Original Article

Frequency of H. Pylori Infection in Patients Undergoing Upper Gastrointestinal Endoscopy at Tertiary Care Unit

Amir Iqbal Memon, Nasreen Qazi, Rasheed Ahmed Soomro, Nazir Ahmed Pathan

ABSTRACT

OBJECT: To find out the frequency of H.pylori infection in patients undergoing upper GI endoscopy.

MATERIALS AND METHODS: This study was conducted at surgical unit-I Liaquat University Hospital and private hospital located at Hyderabad Sindh from June 2010 to July 2011. After taking written consent those Patients were enrolled who fulfilled the inclusion criteria. Study was approved by ethical committee. Presence of H.pylori infection was confirmed by histopathological examination of samples taken during upper gastrointestinal endoscopy. Presence or absence of gastritis was also observed. GIF 140 Olympus gastro-video-scope was used for the procedure.

RESULTS: 165 patients were enrolled in the study, among them 82 were males and 83 females with mean age 41.04 ±15.9 and 35.9 ±11.5 years respectively, among males 43(52.43%) were positive and 39(47.5%) were negative for H.pylori infection, while in females 38(45.78%) were positive and 45(54.2%) negative for the same. When compared for gender differences there was slightly higher prevalence in males. Antral Gastritis was common association with H.pylori infection in both genders with higher prevalence in males as compared to females. 5 patients (5%) were found to have gastric carcinoma without any H.pylori association

CONCLUSION: Helicobacter pylori infection is quite frequently found in association with gastritis in males as well as females with slightly higher prevalence in male.

KEY WORDS: Helicobacter pylori (H.pylori), Antral gastritis, upper gastrointestinal Endoscopy (OGD).

INTRODUCTION

Helicobacter Pylori is one of the commonest bacterial pathogen. It is a small, curved, highly motile, gram negative bacillus that colonizes the mucus layer of the human stomach only. It is the major cause of peptic ulcer disease and the principal risk factor for the development of gastric cancer[1]. Risk factors for H. Pylori infection are birth or residing in a developing country, low socio-economic status, less education, domestic crowding, poor sanitary living conditions, contaminated water and food, exposure to gastric contents of the infected individual through intubation tubes if not cleaned properly [2,3,4,5] Prevalence of H. Pylori is affected by geographical pattern. More common in developing than developed countries, in different developing countries more than 80% of the population is H. pylori positive.[6]It is more common in adults and elderly people as compared to children and adolescents.[7] The infection is also inversely co-related with the socio economic conditions, living conditions during childhood in particular[8]. Though H. Pylori colonization is not a disease itself but increase the relative risk of developing certain upper gastrointestinal disease especially peptic ulcer and gastric carcinoma. Environmental factors (Smoking, NSAIDs or Alcohol Intake) or host factors (gene polymorphism, immune responses) along with H. Pylori as virulence factor will lead to either low acid production leading to gastric ulcer or gastric cancer. Chronic inflammation, atrophy and intestinal metaplasia respectively with pan gastritis is a pattern of gastritis or it can also lead to increased acid production leading to duodenal ulcer with gastric metaplasia.[9]

Diagnosis of H, Pylori infection can be made by invasive or non-invasive procredures.. Invasive procedures involve upper gastrointestinal endoscopy, (OGD), OGD helps in detecting the H. Pylori by histology, culture or urease tests, each of which have particular merits and demerits, but the merits outweigh the demerits, it holds an important place in the diagnosis as it enables visualization, photography, ultra sonography and biopsies of suspicious case.[10] This whole procedure provide physicians with useful information about inflammatory, atrophic and metaplastic lesions of the stomach in H. Pylori positive and negative patients.[11]

The present study was conducted to find out the frequency of H. pylori infection in patients undergoing upper gastrointestinal endoscopy, to help clinicians in deciding about the future medications along with its

eradication therapy.

MATERIALS AND METHODS

This observational study was conducted at surgical unit-I Liaquat University Hospital and private hospital located at Hyderabad Sindh from June 2010 to July 2011.

Patients of either sex, giving history of dyspepsia were included in the study. Patients with history of previous Peptic Ulcer Disease (PUD), lactating pregnant ladies, and patients with chronic liver disease were excluded from the study. Children below 14 and adults above 80 years were also excluded.

The endoscopy was performed after taking written consent. 10% xylocaine spray was used for oral mucosa anesthesia. GIF 140 Olympus gastro videoscope was used for the procedure. Injection midazolam was used in selected cases for sedation. Specimens from the antral mucosa and from the corpus mucosa were taken with medium-sized forceps. Specimens were embedded in paraffin and the paraffin sections stained using haematoxylin-eosin and Giemsa methods.

Data was processed using the SPSS 11.0 software and analysis was done by descriptive statistics. Graphs were made by using Microsoft Excel software.

RESULTS

165 patients were enrolled in the study, among them 82 were males and 83 females with mean age 41.04 ±15.9 and 35.9 ±11.5 years respectively. Among males 43(52.43%) were positive and 39(47.5%) were negative for H.pylori infection, while in females 38 (45.78%) were positive and 45(54.2%) negative for the same. When compared for gender differences there was slightly higher prevalence of H.pylori infection in males. Antral gastritis was common association in both men and women. 5 patients (5%) were found to have gastric carcinoma without any H.pylori association. (Table I, Fig 1 and 2).

TABLE I: BASE LINE DEMOGRAPHIC CHARACTERISTICS OF PATIENTS (n=165)

Parameter	Males (n=82)	Females (n=83)
Mean age ±SEM	41.04±15.9	35.9±11.5
H. pylori Positive Negative	43(52.43%) 39(47.5%)	38(45.78%) 45(54.2%)
H. Pylori + gastritis H. Pylori –ve + gastritis H. Pylori –ve gastric carcinoma	43(52.4%) 39(42.8%) 4 (4.87%)	38(45.78%) 44(53.01%) 1(1.2%)

DISCUSSION

Patients with upper GI symptoms most commonly present with dyspepsia. These patients should never be monitored only by non-invasive investigation method, it is also justified to use the classical histological evaluation by performing OGD.[12]

OGD is gold standard test for diagnosis of H.pylori infection and other lesions of the upper gastrointestinal tract, Ulcer disease is among the main reasons for performing it.[13] Endoscopy gives useful information for the general practitioner both in the cases where peptic ulcer is found or not. In the case of a normal endoscopic finding, further management depends on the histological finding and on H. pylori status. Since persistent H. pylori positivity is always associated with possible peptic ulcer recurrence. when H. pylori is absent, the gastric mucosa is normal and no ulcer is detected, management of such patients should be aimed at establishment of other possible reasons for their complaints.[13]

In our study when OGD was performed the presence of gastritis was common association with H.pylori infection. Our study demonstrated that gender had a slight influence on H. pylori infection rate and it appeared that males were more likely to be infected with H. pylori than females.[14] The study revealed the role of Helicobacter pylori infection in dyspepsia but apparently without ulcers on endoscopy, this association remains controversial. However, different studies have shown increased Helicobacter pylori prevalence in patients with normal endoscopic mucosal findings. They were only dyspeptic. The results of our study are in accordance and can be compared to local and international data. [14, 16, 17, 18]

The prevalence of H.pylori infection has fallen in the last few decades, especially in our country which is part of Asia similar to the Western world.[19] it may be due to awareness, education and improvement in living standards of urban population.

CONCLUSION

Helicobacter Pylori infection is quite frequently found in association with antral gastritis in males as well as females patients with slightly higher prevalence in males.

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