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Research Article

**FREQUENCY OF HELICOBACTER PYLORI INFECTION  
IN PATIENTS OF DYSPEPSIA PRESENTED IN THE  
GASTROENTEROLOGY DEPARTMENT OF  
HOLY FAMILY HOSPITAL RAWALPINDI****\*Dr. Bilal Ahmed Baig, \*Dr. Allah Yar Khan, \*Dr. Muhammad Maaz Ali**  
\*Rawalpindi Medical College, Rawalpindi, Pakistan**Abstract:**

**Objective:** To determine the frequency of *H. pylori* detection in dyspeptic patients and its association with gastro-duodenal pathologies confirmed on histology.

**Study Design:** A Retrospective Study.

**Place and Duration:** In the Gastroenterology Department of Holy Family Hospital, Rawalpindi for one year duration from June 2017 to June 2018.

**Methods:** Upper GI endoscopy was performed in 100 adult cases with sequential dyspepsia. For histology, biopsy was taken from Antral part of stomach. If histology was positive, the infection with *H. pylori* was confirmed.

**Results:** Of the 100 subjects, 43 (43%) were male and 57 (57%) were female. The 26-67 years was the age range and the mean age was  $37 \pm 14.5$  years. 71 patients (71%) were diagnosed with *H. pylori*. Gastritis was the most common finding on endoscopy (83%), severe gastro-duodenal pathology (duodenal ulcer, gastric cancer and gastric ulcer) seen in 11 (11%) patients only.

**Conclusion:** The *H. pylori* prevalence is high in dyspeptic patients. Using biopsy based methods in the patients presented at Medicine OPD, it is necessary to evaluate and treat *H. pylori* infection.

**Key words:** Dyspepsia, *H. pylori*, antral biopsy.

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**INTRODUCTION:**

In 1983, Warren and Marshall discover *Helicobacter pylori* (*H. pylori*) and was a breakthrough in the treatment of dyspepsia. *H. pylori* is a spiral, gram-negative, flagellar bacteria that can produce abundant urease due to many upper gastrointestinal diseases seen as dyspepsia. *H. pylori* is located usually in a narrow position with gastric epithelial cells beneath the mucosal layer in the stomach pits and damages the cells. Chronic gastritis is an important etiological factor in lymphoid tissue lymphoma associated with gastric carcinoma, gastric mucosa and peptic ulcer disease (for MALT, English abbreviation). Peptic ulcer is considered an infectious disease since *H. pylori* treatment invention. For *H. pylori* detection different diagnostic tests have been discovered and can generally grouped into non-invasive and invasive assays. Invasive tests use endoscopic biopsy samples for culture, histology, polymerase chain reaction and rapid urease test. All these tests were found to have specificity and sensitivity of more than ninety percent. For Endoscopy Non-invasive tests are not necessary. These include immunoglobulin M and G, urea breath test (UBT), urine antibody test and testosterone antibody test for stool antigen. In Pakistan, there is usually no noninvasive test except for (IgG) immunoglobulin G serology. The importance of serological tests in a hyperendemic region such as Pakistan is limited by the low discriminatory power between the previous infection and the existing one. The objective of this analysis was to investigate the frequency of *H. pylori* and its

relation with gastro-duodenal pathologies in gastric biopsy histology in dyspeptic patients. The hospital managed as a reference center for a significant part of the Upper Punjab.

**MATERIALS AND METHODS:**

This Retrospective Study was held in the Gastroenterology Department of Holy Family Hospital, Rawalpindi for one year duration from June 2017 to June 2018. Endoscopy was performed in patients after receiving informed consent of consecutive adult patients with symptoms of indigestion. The subjects received proton pump inhibitors, bismuth compounds or antibiotics in the previous 4 weeks, with the exception of *pylori* infection in patients treated previously. Every patient's Endoscopic features were recorded. If the mucosa was pink, soft and bright, the endoscopic view was considered normal. For histology, from gastric antral mucosa two biopsies were taken. When both of these two samples were positive, *H. pylori* infection a diagnosis was confirmed. In 10% formaldehyde 2 antral biopsies were preserved and for histopathology sent to laboratory for processing. For routine screening, eosin paraffin and four micron-thick hematoxylin sections were stained with *H. pylori*. For better performance, Giemsa staining was recommended. The pathologist examined microscopically *H. pylori* slides. The presence of similar organisms such as *Helicobacter* was considered positive and the absence was considered negative

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## SYMPTOMS OF H. PYLORI INFECTION

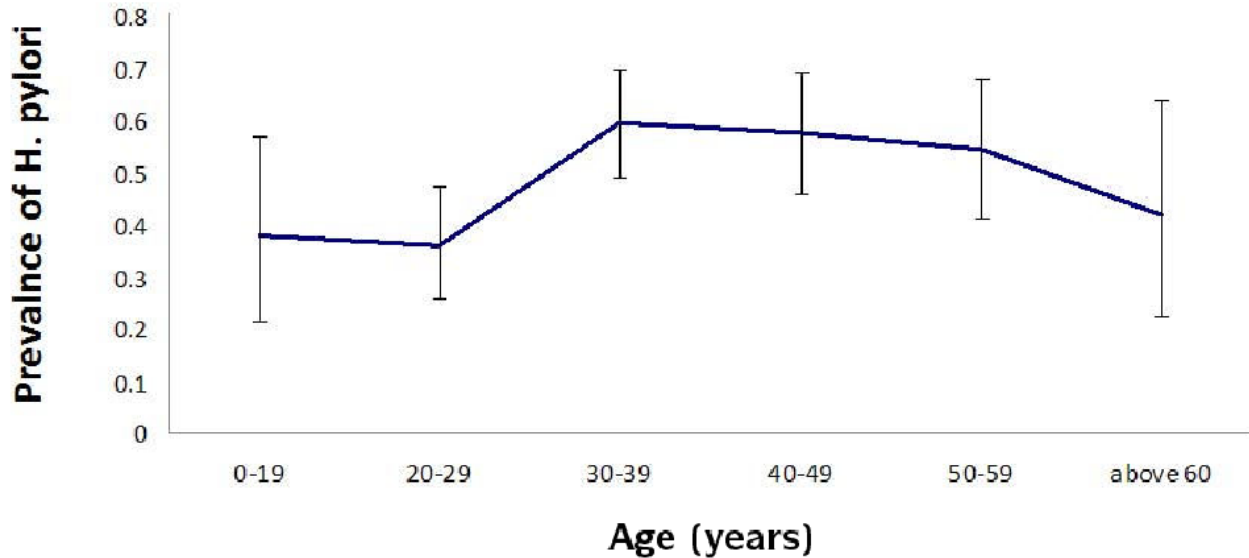
- Epigastric pain with burning sensation.
- Pain get worse with empty stomach
- Poor appetite
- Weight loss
- Dyspepsia
- Vomiting
- Heart burn

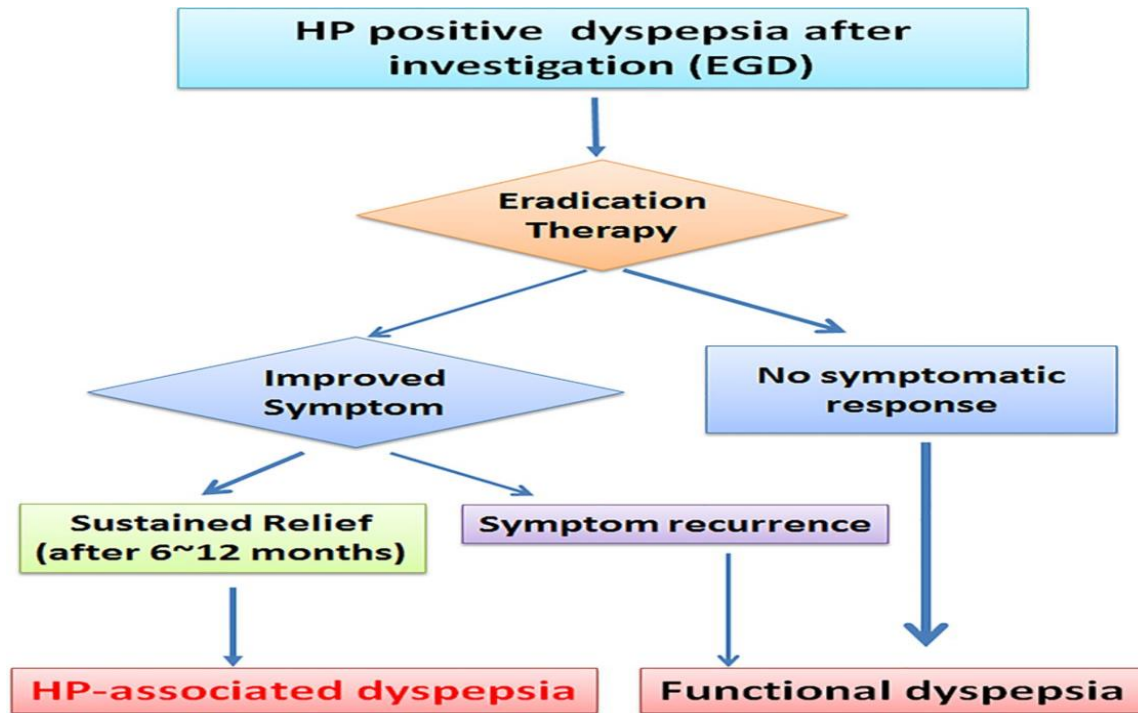
[www.upb.edu.co](http://www.upb.edu.co)

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**RESULTS**

There were 45 (45%) male and 55 (55%) female. 36 ( $\pm$  15.05) years was the mean age. 27 to 68 years was the age range. 71% were positive for H. pylori confirmed on histology. The most common abnormality on endoscopy was gastritis, followed by 12 (12%) duodenogastric duodenitis 9 (9%) and reflux (82%). Three patients (3%) had gastric cancer, 6 (6%) had gastric ulcer (GU), and 21 (21%) had esophagitis. Severe gastroduodenal pathology (GU, DU and gastric cancer) was documented in only 10 (10%) patients. In particular, many of these people with other endoscopic lesions had marked conflicts in endoscopic findings, but also had gastritis. The remaining 14 patients (14%) had normal endoscopic findings, resulting in eighty-six (86%) patients with endoscopic diagnoses for dyspepsia. However, these relationships were significant statistically.





### DISCUSSION:

In this study, in 71% of patients *H. pylori* was detected. This is linked with previous analysis in Nigeria and the results from other regions of West Africa have shown that *pylori* biopsy is based on the high prevalence of consistent methods. Previous analysis performed in different parts of southwestern Nigeria (including Ibadan University College Hospital) were evaluated to determine patients with similar prevalence rates of *H. pylori* organism (HIS) investigated 60%, from 5% to 73% and sometimes up to 94.5%. These are not unexpected in the hyperendemic area as Nigeria and serological tests do not distinguish between past and current infections. The incidence of more IgG antibodies to seropositive in serum lasts up to 3 years or organically destroys. The most common pathology in this analysis was gastritis with a frequency of 83%. This cannot be compared to a 60% frequency obtained in a study in Nigeria.

### CONCLUSION:

This analysis shows that the *H. pylori* prevalence in patients with indigestion diagnosed on basis on biopsies is relatively high. In addition, the most common injury observed on endoscopy in gastritis, dyspepsia patients suggests the high prevalence of *H.*

*pylori* infection.

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