



A STUDY OF PREVALENCE OF H. PYLORI IN PATIENTS WITH DYSPEPSIA UNDERGOING UPPER G.I ENDOSCOPY AT OUR INSTITUTE

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ABSTRACT

Aim: A Study Of Prevalence Of H. Pylori In Patients With Dyspepsia Undergoing Upper G.i Endoscopy At Our Institute **Study design-** This is a Prospective observational study of patients treated at Tertiary health Care Centre, Pune. **Type of study-** Prospective observational study. **Period of study-** September 2020 to May 2022. **Sample size-** 150 patients with symptoms of dyspepsia. **Conclusion:** On Rapid Urease Test kit, H. pylori was found to be 56.67% prevalent in patients with dyspepsia who underwent upper gastrointestinal endoscopy.

KEYWORDS : Endoscopy, Dyspepsia, H. pylori, Rapid Urease Test.

INTRODUCTION

Dyspepsia is the medical term for upper abdominal pain or discomfort that is persistent or recurrent. The word dyspepsia is derived from the Greek words dys means "poor" and pepsin, which means "digestive."¹

In general, there are two categories of diseases presenting with dyspepsia:

1. Organic
2. Functional

The most typical organic causes of dyspepsia are stomach cancer, gastrointestinal disorders, biliary tract illness, and peptic ulcer disease.² Both organic and functional gastrointestinal problem shows the dyspepsia symptoms.

Upper gastrointestinal (UGI) endoscopy:

Upper gastrointestinal (UGI) endoscopy, the preferred method for assessing various abdominal problems, including dyspepsia. There are several tests that can help the UGI endoscopy to find *H. pylori*.⁶ UGI endoscopy is one of the most popular endoscopic treatments and offers helpful information to patients with gastroduodenal illnesses. In comparison to radiology, it provides a greater diagnostic yield in the investigation of upper gastrointestinal.⁷ It is typically regarded as the diagnostic approach of choice in cases of unexplained dyspepsia, because it enables the identification of structural reasons of dyspepsia. It is essential in order to assess upper abdominal symptoms.⁸ The majority of people who are referred for an endoscopy report experiencing symptoms that are generally categorized as dyspepsia.⁹ The symptoms of dyspepsia, including upper stomach pain, bloating, nausea, are the most frequent less-appropriate indications for upper GI endoscopy.¹⁰ Upper GI endoscopy overuse is still a valid risk. It puts strain on endoscopy centre resources and is connected to patient burden, increased healthcare spending.¹¹

AIM

To study prevalence of H. Pylori in patients with dyspepsia undergoing upper G.I endoscopy

METHODS

This is a prospective study of patients with dyspepsia at tertiary health care hospital, Pune, Maharashtra. This study was conducted from September 2020 to May 2022 with complete knowledge and consent.

Inclusion criteria-

All patients having any one or more of the following symptoms; postprandial fullness (termed postprandial distress syndrome); early satiation (meaning inability to finish a normal sized meal or postprandial fullness) and epigastric pain or burning epigastric pain (termed epigastric pain syndrome)

Exclusion criteria-

1. Pregnant and Lactating women.
2. Patients on NSAIDs for more than one month duration.
3. Patients with oesophageal/ gastric growths / esophageal varices on endoscopy.
4. Unwilling or unfit patients for gastroscopy.
5. Patients having hematemesis and melena.
6. Patients with bleeding disorder.

Study protocol-

1. Patients were subjected to upper gastro-intestinal endoscopy.
2. Patients underwent specific investigations.

Rapid Urease Test:

The rapid urease test involves incubating a gastric biopsy in a urea broth that contains the pH indicator phenol red. If gastric helicobacters are present, helicobacter urease breaks down the urea; with the release of ammonia, a rise in pH and a colour change occur. The change in colour can occur within 1 to 3 hours, although the broth is generally incubated at room temperature for 24 hours. The test is very sensitive, but false-negative results can occur if the distribution within the stomach is patchy or if organism loads are low. False-positive results have rarely been reported when other urease-producing bacteria, such as *Proteus* are present in the stomach.³

RESULTS

The current study was conducted in Hospital from September 2020 to May 2022, to study the incidence of *Helicobacter pylori* in patients with Dyspepsia undergoing Oesophago-Gastro-Duodenoscopy. A total of 150 consecutive cases were taken up for study.

Table: 1- Gender distribution of patients

Gender	No. of cases	Percentage
Female	68	45.33%
Male	82	54.67%
Total	150	100.00%

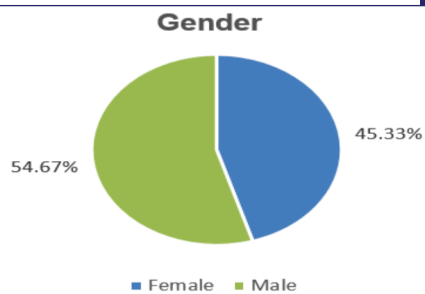


Figure 1- Gender distribution of patients.

Table 1 summarizes the incidence of *H. pylori* patients (found on a fast urease test) by sex. It was shown that males were the majority of *H. pylori* infection cases, accounting for 82 (54.67%), while females participated for 68 (45.33%). The statistical significance of this connection was not established.

Table 2: Rapid Urease Test in study group

Rapid Urease Test	No. of cases	Percentage
Negative	65	43.33%
Positive	85	56.67%
Total	150	100.00%

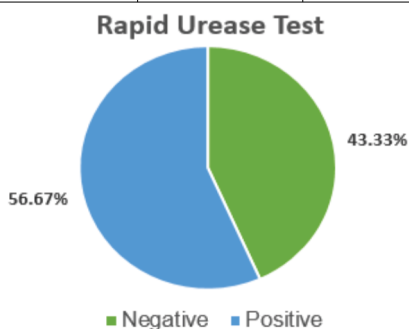


Figure 2- Rapid Urease Test in study group.

Rapid urease test (RUT) results indicate that 85 patients (56.67%) responded positively to the test, while 65 patients (43.33%) had negative results, making it an indirect test for the identification of *H. pylori*. (Table-2)

Table 3- Rapid urease test with gender distribution

Gender	Rapid Urease Test		Total	P value
	Negative	Positive		
Female	29 (44.61%)	39 (45.88%)	68 (45.33%)	0.87
Male	36 (55.38%)	46 (54.12%)	82 (54.67%)	
Total	65 (100%)	85 (100%)	150 (100%)	

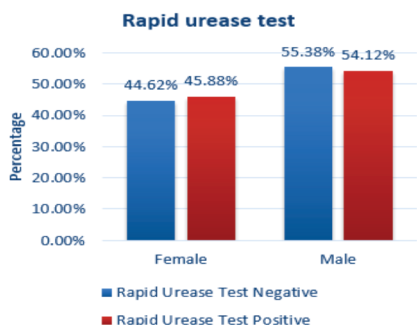


Figure 3. Rapid urease test with gender distribution

According to the gender correlation with rapid urease test shows that positive results were seen in male 46 (54.12%) as compare to female 39 (45.88%) of cases (Table-3)

Table 4 - Age distribution of rapid urease test.

Age (in years)	Rapid Urease Test		Total
	Negative	Positive	
18-30	11 (16.92%)	16 (18.8%)	27
31-45	16 (26.15%)	23 (28.24%)	39
46-60	16 (24.62%)	19 (22.35%)	35
61-75	11 (16.92%)	20 (23.53%)	31
76-90	10 (15.38%)	6 (7.06%)	16

According to the age group correlation of the rapid urease test, there were 23 (28.24%) instances with positive results between the ages of 31 and 45, 20 (23.53%) between the ages of 61 and 75, and 19 (22.35%) between the ages of 46 and 60. (Table-4)

DISCUSSION

Helicobacter pylori is a curved rod-shaped bacterium and has been consistently associated with patients suffering from dyspepsia. Due to this high association, it is now believed that *Helicobacter pylori* plays an important role in the etiopathogenesis of peptic ulcer disease. This prospective study was based on the incidence of *Helicobacter pylori*, its association with dyspepsia.⁵ It was designed to explore the Oesophagogastrosocopy findings in cases of dyspepsia.

Age distribution of *H. pylori* infection did not show any trend towards increase or decrease in infection with the advancing age. Though maximum percent of *H. pylori* positivity – 28% (23/39) was seen in the age group of 31-45 years, this can be attributed to much smaller number of individuals studied in this group, compared to other age groups.⁴ There was no statistically significant difference in prevalence of *H. pylori* in the age group of 46-60 years and 31-45 years.

In the present study, we got a significant difference in *H. pylori* prevalence according to gender.

CONCLUSION

Dyspepsia is one of the most common disorders seen in general practice. It seems to be a heterogeneous disorder in which different pathophysiologic disturbances are associated with different symptom profiles. The available options for the treatment of dyspepsia are of limited efficacy, which probably reflects our incomplete understanding of the nature of this disorder. Therefore, patients' complaints and findings should be meticulously evaluated.

The diagnosis is made by Rapid urease test. And also, there was a statistically significant association was found between rapid urease test and endoscopy findings. Our study shows that Rapid urease test which is a rapid, cheap and simple test that is used frequently in clinical practice can be used in diagnosis of *H. Pylori* infection.

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