our goal was to describe significant endoscopic findings among patients with persistent dyspepsia.

In our study male (58.8%) to female (41.2%) ratio was 1.4:1. Gado A et al²¹ reported an incidence of 51% in males and 49% in females. Thomson A. B.R et al²² reported a male to female ratio of

1:1. In India Sumathi B et al²³ reported a male to female ratio of 1.5:1 and Sunil Kumar et al.⁽²⁴⁾ reported a ratio of 1.05:1.

Our observation shows a male preponderance most probably attributed to the increased smoking and tobacco which play a key role in pathogenesis of dyspepsia. It may also be attributed to the fact that in our society women's health problems are not given priority and fewer symptomatic women than men present to health facilities. Gado A et al²¹ reported normal findings in 65% patients presenting with dyspepsia and 82% of patients younger than 30 years (average of 73.5%). Our study is almost in concordance with other studies.

Among the benign lesions, most common was gastritis (8.0%), followed by esophagitis 5.9%. Also peptic ulcer was seen in 5.1% patients. In the present study, we observed UGI Malignancy in 279 (2.9%) patients of dyspepsia. Gado A et al²¹ reported 16 (1%) patients with UGI malignancy among patients with dyspepsia. Ages ranged from 37 to 75 years. UGI malignancy was diagnosed in 1% of patients aged 30–50 years and 2% of patients more than 50 years ($P = 0.003$). UGI malignancy was not found in dyspeptic patients younger than 30 years old. Sumathi B et al²³ reported a total of 282 patients (8.27%) of UGI malignancy, among these 125 (4.5%) were reported in patients of dyspepsia without alarm symptoms and 48 (21.6%) were reported in patients of dyspepsia with alarm symptoms. Sunil Kumar et al²⁴ reported gastric cancer in 2.8% patients and Manes et al.¹¹ reported 6 (0.86%) patients of gastric cancer out of 706 patients studied. Thomson A.B.R et al²² reported malignancy in less than 2% of the patients.

The results in our study are consistent with most other studies. Gado et al²¹ and Sunil Kumar et al,²⁴ reported Oesophagitis in 0–23.0% and 15.6% respectively. The discrepancy in the studies can be attributed to the differences in socio-cultural factors, absence of alcohol use in the study population and different food habits and the lack of proper defining landmark for differentiating heart burn and epigastric pain or burning.

The findings of the present study confirmed that the majority of patients with dyspepsia had no important endoscopic lesions. Further,

unmeasured benefits could include improvement in quality of life, if anxiety is reduced, and reduction in subsequent health care utilization.

Conclusion

The endoscopic diagnosis of persistent dyspepsia in our setting showed a predominance of functional disease. Every 4th person (26.7%) with persistent dyspepsia had organic lesions whereas UGI malignancy was an uncommon finding. The most frequent significant pathologies included erosive gastroduodenitis, esophagitis and peptic ulcer disease. Patients with recent onset of dyspepsia who are in the age group at risk of gastric malignancy should undergo early endoscopy. UGI endoscopy is simple procedure that can be undertaken for early diagnosis of benign as well as malignant lesions in patient presenting with dyspepsia.

References

1. Akhtar A, Shaheen M. Dyspepsia in African American and hispanic patients. *J Natl Med Assoc* 2004; 96:635–40.
2. Penston JG, Pounder RE. A survey of dyspepsia in Great Britain. *Aliment Pharmacol Ther* 1996; 10:83–9.
3. Ebell MH, Warbasse L, Brenner C. Evaluation of the dyspeptic patient: a cost-utility study. *J Fam Pract* 1997; 44:545–55.
4. Silverstein MD, Petterson T, Talley NJ. Initial endoscopy or empirical therapy with or without testing for *Helicobacter pylori* for dyspepsia: a decision analysis. *Gastroenterology* 1996; 10:72–83.
5. Sonnenberg A. Cost-benefit analysis of testing for *Helicobacter pylori* in dyspeptic subjects. *Am J Gastroenterol* 1996; 91:1773–7.
6. Uday C Ghoshal Functional dyspepsia: The Indian Scenario, supplement to JAPI march 2012 vol 60 page 6
7. Bolling-Sternevald E, Carlsson R, Aalykke C, Wilson BV, Junghard O, Glise H, et al. Self-administered symptom questionnaires in patients with dyspepsia and their yield in discriminating between endoscopic diagnoses. *Dig Dis* 2002; 20:191–8.
8. Tack J, Talley NJ, Camilleri M, Holtman G, Hu PJ, Malagelada JR, et al. Functional gastroduodenal disorders. *Gastroenterology* 2006; 130:1466–79.
9. Vakli N, Halling K, Ohlsson L et al. Symptom overlap between postprandial distress and epigastric pain syndromes of the Rome III dyspepsia classification. *Am J Gastroenterol* 2013; 108:767–74.
10. Valle PC, Breckan RK, Amin A. "Test, score and scope": a selection strategy for safe reduction of upper gastrointestinal endoscopies in young dyspeptic patients referred from primary care. *Scand J Gastroenterol* 2006; 41:161–9.
11. Savary M, Miller G. L'oesophage: manuel et atlas d'endoscopie. Soleure, Switzerland: Editions Gassmann; 1977 (English edition 1978). Internet. Available from: <http://www.gastrosource.com/Scientific-Resources/definitions-classifications/1384415?itemid=1384415>.
12. Ollyo JB, Fontollier C, Brossard E, Lang F. La nouvelle classification de Savary des oesophagites de reflux. *Acta Endoscopica* 1992; 22:307–20.
13. Khan N, Shabbir G, Zarif M, Khattak M. Upper gastrointestinal endoscopic assessment of patients presenting with dyspepsia. *JPMI* 2007; 21:209–16.
14. Spiller RC. Anorexia, nausea, vomiting, and pain. *Br Med J* 2001; 323:1354–7.

15. Akhtar A, Shaheen M. Dyspepsia in African American and hispanic patients. *J Natl Med Assoc* 2004; 96:635–40.
16. Locke GR. Nonulcer dyspepsia: what it is and what it is not. *Mayo Clin Proc* 1999; 74:1011–5.
17. Khan N, Shabbir G, Zarif M, Khattak M. Upper gastrointestinal endoscopic assessment of patients presenting with dyspepsia. *JPMI* 2007; 21:209–16.
18. Spiller RC. Anorexia, nausea, vomiting, and pain. *Br Med J* 2001; 323:1354–7.
19. Fisher RS, Parkman HP. Management of nonulcer dyspepsia. *N Engl J Med* 1998; 339:1376–81.
20. Tytgat G. Role of endoscopy and biopsy in the work up of dyspepsia. *Gut* 2002; 50:13–6.
21. Gado A, Ebeid B, Abdelmohsen A, et al. Endoscopic evaluation of patients with dyspepsia in a secondary referral hospital in Egypt. *Alex J Med* 2015; 51:179–184. doi:10.1016/j.ajme.2013.10.001
22. Thomson ABR, Barkun AN, Armstrong D, Chiba N, Whites RJ, Daniels S. The prevalence of clinically significant endoscopic findings in primary care patients with uninvestigated dyspepsia: the Canadian Adult dyspepsia Empiric Treatment-Prompt Endoscopy (CADET-PE) study. *Aliment Pharmacol Ther* 2003; 17:1481–1491.
23. Sumathi B, Navaneethan U, Jayanti N. Appropriateness of indications for diagnostic upper GI endoscopy in India. *Singap Med J* 2008; 49:970.
24. Kumar S, Pandey HI, Verma A, Deb PP. Prospective analysis of 500 cases of upper gi endoscopy at Tata Main Hospital. *IOSR J Dent Med Sci (IOSR-JDMS)*. 2014;13(January (1 Ver. III))21–25 e- ISSN: 2279-0853, p-ISSN: 2279-0861.