

Research Article

The prevalence of Helicobacter Pylori in Patients with Dyspeptic Complaints and the Relation Between Helicobacter Pylori and Dyspepsia

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Abstract

Objectives: Helicobacter Pylori(HP) is a very common infection in the communities. More than half of the people in the world population carry this bacterium in the gastric mucosa. Dyspepsia is a collection of the symptoms that cause difficulties in both explaining the symptoms to physicians or defining these complaints as a disease by the physician. This study explores the prevalence of HP in patients with dyspeptic complaints who applied to family medicine outpatient department in a tertiary care institute, aiming at investigating the possible relationship between Dyspepsia and HP.

Methods: This was retrospective a study of 124 patients with dyspeptic complaints who were admitted to an outpatient clinic of tertiary care institute. Patients were screened for the symptoms suggestive of dyspepsia and underwent carbon Urea Breath Test (UBT) to identify HP positivity and prevalence. The results were analyzed using SPSS-PASW Statistics-17 package program.

Results: There was no significant relation between dyspepsia and HP positivity in terms of gender and age groups. The prevalence of HP in patients with dyspeptic complaints was found to be lower than that in the general population.

Conclusion: The prevalence of HP in patients with dyspeptic complaints was lower than that in the general population. The result of this study may be due to the decrease in the prevalence of HP in recent years. This, however, does not support that the prevalence of HP is definitely low in patients with dyspeptic complaints.

Keywords: Helicobacter pylori, dyspepsia, prevalence

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After the 1980s when the Helicobacter Pylori (HP) infection was first defined, its role in the pathogenesis of duodenal and gastric ulcer was clearly demonstrated and it has been shown that the formation of peptic ulcer disease decreases with the eradication of this infection.^[1,2] The frequency of HP infection, which is the most common infection in the world, is associated with socioeconomic level of society and is seen at a rate of 80% in developing countries and 20-50% in developed countries.^[3] Although the inci-

dence in our country varies according to the regions, it is reported to be between 67-81% in adults.^[4]

HP infection is also known to be responsible for the development of Mucosa Associated Lymphoid Tissue(MALT) lymphoma, acute or chronic gastritis, and gastric cancer.^[5-6] Peptic ulcer and gastric malignancy develop in 15-20% and 1% of patients with chronic gastritis caused by HP, respectively.^[7-8] By eradicating HP, peptic ulcer recurrence can be reduced and a complete remission in early-stage MALT

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lymphoma can be achieved.^[9] Another gastrointestinal system disease in which HP is known to be an etiological factor is dyspepsia. Long-term symptoms including epigastric pain, early satiety, discomfort and bloating after meals are referred to dyspepsia. If there is no systemic or metabolic structural disorder to explain the symptoms related to dyspepsia by endoscopic examination and routine blood tests, functional dyspepsia is the issue of consideration at this case. The effect of HP eradication on symptoms in patients with dyspepsia is still under debate.^[10,11] In many studies, although the frequency of HP infection is seen more frequently in patients with non-ulcer dyspepsia than in control groups, the role of bacteria in dyspepsia has not been explained yet.^[12]

Methods

This was a retrospective study of total 126 patients with dyspeptic complaints, including 66 female and 60 males, who applied to a family medicine outpatient clinic between November 2011 and March 2012 and were requested Urea Breath Test (UBT) for a possible HP infection. The results of the carbon-14 UBT performed by nuclear medicine laboratory were evaluated as positive or negative, based on the reference ranges of the hospital. Suspicious results were excluded from the study. The obtained data were analyzed using the SPSS-PASW Statistics-17 package program and the results were analyzed using the Chi-square test.

Results

Medical records of a total 126 patients who met the criteria of the study were evaluated. Two of these patients were excluded from the study because of the suspicious UBT results. Of the 124 patients, 52.4% were female and 47.6% were male. About 72.6% of the patients tested positive for HP. The rate of HP positivity was 74.6% in men and 70.8% in women. Although there was a slight increase in the HP prevalence with increasing age, no statistically significant difference was found between the age groups. Also, there was no significant difference in the HP prevalence in terms of gender. Mean age was 41.25 years (SD, 11.09) for all patients, 40.8 years (SD, 11.55) for women, and 41.75 years (SD, 11.92) for men. The mean ages of the ones tested positive for HP was 45.4 years (SD, 11.4) for all patients, 42.64 years (SD, 11.01) for men, and 48 years (SD, 12) for women. The mean age of those tested negative for UBT was 39.5 (SD, 12.14) for all groups, 39.1 years (SD, 14.39) for men, and 40.74 years (SD, 8.7) for women. There was no statistically significant between those with positive and negative UBT in regards to age and gender.

Discussion

In the Maastrich 2-2000 Consensus Report of European HP Study Group, it was recommended to use the UBT in both diagnosis and showing eradication of HP in patients with dyspeptic complaints who don't have alarm symptoms.^[13] The fact that more than 90% of peptic ulcer is associated with HP and that HP eradication reduces the prevalence of peptic ulcer has led "test-and-treat" strategy to be included in current guidelines.^[14] In our study, the prevalence of HP was found to be 72.6% in patients with dyspeptic complaints. In the study by Erdoğan et al., the frequency of HP was shown to be 63.9% in patients who applied to family medicine outpatient clinic.^[15] Özden et al., who conducted a study in Adana Province in Turkey and investigated the prevalence of HP by C14-UBT in patients with dyspeptic complaints, found the HP prevalence to be 80.2%.^[16] The prevalence of HP is around 80% in Turkey.^[17] Turkolmez et al. found the prevalence of HP to be 68% in 1567 patients who applied for dyspeptic complaints in Ankara.^[18] In the TURHEP (HP Prevalence Study) study, in which the prevalence of HP in the adult population in Turkey was investigated by UBT, the prevalence of HP was 82%.^[19]

The prevalence of HP in our study was lower than that in the prevalence studies of HP in our country. In many studies worldwide, the prevalence of HP was found to be slightly higher in patients with dyspeptic complaints. The majority of patients who applied to our outpatient clinic were the ones living in urban areas and having middle or above middle socio-economic level. Socio-economic status, genetic characteristics, hygienic conditions, and family life habits affect the distribution of HP prevalence in different populations.^[20-21]

The low prevalence of HP in our patients with dyspeptic complaints can be explained by the socio-economic status of our patients, the decreasing trend of HP prevalence in developed and developing countries, and the frequent prescription of antibiotics. In the study performed by European countries investigating HP infection in dyspeptic patients, the countries were divided into three groups according to the prevalence of HP as follows; 1. High level (Czechoslovakia 60-70%, Italy 71%, Spain 50-60%, Poland 85%), 2. Intermediate level (Sweden, England 50%), and 3. Low level (Netherlands 25%, Denmark 30%).^[22]

The prevalence of HP in our study was found to be similar to the European countries with a high prevalence of HP. In our study, no significant relationship was found between HP infection and gender. Likewise, in many studies, no relationship was found between gender and HP. Moreover,

Turkolmez et al. and Erdogan et al. could not find a significant relationship between gender and HP infection.^[18-23] In addition to studies stating that the incidence of HP infection in the general population is equal in men vs. women, there are also studies suggesting that being a man poses a risk for contracting this infection.^[24] In our study, the incidence of HP was slightly higher in males than in females (74.6% vs. 70.8%). Detection and eradication of HP is not a cost-effective form of treatment. It has been reported that dyspepsia complaints regressed in only 9% of patients after the treatment given for HP eradication.^[13-14] Urea breath test is adopted as an appropriate diagnostic approach in case of treatment failure.

Further studies on analysis for cost-effectiveness are needed in patients with dyspeptic complaints. In our study, we investigated the prevalence of HP in patients with dyspeptic complaints. The prevalence of HP in patients with dyspeptic complaints was found to be lower than that in the general population. This may not be due to the low prevalence of HP in patients with dyspeptic complaints, but may be due to the decrease in the prevalence of HP in recent years. In addition to the fact that this is due to socio-economic developments and the importance of hygiene rules, it is certain that the increased use of antibiotics also has an effect. Due to the increase in the level of development of our society, new prevalence studies for HP are needed in our society.

Disclosures

Ethics Committee Approval: Retrospective study.

Peer-review: Externally peer-reviewed.

Conflict of Interest: None declared.

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