ORIGINAL ARTICLES

ENDOSCOPIC FINDINGS IN NON ULCER DYSPEPSIA; A NEW PERSPECTIVE

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ABSTRACT

Objective: To see the pattern of endoscopic findings in patients with non-ulcer dyspepsia.
Study Design: Observational cross sectional study.
Place and Duration of Study: Department of Gastroenterology, Combined Military Hospital Kharian Pakistan, from Jan 2015 to Dec 2015.
Material and Methods: Two hundred and seventy seven patients were included in the study. Patients presenting with dyspeptic symptoms at outpatient Gastroenterology Department were included in this study. Upper GI endoscopy was carried out and those having ulcers or any structural lesion were excluded from the study. Endoscopic findings were interpreted with IBM SPSS version 22.
Results: Out of 277 patients, 146 were male and 131 female. Their minimum age was 12 and maximum age was 86 years with 44 ± 15.5 (mean ± SD). Maximum numbers of patients were between ages of 31 to 50 years. Endoscopy was normal in 112 (40.4%) patients, showed mild gastritis in 118 (43.7%), moderate gastritis in 17 (6.1%), duodenitis in 19 (6.9%), and mixed findings in 8 (2.9%) patients. Bile was present in 144 (52%) and absent in 133 (48%) of the endoscopies.
Conclusion: Mostly patients have either normal findings or mild gastritis on upper GI endoscopy. Gastric bile reflux was a common observation.

Keywords: Bile reflux, Gastritis, Non ulcer dyspepsia.

INTRODUCTION

'Dyspepsia' is a combination of two Greek words "dys" means bad and "pepsis" means digestion. It is usually described by patients as indigestion or discomfort in upper abdomen. This terminology was first described in mid-18th century and is being widely used since then[1]. It is defined in Rome III criteria as one of three symptoms for last 3 months within the initial six month of symptoms onset of including; 1) postprandial fullness, 2) early satiety, and 3) epigastric pain or burning[2]. It is one of commonest presentation in medical outpatient department. It necessitates initial endoscopy in the presence of warning symptoms including Age ≥50 years[3], family history of upper GI malignancy in a first-degree relative, unintended weight loss, bleeding or iron deficiency anemia, dysphagia, odynophagia, persistent vomiting, abnormal imaging suggesting organic disease[4]. Non ulcer dyspepsia is supposedly considered due to visceral hypersensitivity, delayed gastric emptying and psychological stress[5,6]. Investigated dyspeptic patients are categorized in organic and functional dyspepsia[7]. Organic causes include anatomical and pathophysiological changes while functional dyspepsia means number of investigation and upper GI endoscopy to be normal[8]. In addition to the supposed mechanisms of the non ulcer dyspepsia mentioned above, presence of bile was a common observation in these patients in the absence of structural lesion. As we know duodeno-gastric bile reflux is common in peptic ulcer, post distal gastrectomy and cholecystectomy patients. In our observation, the bile reflux was present in dyspeptic patients in the absence of above conditions. Keeping all above in mind, this study was designed to find

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out frequency of different endoscopic findings in patients presenting with dyspepsia, who don't have ulcer or any anatomical or pathophysiological changes.

MATERIAL AND METHODS

This prospective study was carried out at Gastroenterology Department of Combined Military Hospital Kharian from Jan 2015 to Dec 2015. Study was approved by the ethical committee of the hospital. Informed consent of patients was taken. Patients presenting in medical outpatient department during this period with dyspepsia were enrolled. The demographic data i.e. age, gender etc was noted down. They were inquired about the duration of symptoms, post prandial discomfort, epigastric pain, early satiety, presence of warning symptoms like reduced appetite, weight loss, and GI bleed. After the detailed history, a thorough examination was carried out.

Patients falling into the Rome III criteria i.e. one of three symptoms for last 3 months within the initial of six month of symptoms onset 1) postprandial fullness, 2) early satiety and 3) epigastric pain or burning and absence of any organic lesion defined after history, physical examination followed by upper GI endoscopy were included in the study.

Patients with organic disease like, gastric esophageal reflux disease (GERD), peptic ulcer or malignancy confirmed on the upper GI endoscopy, used NSAIDS one week before and H2 antagonist or proton pump inhibitors (PPI) two weeks before endoscopy, were excluded from the study.

Their upper GI endoscopy was carried out with high definition pentax video endoscope, after informed consent, counseling, detailed explanation of the procedure, overnight fasting and lignocaine 4% throat spray as a local anesthesia. In Endoscopy, detailed examination of esophagus, stomach, 1st and 2nd part of the duodenum were examined. Out of a total of 277 patients examined endoscopically, 188 were biopsied. Biopsies were taken 2 from antrum and 2 from body for hispathological examination. The sections were stained with haematoxylin and eosin (H&E). For highlighting the presence of *H.Pylori*, modified giemsa stain was done on one section including antral and corporal mucosa. Findings were interpreted with IBM SPSS version 22.

RESULTS

During the period of study, 277 non ulcer dyspeptic patients endoscopically proven were included in the study. Out of total 277 patients, 146 (53%) male and 131(47%) were female. Their minimum age was 12 and maximum age was 86 years with mean of 44 SD ± 15.5. Maximum numbers of patients were between 31 to 50 years. Pain epigastrium was the most common symptom i.e. 173 (62.5%), followed by postprandial distress in 32 (11.6%) and mixed symptoms in 72 (43%) patients. Minimum duration of symptoms were for the last 3 months with onset 6 months back and maximum 20 years. Maximum patients had symptoms for last four years before consultation as shown in figure. Endoscopically, most of the patients of non-ulcer dyspepsia had normal upper GI endoscopy (40.4%) and other most common finding was bile

Table: Findings on endoscopic examination.

Endoscopic findings	No. of Patients	Percentage (%)
Normal	112	40.4
Mild gastritis	118	43.7
Moderate gastritis	17	6.1
Duodenitis	19	6.9
Mixed findings	8	2.9
Total	277	100

in the stomach without any structural changes (52%). Amongst the patients with bile in stomach, only 9% of the patients had gallbladder or any biliary tract surgery. Other findings were mild gastritis in 43.7% moderate gastritis in 6.1%, duodenitis in 6.9% and mixed findings in 2.9% of the cases, as shown in table. *H pylori* was detected in 23 patients (12%) out of which 13 (58%) had mild, 7 (32%) had moderate and 3 (10%) had severe colonization of *H Pylori*.

DISCUSSION

Dyspepsia is the most common presentation in gastrointestinal outpatient department. During this study, dyspepsia was observed in fifty two percent of the patients, 42% percent out of them had non ulcer dyspepsia. This finding is close to the findings observed in a study by rose ashinedu ugiagbe, where dyspepsia was observed in 55.5%[9] and 40.4% had non-ulcer dyspepsia. In another study by Iqbal Haider et al, non ulcer dyspepsia was present in 26%[10]. Maximum cohort of patients in the index study was 3rd decade which as compared to the study by Iqbal Haider, where the max patients were below 30 years, and 6th decade in study by rose ashinedu ugiagbe[9,10]. Male to female ratio in our study was 52.7%, 47.3% respectively, that is reverse as compared to study by ugiagbe et al, where the female to male ratio was 71.7% to 28.3%[9]. In our study, we observed a significant number of normal upper GI endoscopies i.e. 40.6%, while the frequency of gastritis was 49.8%, which is in comparison to study by Faintuch et al, where functional dyspepsia was present in 186 (66%), normal endoscopy was in 56 (20%) and gastritis in 130 (46%) cases[11]. Microscopic duodenal inflammation is another concept being discussed as a cause of functional dyspepsia[12]. Duodenitis was 6.9%, which is close to the findings observed by Iqbal Hyder and Faintuch i.e. 6% and 9% respectively[9,11]. *H pylori* is more common in non-ulcer dyspepsia[13]. Treatment of *H Pylori* has statistically significant but less symptomatic effects[14]. Out of 188 patients, 23 (12%) patients had *H Pylori*. It is approximately half of the data observed i.e. 25% by Sarfraz et al[15]. One of the postulated mechanism of the functional dyspepsia other than gastric dysmotility and visceral hypersensitivity is acid and bile reflux[16]. Duodenogastric Bile reflux is more common after cholecystectomy[17], gastric surgery including total gastrectomy and gastric bypass surgery for weight loss. Bile reflux associated gastritis is an established fact[18,19]. In our study, bile reflux was found in 52% of the non-ulcer dyspeptic symptoms, out of which 56.7% had chronic inflammation on histopathology and only 9% out of them had previous gall bladder surgery and none of them had gastric surgery. Chronic inflammation in our study is close to a Nigerian

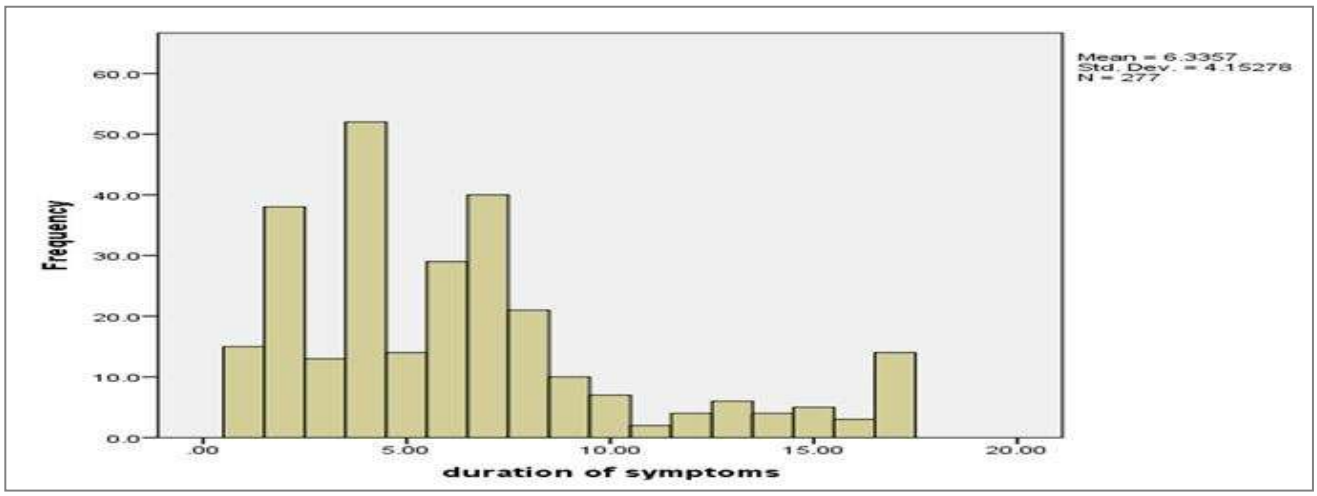

Figure: Duration of symptoms (in years) and their frequency in percentages.

study i.e. 66.70%[20] and far less as observed in an Indian study, where it was 82.30% in non-ulcer dyspeptic patients[21]. Above findings may be because of over the counter use of antibiotics and more frequent use of acid suppressing proton pump inhibitors (PPIs), however this possibility needs confirmation by doing more studies.

CONCLUSION

Normal appearance and mild to moderate gastritis were the most common finding on upper GI endoscopy. Duodenogastric bile reflux associated gastritis contributed more than *H. Pylori* gastritis to non-ulcer dyspepsia.

Burden of bile associated gastritis leading to non-ulcer dyspepsia is way above we thought before and may be considered for future research as well as for formulating new management strategies.

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CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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