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Research Article

A STUDY ON CLINICAL FINDINGS AND PREVALENCE OF HELICOBACTER PYLORI IN ESIC PATIENTS WITH GASTRITIS

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ABSTRACT
Objective was to detect the prevalence of *H. Pylori* in patients with gastritis. This study involved 90 patients with gastritis who attended surgical outpatient as well as inpatient department of ESIC Medical college hospital from September 2014 to August 2015. Endoscopy was carried for all patients to diagnose gastritis. Urease and Serum IgG anti H.Pylori antibodies used to detect the presence of *H. Pylori* in these patients. Ninety patients; 60 males (66.67%) and 30 females (36.33%) were infected with gastritis. The results showed that 53.33% of the patients gave positive results on urease test. The results showed that for screening and determining the clinical features of gastritis, at least one method for *H. Pylori* are required to give positive result in order to identify an infected patient with *H. Pylori*.

Keywords: *Helicobacter Pylori, Urease, Gastritis, Heart Burn*

INTRODUCTION
Helicobacter pylori (*H. Pylori*) are a Gram negative facultative anaerobic rods. Researchers believe that *H. Pylori* are responsible for the majority of peptic ulcers (Fauci *et al.,* 1998). *H. Pylori* infection is common in the india. About 20% of people under the age of 40 and half of those over the age 60 have *H. Pylori*. Most infected people, however, do not develop ulcers. The most likely infection depends on the characteristics of the infected person (Kaptan *et al.,* 2000). *H. Pylori* weaken the protective mucous coating of the stomach and duodenum, which allows acid to get through to the sensitive lining beneath. Both the acid and the bacteria irritate the lining and cause a sore, or ulcer (Laurila *et al.,* 2001). *H. Pylori* are able to survive in stomach acid because they secrete enzymes that neutralize the acid. This mechanism allows *H. Pylori* to make its way to the "safe" area-the protective mucous lining (Qasim and O'Morain, 2002).

Enervating habits, the use of stimulants, excesses in eating and pleasurable enjoyments, using irritating substances like salt, pepper, vinegar, spices, hot sauces, alcohol, tobacco, cathartics, etc., lack of emotional poise, overwork or any natural or unnatural expenditure of nerve energy beyond the power of recuperation. Chronic gastritis is the culmination of a number of recurrences of acute gastritis with a continuous abuse of the stomach between crises (Kaptan *et al.,* 2000). Gastritis can be caused by infection, irritation, autoimmune disorders (disorders caused by the body's immune response against its own tissues), or backflow of bile into the stomach (bile reflux). Gastritis can also be caused by a blood disorder called pernicious anemia (Fauci *et al.,* 1998). There are several tests that may be performed for diagnosis. These can include endoscopy of the stomach. The laboratory tests needed may depend on the specific cause of gastritis. A stool test may be use to check for the presence of blood, or a biopsy may be taken of the stomach tissues to determine the cause of discomfort. A breath test may detect *H. Pylori*, or samples from the esophagus or stomach may be taken to detect the organism (Dohil and Hassall, 2000; Gold, 2001).

MATERIALS AND METHODS
Methods
A total of 90 patients who had attended the surgery outpatients as well as inpatient department at ESIC Medical college Hospital with different types of gastric complaints were enrolled in the present study. Patients in various age ranging from 18 to 65 years old (60 males and 30 females) were enrolled. The

period of this analytical study was carried out from September 2014 to August 2015. Blood samples were collected from patients with gastritis after endoscopy (confirmation of patients infected with gastritis). The blood specimens were allowed to clot and the sera separated. These sera were immediately examined by *H. Pylori* ELISA kit for the diagnosis of gastritis caused by *H. Pylori*. Gastric aspirations were taken from patients and examined by rapid urease test. All the patients were asked regarding the age, sex, occupation, residence, socioeconomic status, smoking, family history, alcohol history, the duration of disease and symptoms, the treatment or any antimicrobial therapies have been received during the previous three months, any previous and / or present history of any complains of gastritis and other clinical signs. SPSS programmer ver. 15 and one way T- test were used to analyze data of the present study.

RESULTS AND DISCUSSION

Results

From 90 patients with gastritis, 60 were males (66.67%) and 30 were females (33.33%).

Table 1.1: Patients with Gastritis

Patients with gastritis	No of patients
Male	60(66.67%)
Female	30(33.33%)
Total	90

The patients were screened for dyspeptic symptoms associated with gastritis and the results are illustrated in Table 1.2 which shows that the 44 patients (48.88%) had Heart burn followed by other symptoms such as: dysphagia 14 (15.55%), and abdominal discomfort in relation to meals 14 (15.55%), Abdominal pain 12 (13. 33%), vomiting 6 (06.66%), the difference was significant ($p< 0.05$).

Table 1.2: Dyspeptic Symptoms Associated with Gastritis

Symptoms	No. Of patients	% of patients
Heart burn	44	48.88
Dysphagia	14	15.55
Abdominal pain	12	13.33
Abdominal discomfort in relation to food	14	15.55
Vomiting	6	6.66
Total	90	

Table 1.3 shows 47 patients (52.22%) were treated with antiulcer drugs and antibiotics, while 18 patients (20.00%), and 25patients (27.77%), treated with antiulcer alone and antibiotics alone respectively ($p< 0.01$).

Table 1.3: History of Antiulcer and /or Antibiotic Treatment of Patients with Gastritis

Mode of treatment	No. Of patients	% of patients
Antiulcer drugs	18	20.00
Antibiotics	25	27.77
Both	47	52.22

Table 1.4 demonstrates the diagnostic tests that used to detect *H. Pylori* in gastritis patients, 53.33% of patients gave positive results to Urease test, and 13.33% of patients gave positive results to serum IgG anti- *H. Pylori* antibodies ($p< 0.001$).

Table 1.4: Diagnostic Tests to Detect *H. Pylori* in Gastritis Patients

Test name	Results	No. Of patients	% of patients
Urease test	Positive	48	53.33
	Negative	42	46.67
Serum IgG antibodies H.Pylori antibodies	Positive	12	13.33
	Negative	78	86.67

Discussion

Helicobacter pylori are now considered to be the most prevalent infectious disease known to occur in humans; about 50% of the human population is estimated to be infected (Letley *et al.,* 2003). This bacteria can cause persistent gastritis and is directly linked to the development of peptic ulcer disease as well as gastric adenocarcinoma and mucosa-associated lymphoma of the stomach (Schenk *et al.,* 1999). Individuals living in countries with low socioeconomic conditions had high prevalence rates of *H. Pylori* acquired at an early age (Ally *et al.,* 1999). The current study found that gastritis caused by *H. Pylori* was significantly higher in studied age group. This finding was in agreement with many other studies that showed a similar age incidence of H.pylori (Drumm *et al.,* 2003; Abbas, 2005; Shuker, 2007). WHO found that the majority of infections occurred in young and middle age groups (25–50 years) more than in other age groups and the factors that predispose the higher colonization rates included poor socioeconomic status and less education in addition to genetic factors.

The explanations for the present study are in agreement with approved results of other studies which were mainly due to socioeconomic status and the sample size of the population studied, type of patients, location of the study as well as the mode of transmission whereby spread infection was acquired from person to person or by oral-oral or feco-oral routes.This study found that there was a significant difference between both sexes (males > females) regarding the incidence of gastritis with *H. Pylori*, a result which is in agreement with many other studies (Shuker, 2007; Twaij, 2006; Al-Yas, 2006). Also, this investigation found that the Heart burn and Dysphagiawere most predominant symptoms in percentages of (48.88% and 15.55%) respectively followed by other symptoms. The main chemotherapy given was antiulcer with antibiotics to 52.22% of patients .The results described above are similar to the approved results from other modern studies (Drumm *et al.,* 2003; Abbas, 2005; Shuker, 2007).

Conclusion

In this study, the presence of *H. Pylori* in gastritis patients was determined by aspiration rapid urease test and serum IgG anti-*H. Pylori* antibodies test. 13.33% of patients were positive to serum IgG anti-*H. Pylori* antibodies test, 53.33% of patients were positive in rapid urease test Patients was considered to be infected with *H. Pylori* if they positive in one of these two test (Shuker, 2007). The use of multiple diagnostic methods was recommended to accurately diagnose *H. Pylori* gastritis. These results agree with the results by Twaij, who found the prevalence of *H. Pylori* was (65.7%) in Iraqi patients, in comparison with the results by Al-yas and AL-Dhaher, who found the prevalence of H.pylori (81.5%) and (74.78%) respectively in Iraqi patients (Shuker, 2007; Twaij, 2006; Al-Yas, 2006; Al-Dhaher, 2001). Also, the results were approved with the results of Shuker, who found the prevalence of *H. Pylori* was (61%) in Iraqi patients (Shuker, 2007). The results from many researchers depend on one or two tests only for the diagnosis of *H. Pylori* and any test that would give positive result for *H. Pylori* was regarded positive for final diagnosis. But every diagnostic method has a percentage of false positive or negative result (Al-Yas, 2006; Al-Dhaher, 2001).

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