



COMPARISON OF THE RELATIONSHIP BETWEEN *HELICOBACTER PYLORI* AND ENDOSCOPIC DIAGNOSIS

Medicine

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ABSTRACT

AIM: *Helicobacter pylori* is a gram-negative, spiral-shaped, urease-positive bacteria that infects human worldwide. the aim of this study is to compare endoscopic findings with the presence of *H. pylori*.

PATIENTS AND METHOD: Esophagogastroduodenoscopy (OGD) was performed in *Helicobacter pylori* IgG (+) 50 patients and *Helicobacter pylori* IgG (-) 19 patients from patients admitted to Kahramanmaraş Sütçü İmam University Medical Faculty Internal Diseases and Gastroenterology clinic with dyspeptic complaints. Patients were divided into two groups according to whether they were *Helicobacter pylori* IgG (+) or (-). Patients in each group were classified according to their endoscopic diagnosis.

RESULT: There were 69 patients in this study and 50 of them were selected from *Helicobacter pylori* IgG (+) group and 19 from *Helicobacter pylori* IgG (-) patients. Among 68 patients of 69 had gastritis (98.6%). There was only 1 patient without gastritis.

The rate of erosive gastritis was 12/50 (24%) in *Helicobacter pylori* IgG (+) group and 10/19 in *Helicobacter pylori* IgG (-) group (52.6%) ($p = 0.024$).

Bulbitis was detected in 34/50 (68%) of patients with *Helicobacter pylori* IgG (+). 16/19 of the patients with *Helicobacter pylori* IgG (-) had bulbitis (84%) ($p = 0.534$).

The rate of esophagitis was 8/50 (16%) in *Helicobacter pylori* IgG (+) group and 4/19 (21%) in *Helicobacter pylori* IgG (-) group ($p = 0.431$).

CONCLUSION : it can be said that studies with a larger number of patients are needed in order to be able to reveal the relationship between *Helicobacter pylori* antibody (+) serology and endoscopic diagnoses serologically.

KEYWORDS

Helicobacter Pylori, Gastritis, Endoscopy, Bulbitis Conflict Of Interest: None To Be Declared

Helicobacter pylori is a gram-negative, spiral-shaped, urease-positive bacteria that infects human worldwide. The prevalence of *Helicobacter pylori* has been reported to be around 80% in developing countries (Asian countries such as Nigeria, South Africa, Tunisia, Asian countries such as Kazakhstan, Nepal and Pakistan) while in the developed countries like the United States, Switzerland and Denmark it is about 22-35%. Prevalence in Turkey was reported to be 77.2%. The transmission mechanism is still not fully understood. Nevertheless, the improvement of socioeconomic conditions causes a decrease in the incidence of *Helicobacter pylori* (1). Human is the only major reservoir of *Helicobacter pylori* (2). *Helicobacter pylori* is present in the gastric mucus gel in a large amount and is attached to the surface of the mucous cells. Other than this, it is present at intercellular intervals and is found in the canalicular parietal cells, especially in patients receiving anti-secretory treatment with a proton pump inhibitor. Antral, oxytric, and cardiac mucosal infections are equally sensitive and the colonization of this bacteria is similar in these regions (3).

IgA elevation is a finding that reflects local mucosal damage. IgM is elevated in the early period and falls quickly in the early period (18-60 days) (4). IgG response is constantly detected in those who have had *Helicobacter pylori* infection (8). Despite antibodies, *Helicobacter pylori* maintain its presence in the mucosa. Although the antibodies are not protective (9), they are particularly reliable and useful for prevalence studies. It is also useful for follow-up and control of treatment. With successful treatment, there is a decrease in IgG titration and the relapse increases the titer again. The sensitivity of IgG is 74-98% and the specificity is 78-95% (5-9).

Amoxicillin, tetracycline, clarithromycin, and metranidazole are the most frequently used antibiotics in the eradication of *Helicobacter pylori* (10). Triple therapy, which has been used for many years, is no longer sufficient. The effectiveness of the regimen, which provided 90% eradication in the nineties, declined to 43-49% in 2000 due to resistance to clarithromycin (11). Currently, the best regimens for *Helicobacter pylori* eradication are the combined use of bismuth quadruple therapy (Bismuth salt 4x1 + proton pump inhibitor 2x1 + tetracycline 3x1 + metranidazole 3x1) or high dose proton pump inhibitor 4x1 + amoxicillin 500mg 2x1 combination (12).

In the consensus statement published in 2016, for the first time, the

need for *H. pylori* screening and eradication was emphasized in patients at risk for gastric cancer (13).

PTIENTS AND METHOD

Between May 2004 and May 2005, esophagogastroduodenoscopy (OGD) was performed in *Helicobacter pylori* IgG (+) 50 patients and *Helicobacter pylori* IgG (-) 19 patients from patients admitted to Kahramanmaraş Sütçü İmam University Medical Faculty Internal Diseases and Gastroenterology clinic with dyspeptic complaints. Patients were divided into two groups according to whether they were *Helicobacter pylori* IgG (+) or (-). Patients in each group were classified according to their endoscopic diagnosis. All ethical approvals are obtained from the ethical committee of Kahramanmaraş Sütçü İmam University Medical Faculty.

For the statistical analyses of the study, chi square test and Fisher's exact test were used to compare categorical variables. A value of $p < 0.05$ was considered significant. All statistical analyses were performed by using SPSS version 21.0 (Statistical Package for Social Sciences; SPSS Inc., Chicago, Illinois).

RESULTS

There were 69 patients in this study and 50 of them were selected from *Helicobacter pylori* IgG (+) group and 19 from *Helicobacter pylori* IgG (-) patients.

68 of 69 patients had gastritis (98.6%). There was only 1 patient without gastritis.

The rate of erosive gastritis was 12/50 (24%) in *Helicobacter pylori* IgG (+) group and 10/19 in *Helicobacter pylori* IgG (-) group (52.6%). These values were statistically significant ($p = 0.024$).

Bulbitis was detected in 34/50 (68%) of patients with *Helicobacter pylori* IgG (+). 16/19 of the patients with *Helicobacter pylori* IgG (-) had bulbitis (84%). This result was not statistically significant ($p = 0.534$).

From the point of view of esophagitis; the rate of esophagitis was 8/50 (16%) in *Helicobacter pylori* IgG (+) group and 4/19 (21%) in *Helicobacter pylori* IgG (-) group. This result was not statistically significant ($p = 0.431$).

Table.1 Comparison of endoscopic diagnoses due to *Helicobacter pylori* antibody status in serology

Endoscopic Diagnosis	<i>Helicobacter pylori</i> IgG (+)	<i>Helicobacter pylori</i> IgG (-)	p
Gastritis	49/50 (%98)	19/19 (%100)	0,771
Erosive gastritis	12/50 (% 24)	10/19 (% 52.6)	0,024
Bulbitis	34/50 (% 68)	16/19 (% 84)	0,534
Erosive gastritis	8/50 (% 16)	4/19 (% 21)	0,431

DISCUSSION

Helicobacter pylori is an infection affecting approximately 50% of the world's population (14). *Helicobacter pylori* appears to be the primary cause of antral gastritis (15). *Helicobacter pylori* is also strongly associated with Peptic ulcer disease (16), gastric cancer (17) and gastric Malt lymphoma (18).

Chronic *Helicobacter pylori* gastritis does not have a clear endoscopic pattern. According to its distribution and stage gastritis, hyperemia, erosion, ulceration, hypertrophy and atrophy can be found in various combinations at the same level. Yet none of these have predictive value for chronic *Helicobacter pylori* infection. For this reason, the diagnosis of *Helicobacter pylori* gastritis requires histopathological analysis (19). First, it should be noted that this is not a prevalence study. Patients were chosen not to be random, but to create a certain number of groups. The main purpose is to demonstrate whether there is correlation between serology and endoscopic diagnoses.

There was no statistically significant difference in terms of esophagitis, gastritis and bulbitis rates between *Helicobacter pylori* IgG (+) patients and *Helicobacter pylori* IgG (-) patients in our study. Erosive gastritis was significantly higher in *Helicobacter pylori* IgG (-) group than in *Helicobacter pylori* IgG (+) group, although no significant difference was reported in the literature (19, 20).

However, it may be appropriate to consider this relationship with consideration of the number of patients. Almost all the patients in the study had gastritis. Patients who were included in the study were patients who had been referred to a tertiary health care facility and who had previously had dyspeptic complaints. Probably these are the two reasons why gastritis is found in so many patients.

It is also impossible to adapt the serology correlation to other diagnoses to the normal population. It can be assumed that these pathologies are seen less frequently in the normal population.

As a result, it can be said that studies with a larger number of patients are needed in order to be able to reveal the relationship between *Helicobacter pylori* antibody (+) serology and endoscopic diagnoses serologically.

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