

# UPPER GASTROINTESTINAL ENDOSCOPIC ASSESSMENT OF PATIENTS PRESENTING WITH DYSPEPSIA

Nowshad Khan, Ghulam Shabbir, Muhammad Zarif,  
Muhammad Ishaq Khattak

Department of Medicine  
Khyber Teaching Hospital, Peshawar – Pakistan

## ABSTRACT

**Objective:** To evaluate common causes of dyspepsia and to correlate endoscopic findings with histological examination of biopsy specimens.

**Material and Methods:** This observational descriptive study was conducted at department of medicine Khyber Teaching hospital Peshawar, from 1st June 2006 to 31st December 2006. Detailed history, thorough physical examination and relevant investigations were done in each patient. All patients underwent upper gastrointestinal (GI) endoscopy. Biopsies were taken in every patient from oesophagus, stomach and duodenum. Histological examination was done from single pathologist.

**Results:** The endoscopic findings of 50 patients with dyspepsia were studied. Out of 50 patients, 35(70%) were males while 15(30%) were females. Eighty two percent (41/50) were in the age group of 30-50 years. The most common presentations were epigastric pain in 45 (90%) cases, heartburn in 36 (72%) and flatulence in 35 (70%) cases. The endoscopic findings were normal in 25 (50%) patients. The abnormal findings included esophagitis in 6 (12%) patients, gastric ulcer in 5 (10%) patients, duodenal ulcer in 4 (8%) patients, gastritis in 4 (8%) patients and duodenitis in 2 (4%) patients; while esophagogastritis, gastroduodenitis, esophagogastrroduodenitis and carcinoma stomach were present in 1 (2%) patient each. All the endoscopically abnormal as well as normal findings were confirmed by histopathology.

**Conclusion:** The endoscopic findings were normal in majority of patients with dyspepsia. The common abnormal endoscopic findings included esophagitis, gastric ulcer, duodenal ulcer and gastritis. The endoscopic findings were matching with histological diagnosis.

**Key Words:** Dyspepsia, Endoscopy, Biopsy, Histology, Esophagitis, Gastric Ulcer.

## INTRODUCTION

Dyspepsia is described as recurrent upper abdominal discomfort and epigastric fullness after meals, often described by the patients as indigestion.<sup>1</sup> It is one of the commonest presentation both at general medical as well as gastroenterology out patient's clinics. Dyspepsia has an extensive differential diagnosis and a heterogeneous pathophysiology. It occurs in approximately 25 percent (range 13 to 40 percent) of the population each year. Dyspepsia is responsible for substantial health care costs and considerable time lost from work. It may be an early symptom of a serious disease or it may be functional. Therefore complete history and physical examination is necessary for selection of patients for further investigations. Dyspepsia is divided into two main types: Organic and non-

ulcer dyspepsia. Dyspepsia accounts for about 4-5% of all the general practitioner consultations and about 20-40% of all gastroenterological consultations. Endoscopy and barium studies are among the most commonly used investigations. Moreover endoscopy alone is insufficient because it may miss serious mucosal lesions in about 15-30% of cases that can be picked up later on by histological examination. Therefore endoscopy with biopsy and histological examination is more rewarding than endoscopy alone. This study was therefore designed as to determine causes of dyspepsia, status of non-ulcer dyspepsia and to correlate endoscopic findings with histological examination.

## MATERIAL AND METHODS

This descriptive observational study

## PRESENTING COMPLAINTS

Presenting complaints	Number of patients		
	Male	Female	Total
Epigastric discomfort	32 (91%)	13 (87%)	45 (90%)
Flatulence	26 (74%)	10 (67%)	36 (72%)
Heartburn	25 (71%)	10 (67%)	35 (70%)
Food intolerance	6 (17%)	3 (20%)	9 (18%)
Indigestion	5 (14%)	4 (27%)	9 (18%)
Aerophagia	6 (17%)	10 (67%)	16 (32%)

Table 1

comprising fifty patients with dyspeptic symptoms, were studied at department of medicine Khyber Teaching hospital Peshawar, from 1st June 2006 to 31st December 2006. Detailed history, thorough physical examination and relevant investigations were done. All patients underwent upper gastrointestinal (GI) endoscopy and biopsies were taken from oesophagus, stomach and duodenum. Histopathology of the biopsied material was done.

The inclusion criteria were all patients with one or more than one of the following symptoms (of at least six months duration): flatulence, food intolerance, epigastric pain, heartburn and aerophagia. Patients having hepatic, gallbladder and pancreatic diseases were excluded from the study.

## RESULTS

Out of 50 patients, 35(70%) were males while 15(30%) were females. The age range of the patients was from 31 to 70 years. Eighty two percent (41/50) of patients were in the age group of 30-50 years. The catchment area was scattered

all over the NWFP.

The common symptoms were epigastric discomfort in 45 (90%) cases, flatulence in 36 (72%) cases and heartburn in 35 (70%) cases as shown in Table 1. These dyspeptic symptoms were associated with constipation, weight loss, vomiting and diarrhea (Table 2). These patients had used antacids (100%) and H<sub>2</sub> blockers (54%). Other drugs used by these patients were NSAIDs (54%), steroids (32%).

Most of the male patients were smokers (50%). Ninety-eight (49/50) percent of the patients were taking tea. Other common habits were snuff and spicy meals. Most of the patients were investigated either by general practitioners or by medical specialists (Table 3). Fifty percent (25/59) of our patient had consulted hakeems, quacks and other unqualified people. These patients were divided into two groups on the basis of endoscopic findings: i.e. those with normal findings (25 patients), those with abnormal findings (25 patients). The abnormal findings included esophagitis in 6 (12%) patients, gastric ulcer in 5

## FREQUENCY OF ASSOCIATED SYMPTOMS

Associated Symptoms	Number of patients		
	Male	Female	Total
Constipation	12 (34%)	5 (33%)	17 (34%)
Weight loss	10 (29%)	3 (20%)	13 (26%)
Vomiting	7 (20%)	5 (33%)	12 (24%)
Diarrhoea	5 (14%)	4 (27%)	9 (18%)
Pallor	5 (14%)	1 (7%)	6 (12%)
Dysentery	4 (11%)	2 (13%)	6 (12%)
Melena	4 (11%)	1 (7%)	5 (10%)
Jaundice	3 (9%)	1 (7%)	4 (8%)
Haematemesis	3 (9%)	1 (7%)	4 (8%)
Fever	1 (3%)	1 (7%)	2 (4%)
Dysphagia	1 (3%)	0 (0%)	1 (2%)

Table 2

## PREVIOUS INVESTIGATIONS

Previous Investigations	Number of patients		
	Male	Female	Total
X-ray (Abdomen)	18 (51%)	11 (73%)	29 (58%)
Abdominal ultrasound	13 (37%)	9 (60%)	22 (44%)
Endoscopy	4 (11%)	1 (7%)	5 (10%)
Biopsy	3 (9%)	0 (0%)	3 (6%)
Barium studies	3 (9%)	1 (7%)	4 (8%)

Table 3

(10%) patients, duodenal ulcer in 4 (8%) patients, gastritis in 4 (8%) patients (Table 4). Histopathology of the biopsies helped in confirmation of the normal and abnormal findings.

## DISCUSSION

Dyspepsia is a major health problem worldwide and specially in the developing countries like Pakistan where it put a lot of financial burden on national economy. The prescriptions for dyspepsia now account for over 10% in primary care, numbering 471 million in 1999 in England and Wales. The most common type of dyspepsia encountered in primary care and gastroenterology practice is functional dyspepsia. Treatment of patients with functional dyspepsia is controversial and often disappointing. The goal is to help patients accept, diminish, and cope with symptoms rather than eliminate them. There is no drug that has consistently been proven to be effective for functional dyspepsia. Patients should be reassured and given dietary and psychosocial advice as needed. A trial of acid suppression may be reasonable in patients who do not respond to

the above. The American College of Physicians recommended a trial of antisecretory therapy for patients without an obvious organic cause of dyspepsia who were under the age of 45, with endoscopy reserved for patients who had little or no response to therapy after 7 to 10 days or whose symptoms had not resolved after six to eight weeks. However, this strategy may not be optimal based upon the following observations. Peptic ulcer disease is responsible for a substantial number of cases of dyspepsia, *H. pylori* is the most common cause of peptic ulcers, and failure to eradicate *H. pylori* increases the risk of ulcer recurrence. Thus, treatment with empiric antisecretory drugs results in a delay of optimal therapy for a number of patients with dyspepsia. A favorable symptomatic response to antisecretory therapy does not exclude a malignant gastric ulcer and thus may delay its diagnosis.<sup>7</sup> Non-steroidal anti-inflammatory drugs (NSAIDs) were used in 54% while steroids by 32% of our patients. NSAIDs can cause dyspepsia and their use should be discontinued whenever possible. Several studies have evaluated rates of dyspepsia in patients

## FREQUENCY OF ENDOSCOPY AND BIOPSY FINDINGS IN THE PATIENTS

Findings	Number of patients		
	Male	Female	Total
NORMAL	17(49%)	8(53%)	25(50%)
ABNORMAL	18(51%)	7(47%)	25(50%)
Esophagitis	3(9%)	3(20%)	6(12%)
Gastric ulcer	4(11%)	1(7%)	5(10%)
Gastritis	2(6%)	2(13%)	4(8%)
Duodenal ulcer	3(9%)	1(7%)	4(8%)
Duodenitis	2(6%)	0(0%)	2(4%)
Esophagogastritis	1(3%)	0(0%)	1(2%)
Gastroduodenitis	1(3%)	0(0%)	1(2%)
Esophagogastroduodenitis	1(3%)	0(0%)	1(2%)
Carcinoma stomach	1(3%)	0(0%)	1(2%)

Table 4

taking a COX-2 selective inhibitor versus a nonselective NSAID plus a proton pump inhibitor. A meta-analysis found a greater degree of risk reduction in dyspepsia with the PPI approach.<sup>8</sup> Several other drugs have been implicated as causes of dyspepsia. Calcium channel blockers, alendronate, orlistat, potassium supplements, acarbose and certain antibiotics, including erythromycin and metronidazole should also be considered as a potential factor.<sup>9</sup> Proper history, physical examination and a therapeutic trial followed by selected investigations to confirm or exclude serious diseases should be the rule in dyspeptic patients. However Studies evaluating the sensitivity and specificity of symptoms in predicting the presence of malignancy have produced disparate results leaving substantial uncertainty regarding their accuracy.<sup>10</sup> The value of the alarm symptoms is even less clear in populations with a high incidence of gastroesophageal malignancy.<sup>11</sup> Three common patterns of dyspepsia have been recognized in a number of studies: ulcer-like, dysmotility-like and unspecified dyspepsia. However, these patterns overlap considerably and clinical features alone have poor predictive value for the specific diagnosis found after endoscopy or distinguishing organic from functional dyspepsia.<sup>12,13</sup> Endoscopy provides a gold-standard for the diagnosis of dyspepsia. The diagnostic yield of endoscopy in patients with dyspepsia increases with age. There is little role for barium meal in the routine evaluation of patients with dyspepsia. Barium meal is cheaper than endoscopy for the diagnosis of peptic ulcer disease, but is less accurate.<sup>14</sup> As a general rule, barium studies should be reserved for patients in whom an objective assessment of upper gastrointestinal tract is desirable but who cannot tolerate endoscopy. Guidelines published by the American College of Gastroenterology suggest that endoscopy is appropriate in patients with uninvestigated dyspepsia who are older than 55 years or have alarm features.<sup>15</sup> In those 55 years old and without alarm features, options include an empiric trial of acid suppression with a proton pump inhibitor or a test and treat strategy for *H. pylori*; the latter is preferred in populations with a prevalence of *H. pylori* of 10 percent.

Etiology of dyspepsia has considerable variation. Gastritis is the commonest cause of dyspepsia in countries like Saudi Arabia<sup>16</sup>, China<sup>17</sup> while in northeastern part of India esophagitis is the commonest, closely followed by gastritis.<sup>18</sup> In our study esophagitis (12%) was the common endoscopic findings followed by gastritis (8%). Sarwar et al<sup>19</sup> had esophagitis in 20% of cases and gastritis in 13% cases. Ziauddin<sup>20</sup> had more cases of gastritis (18%) than esophagitis (14%). In our

study 25 patients (50%) were found to be normal on upper GI endoscopy that was also confirmed by biopsy. Sarwar M et al<sup>19</sup> had similar results with 51.17% of patients with dyspepsia had no endoscopic abnormality. Khan PM et al<sup>21</sup> reported 185 patients having normal upper GI endoscopy out of 1390 cases. Hussain I<sup>22</sup> reported 38.9% rate of functional dyspepsia in patients presenting with dyspepsia. The study from Peshawar by Ziauddin diagnosed non-ulcer dyspepsia in 28% of patients with dyspepsia.<sup>20</sup> Peptic ulcer was found in 18% (gastric ulcer 10% and Duodenal ulcer 8 %) of our patients. These values are comparable to 24% by Ziauddin<sup>20</sup> and more as compared to 10% by Sarwar et al<sup>19</sup> and 1.54% reported by Sheikh WM et al<sup>23</sup>. The difference could be due to the influx of Afghan refugee or to the changing personal habits. Most of our patients had consulted unqualified people. This trend is very common in NWFP that need to be discouraged.

## CONCLUSION

Endoscopy is very important procedure for the assessment of dyspepsia. The endoscopic findings were normal in majority of patients with *dyspepsia*. The common abnormal endoscopic findings included esophagitis, gastric ulcer, duodenal ulcer and gastritis. Multiple blind biopsies improve the diagnostic yield and it is after negative endoscopy and biopsy report that one can be labeled as suffering from non ulcer dyspepsia.

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**Address for Correspondence:****Dr. Nowshad Khan**

Department of Medicine,  
Khyber Teaching Hospital,  
Peshawar – Pakistan.

E.mail: nowshadkhan\_29@yahoo.com