Endoscopic Findings and Histopathological Pattern in Patients with Chronic Dyspepsia at Panti Rapih Hospital, Jogjakarta

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ABSTRACT

Background: *To determine the relationship between clinical manifestation of chronic dyspepsia and endoscopic findings along with histopathological pattern by descriptive analysis.*

Methods: *This study was a retrospective study. Subjects were patients with chronic dyspepsia who underwent endoscopic examination and gastric biopsy between June 2005 and July 2006.*

Result: *There are 10.17% normal endoscopic results of 79 patients with chronic dyspepsia and almost 90% show abnormal result in endoscopic examination. The histopathological pattern is normal in 2.53% and 97.47% demonstrate abnormal result. The prevalence of Helicobacter pylori due to gastric ulcer is 1.26% and chronic atrophic gastritis is 3.80%.*

Conclusion: *Most of chronic dyspepsia patients have abnormal endoscopic and histopathologic result.*

Keywords: *chronic dyspepsia, endoscopic findings, histopathological pattern, Helicobacter pylori*

INTRODUCTION

The term "dyspepsia" derives from Greek words "dys" (bad) and "pepsis" (digestion) that refers to symptoms thought to originate in the upper gastrointestinal tract.[1] Dyspepsia refers to pain or discomfort centered in the upper abdomen. However, the most frequent type is non-ulcer dyspepsia, in which no definite structural or biochemical explanation for the symptoms can be identified. At least 50% of patients with dyspepsia who are seen in primary care settings have non-ulcer dyspepsia. Discovery of *Helicobacter pylori (H. pylori)* has resulted important advances in the management of dyspepsia.[2] Over the past 40 years, endoscopy examination has been widely used in the investigation of upper gastrointestinal symptoms.[3] Immediate endoscopy in a patient with dyspepsia results in a definite diagnosis from the outset and ensures that the patient receives the most appropriate treatment. It is evident that in most patients with dyspepsia, no underlying disease can be identified. A negative endoscopic result may have significant reassuring effect and may result in decreased use of medication and fewer medical consultations. Prompt endoscopy has been proved to be more cost effective and has resulted more patient satisfaction than empiric treatment with an H_2-receptor blocking agent.[4,5]

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METHODS

This study was a retrospective study conducted between June 2005 and July 2006. Subjects were patients with chronic dyspepsia who had dyspepsia for at least three months and had undergone endoscopic examination. Endoscopic findings and histopathology results were studied. We used OMED nomenclature for endoscopic findings criteria.[6] Histopathological assessment of two biopsy specimens were obtained from anthrum and body of the stomach and were examined by a histopathologist. Statistical analysis was conducted by using descriptive method.

RESULTS

There were total 79 patients in this study; 35 (44.30%) males and 44 (55.70%) females with ranged of age 21-70 years old (figure 1) and mean age 45.19 ± 16.67 years. The endoscopic findings were: normal in 8 patients (10.17%), chronic antral gastritis in 17 patients (21.50%), chronic antral gastritis with erosion in 20 patients (25.31%), acute pangastritis with erosion in 3 patients (3.80%), chronic pangastritis in 5 patients (6.33%), chronic pangastritis with erosion in 5 patients (6.33%), duodenitis erosion in 4 patients (5.06%), gastric ulcer in 12 patient (15.18%), duodenal ulcer in 1 (1.26%) patient, gastric ulcer with erosion in 2 patients (2.53%) and gastric tumor in 2 patients (2.53%) (figure 2). The histopathological pattern were: normal in 2 patients (2.53%), chronic superficialis gastritis in 51 (64.57%) patients, chronic athropic gastritis in 14 patients (17.72%), chronic athropic gastritis with *H. pylori* in 3 patients (3.80%), chronic gastritis with ulcer in 3 patients (3.80%), gastric ulcer with *H. pylori* in 1 patient (1.26%), chronic gastritis with metaplasia in 1 patient (1.26%), chronic gastritis with erosion in 4 patients (5.06%) (figure 3)

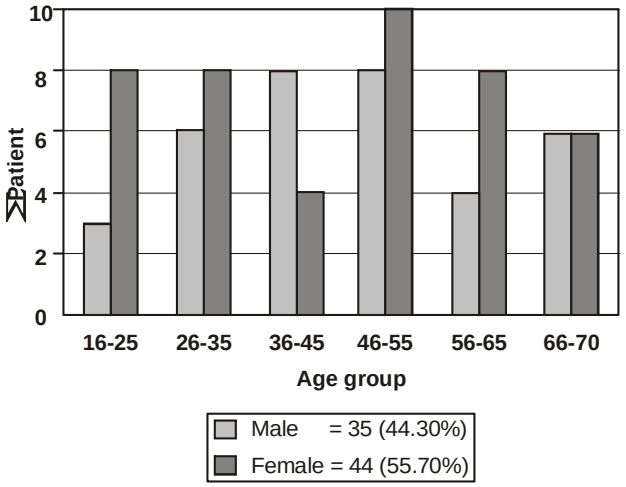
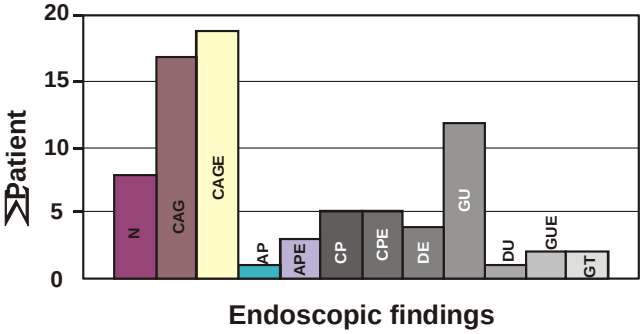
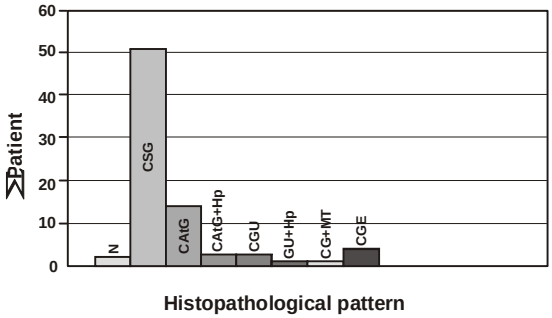


Figure 1. Sex and age distribution (N = 79)



N = Normal; CAG = Chronic Anthral Gastritis; CAGE = Chronic Anthral Gastritis Erosion; AP = Acute Pangastritis; APE = Acute Pangastritis Erosion; CP = Chronic Pangastritis; CPE = Chronic Pangastritis Erosion; DE = Duodenitis Erosion; GU = Gastric Ulcer; DU = Duodenal Ulcer; GUE = Gastric Ulcer Erosion; GT = Gastric Tumor.

Figure 2. Distribution of histopathological pattern (N=73)



N = Normal; CSG = Chronic Superficial Gastritis; Catg = Chronic Atrophic Gastritis; Catg+Hp = Chronic Atrophic Gastritis with H. pylori; CGU = Chronic Gastritis with Ulcer; GU+Hp = Gastritis Ulcer With H. pylori; CG+Mt = Chronic Gastritis with Metaplasia; CGE = Chronic Gastritis Erosion.

Figure 3. Distrubution of endoscopic findings (N= 73)

DISCUSSION

The prevalence of dyspepsia ranges from 26% in United States to 41% in England. Although only 20 to 25% of persons with dyspepsia seek medical care, the problem is responsible for 2 to 5% of visits to primary physicians. An organic cause is found in 40% of patients with dyspeptic symptoms. The most common organic disorders causing dyspepsia are gastro-duodenal ulcer, gastro-oesophageal reflux disease, and gastric cancer. In 50% of patients, no cause is apparent and the dyspepsia is consider to be idiopathic, that is the diagnosis is essential, functional, or non-ulcer dyspepsia.[1] The prevalence of the underlying causes of dyspepsia differs between various parts of the world, and up to 60% will be diagnosed with non-ulcer-dyspepsia.[4,5] Most dyspeptic patients have no clinically significant abnormalities on investigation. Up to 20% may have endoscopic reflux oesophagitis and 15-20% may have peptic ulcer disease including duodenitis, while 2% will have a gastric or oesophageal cancer.[7]

A number of hypotheses have been proposed to explain the pathogenesis of non-ulcer dyspepsia. The gastric acid hypothesis suggests that either hypersecretion of gastric acid or increased sensitivity to gastric acid is responsible for dyspeptic symptom. Other hypothesis includes the motor-disorder hypothesis, the psychiatric hypothesis, the hypothesis of augmented visceral perception, and the food intolerance hypothesis.[1]

Endoscopic findings in our study found that there are about 10% normal endoscopic findings of 79 patients with chronic dyspepsia and almost 90% are abnormal. Of 10% normal endoscopic findings, we found only 2.53% has normal histopathological results. Esophagogastroduodenoscopy (EGD) was performed to investigate the cause of gastrointestinal symptoms with a sensitivity and specificity of more than 95%. Almost 50% of patients investigated are essentially have normal endoscopy, and are labeled as

having functional dyspepsia. The cause of functional dyspepsia is uncertain and likely to be multifactor.[8] Study on delayed gastric emptying shows that impaired accommodation to a meal and visceral hypersensitivity has been demonstrated in patients with functional dyspepsia. These mechanisms, rather than *H. pylori* infection, are responsible for functional dyspepsia.[9]

The prevalence of *H. pylori* in our study, gastric ulcer is 1.26% and in chronic atrophic gastritis is 3.80%. One study shows that the prevalence of *H. pylori* varies among Indonesia's provinces; 19.04-86.1% in chronic gastritis and 71.4-100% in peptic ulcers.[10] The *prevalence H. pylori* in Sardjito hospital Jogjakarta is 22.8% based on 92 endoscopic examinations in patients with chronic dyspepsia.[11]

The relationship between *H. pylori* and functional dyspepsia has been debated for a long time and still not entirely clarified.[4] Some cases of dyspepsia may represent various stages of *Helicobacter pylori* infection and may subsequently progress to ulcer, gastric atrophy, intestinal metaplasia and gastric adenoma.[5,9,12,13] WHO concluded that there is sufficient evidence that *H. pylori* has an etiologic role in gastric carcinogenesis.[12] However, although approximately 30% of patients with non-ulcer dyspepsia also have *H. pylori* infection,[2] the prevalence of ulcers in the patients positive for *H. pylori* with predominant heartburn or reflux symptoms is only 8%, which is significantly less than the 21% found in the *H. pylori* positive patients with other upper gastrointestinal symptoms and little higher than the 4% seen in *H. pylori* negative patients.[3] The reported of *H. pylori* infection in patients with gastritis and non-ulcer dyspepsia ranges from 30% to 70%.[14]

CONCLUSION

We found abnormalities on endoscopic examination, i.e. chronic dyspepsia in 79 patients our hospital in almost of the cases abnormal. The histopathological results are abnormal in almost patients. Our data revealed that the endoscopic abnormalities include chronic antral gastritis erosion, chronic antral gastritis, and gastric duodenal ulcer; while the histopathologic abnormalities are chronic superficial gastritis and chronic atrophic gastritis. The prevalence *H. pylori* in chronic gastritis with atrophic and gastric ulcer; but not in chronic gastritis with metaplasia or gastric tumor. There are certain limitations of this study, and we suggest for further studies.

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