Comparison of Helicobacter Pylori Infection among Male and Female at LUMHS, Hyderabad, Sind

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ABSTRACT

Objective: To compare H. pylori infection in male & female at LUMHS Jamshoro Hyderabad Sind.

Study design: Comparative study.


Methods: 100 patients with H. pylori infection of male and female were included in study with serum samples, stool specimens and gastric biopsies.

Results: Out of 100 gastric biopsy cases, 90 were positive for H. pylori bacilli with 52(52 %) male and 38(38%) female. Blood samples from 100 patients for analysis were performed and 68 were positive with 38(38%) male & 30(30%) female. Fresh stool samples were detected on immune chromatography method and were positive in 28(28%) male patients and 20(20%) female patients. The value of stool antigen sensitivity was 52.7% and specificity 90%. The study shows that H. pylori infection is more in male patients than in females.

Conclusion: H. pylori positivity is highly significant and shows H. pylori more in male patients than in females. It requires further study to find out the reason. Serological and stool antigen tests are recommended as best tools for the primary care physician, diagnosis and eradication therapy, those patients who are unwilling for the endoscopy, and mass screening purpose.

Key words: H. Pylori, sex, stool antigen

INTRODUCTION

At least half of the world’s population is infected by Helicobacter pylori, and most of the infected people (>70%) are asymptomatic whereas only <30% are symptomatic. The infection by H. pylori involves the development of gastric cancer and has a significant correlation with the prevalence of antibody to H. pylori. H. pylori cause chronic gastritis, peptic ulcers, and gastric cancers. There is six fold increased risk of gastric cancer in population with H. pylori infection compared with population that have no gastric infection. Furthermore H. pylori is classified as a group I carcinogen by WHO, because of the evidence for its role in the pathogenesis of gut mucosa associated lymphoma and possibly in gastric carcinoma. Duodenal and gastric ulcers and gastric adenocarcinomas and MALT lymphoma (mucosa associated lymphoid tissue) are associated with H. pylori infection. The infection acquired in adulthood is less common and the estimated annual incidence is only 0.3-0.5% with a prevalence of H. pylori detected on 50 patients (40 males and 10 females).

The incidence of H. pylori infection is 73.5% below the age of 40 years and 55.3% above the age of 40 years. It is the commonest bacterial infection throughout the world causing gastritis and gastric malignancies.

Several techniques, both invasive and non-invasive, are now available for diagnosing H. pylori infection. The invasive methods include culture, histological examination and urease testing of biopsy specimens. The non-invasive methods available include the urea breath testing requiring patient ingestion of carbon isotope derivatives of urea and serological detection of serum antibodies to H. pylori. H. pylori elicit a specific serological response in the infected person & detection has a significant correlation with the prevalence of antibody to H. pylori of antibodies in the patient’s serum as a reliable indicator of H. pylori infection with a useful tool for monitoring efficacy of antimicrobial treatment.

This study compares the sensitivity of three commonly used tests i.e., Endoscopic histopathology, HpSA, and Anti H. pylori IgG antibodies, and evaluate their usefulness in our patients in detecting H. pylori and formulate recommendations after consideration the cost effectiveness, time factor, sensitivity and specificity.
METHODOLOGY

Hundred patients i.e., male & female of H. pylori infection were included in this study for different techniques i.e., gastric endoscopic biopsy, ELISA method and rapid Immune chromatographic assay detection of H. pylori antigen from stool sample, which were collected from surgical, medical, and Research Lab. LUMHS, Jamshoro/Hyderabad. Patients of all age groups and both sexes with the clinical suspicion of H. pylori were included in study. Patients having H/O NSAIDs, and gastric biopsies showing autolytic changes were excluded.

RESULTS

Detail of results are given in tables 1, 2 and 3.

Table 1: Results of gastric biopsies related to sex.

<table>
<thead>
<tr>
<th>Gastric biopsies</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>52(52%)</td>
<td>38(38%)</td>
<td>90(90%)</td>
</tr>
<tr>
<td>Negative</td>
<td>04(04%)</td>
<td>06(06%)</td>
<td>10(10%)</td>
</tr>
</tbody>
</table>

Table 2: Serum H. pylori antibodies related to sex.

<table>
<thead>
<tr>
<th>H. pylori stool antigen</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>38(38%)</td>
<td>30(30%)</td>
<td>68(68%)</td>
</tr>
<tr>
<td>Negative</td>
<td>18(18%)</td>
<td>14(14%)</td>
<td>32(32%)</td>
</tr>
</tbody>
</table>

Stool antigen: Fresh stool samples were collected from 100 patients in sterilized bottle H. pylori antigen were detected on immune chromatography method and were found positive in 48(48%) cases, and H. pylori stool antigen positivity was seen in 28(58.3%) male patients and in 20(41.7%) female patients. The values of stool antigen sensitivity was 52.74% and specificity 90%.

Table 3: H. pylori stool antigen test related to sex.

<table>
<thead>
<tr>
<th>H. pylori stool antigen</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>28(28%)</td>
<td>20(20%)</td>
<td>48(48%)</td>
</tr>
<tr>
<td>Negative</td>
<td>28(28%)</td>
<td>24(24%)</td>
<td>52(52%)</td>
</tr>
</tbody>
</table>

DISCUSSION

Over the past 52 years, endoscopy has been extensively used in the diagnosis of the upper gastrointestinal ulcer. Ideally the culture & biopsy is considered as the gold standard method for the diagnosis of the H. pylori infection. Out of 100 cases H. pylori organisms found in 90(90%) cases but 10(10%) cases were negative, and out of 90 positive cases for H. pylori 52(52%) were male and 38(38%) were female. In studies conducted by Tzeng et al., 58(52.2%) were male and 53(47.7%) were female. In study of Qureshi et al., out of 72(90%) positive cases for H. pylori 48 (66.6%) were male and 24 (33.3%) were female. Study in a school based population, the prevalence of H. pylori was 70.3% in girls and 74.0% in boys. All these studies including this study showed H. pylori more in male patients. However Malik in his study showed out of 63 cases, 31 were male and 32 were female.

REFERENCES
