

**Research Article****Demographic and endoscopic characteristics of patients with H-Pylori positive****Shayan Fakher<sup>1</sup>, Bela Zahid<sup>1</sup>  
and Aisha Khan<sup>2</sup>**<sup>1</sup>Lahore Medical and Dental College, Lahore.<sup>2</sup>Fatima Jinnah Medical University, Lahore

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**ABSTRACT**

**Introduction:** The association between infectious agents and gastritis has been known for centuries. However, this relation was not strongly implicated until the discovery of *Helicobacter pylori* (*H. pylori*) in the early 1980s. **Objectives:** The main objective of the study is to analyse the demographic and endoscopic characteristics of patients with H-Pylori positive. **Material and methods:** This cross sectional study was conducted in Lahore Medical and Dental College, Lahore during January 2020 to June 2020. The data was collected through non-probability sampling technique. The data was collected from 100 patients of both genders. Patients who received *aRa-H. Pylori* therapy in the preceding months were excluded. **Results:** The data was collected from 100 patients. Among the 100 patients, 67 were positive for HP, 33 had a history of NSAIDs consumption. The demographic, clinical and endoscopic data of patients with DU are collected. About 22% of those patients who were both NSAIDs users and HP positive smoked which was significantly more than H.P patients ( $p < 0.04$ ). Frequency of gastrointestinal bleeding (GIB) did not show a significant difference between these two groups. **Conclusion:** It is concluded that Gastric ulcers may now be more common than duodenal ulcers. Gastric ulcers associated with *H. pylori* infection and/or NSAID use occurred mostly in older people, while non-*H. pylori*, non-NSAID gastric ulcers were more common in younger patients.

**INTRODUCTION**

The association between infectious agents and gastritis has been known for centuries. However, this relation was not strongly implicated until the discovery of *Helicobacter pylori* (*H. pylori*) in the early 1980s. Since then, and in addition to gastritis, strong evidences have been accumulated regarding the role of *H. pylori* in multiple gastric disorders including peptic ulcer disease, gastric cancer, and lymphoma<sup>1</sup>. *H. pylori* is spiral-shape slow-growing gram-

negative bacteria characterized by urease, catalase, and oxidase positivity<sup>2</sup>.

Urease activity is crucial for bacterial survival, as well as constituting the basis of *H. pylori* diagnostic testing<sup>3</sup>. In developed countries, the *H. pylori* infection rate is low in childhood; however, it increases with age reaching 10 percent in adulthood and raising up to 50 percent in individuals older than 60 years<sup>4</sup>. Low socioeconomic status, overcrowding, smoking, family member with *H. pylori*, and

unfiltered drinking water were all shown to be directly associated with increased prevalence rates<sup>5</sup>.

It is generally accepted that *Helicobacter pylori* (*H. pylori*) is, in the absence of other known causes such as NSAIDs, the cause of duodenal ulcer. However, doubt has been cast on this conclusion in several review articles<sup>6</sup>. The report that patients with a short history of duodenal ulcer (endoscopic diagnosis made in a first episode and lack of endoscopic stigmata of chronicity) often have no gastric infection with *H. pylori*, unlike those with a longer history, is also difficult to understand if the organism is the cause, and has stimulated us to report our own experience<sup>7</sup>. The main causes of peptic ulcer disease (PUD) are helicobacterpylori(HP) infectionandtheuseofNon-SteroidalAntiInflammatoryDrugs(NSAIDs),but the factors that make patients prone to ulcer have not been completely recognized yet. HP infection as an important cause of PUD is approximately always associated with active chronic gastritis, but only 10- 15% of infected patients have obvious peptic ulcer and the maincauseofthisdifferenceisunrecognized<sup>8</sup>. In recent years many studies suggested a significant proportion of PUD was not related to these two risk factors there are variations in the reported rate of non H pylori non NSAID related ulcer. Differences in demographic and endoscopic characteristics of the ulcers including ulcer location, its size and associated findings such as simultaneous bleeding have not been assessed completely in these patients<sup>9</sup>.

## OBJECTIVES

The main objective of the study is to analyse the demographic and endoscopic characteristics of patients with H-Pylori positive.

**Table 01.** Demographic, clinical and endoscopic data of patients with GU in each group.

Variables	Group A (HP positive)	Group B (NSAIDs users)
Age (years)	57.7±16.18	53.23±15.94
Male gender (%)	60.3	47

## MATERIAL AND METHODS

This cross sectional study was conducted in Lahore Medical and Dental College, Lahore during January 2020 to June 2020. The data was collected through non-probability sampling technique. The data was collected from 100 patients of both genders. Patients who received aRa-H. Pylori therapy in the preceding months were excluded. Use of NSAIDs over the preceding three months was recorded, based on an interview. Patients who had used aspirin or non-aspirin NSAIDs for at least three days at any dosage during this period were considered to be NSAID users. During the endoscopic examination, eight biopsies were obtained from each patient using a standard mapping protocol. Serum samples were also prepared from each of the patients and a validated enzyme-linked immunosorbent assay (ELISA) test was used to detect specific anti-H. pylori' IgG anti- bodies. Rapid urease test, culture and histological examination for H. pylori infection; anti-H. pylori IgG antibodies in serum; demographic data, intake of non-steroidal anti-inflammatory drugs (NSAIDs) in the preceding 3 months, and size, number and location of ulcers. The data was collected and analyzed using SPSS version 23. All the values were expressed in mean and standard deviation.

## RESULTS

The data was collected from 100 patients. Among the 100 patients, 67 were positive for HP, 33 had a history of NSAIDs consumption. The demographic, clinical and endoscopic data of patients with DU are collected. About 22% of those patients who were both NSAIDs users and HP positive smoked which was significantly more than H.P patients ( $p < 0.04$ ). Frequency of gastrointestinal bleeding (GIB) did not show a significant difference between these two groups.

Smoking (%)	6.4	13.0
GIB (%)	17	16
Number of ulcers (%)		
I	76.7	80.4
II	9.5	6.5
III	13.8	13
Place of ulcer (%)		
Proximal	11.2	8.7
Body	28.4	23.9
Antrum	54.3	56.5
multiple	6.0	10.9

**Table 02:** Demographic, clinical and endoscopic features of patients in each group

Variables	HP positive	NSAID users (n=80)
Age (year)	45.11±16.66	46.39±17.12
Male gender (%)	59.9	55.6
Smoking (%)	12.3	10.0
Number of ulcers I	79.4	77.6
II	9.2	15.8
III	11.4	6.6
Place of Ulcer		
Anterior	45.7	48.7
Posterior	7.5	10.3
Upper	16.2	15.4
Lower	16.8	17.9
Different	13.9	7.7

**DISCUSSION**

*H. pylorus* is a gram-negative bacillus that is found within the gastric epithelial cells. This bacterium is responsible for 90% of duodenal ulcers and 70% to 90% of gastric ulcers. *H. pylori* infection is more prevalent among those with lower socioeconomic status and is commonly acquired during childhood<sup>9</sup>. The organism has a wide spectrum of virulence factors allowing it to adhere to and inflame the gastric mucosa. This results in hypochlorhydria or achlorhydria, leading to gastric ulceration<sup>10</sup>. Epidemiological studies worldwide showed *H. pylori* infection to be acquired earlier in life in developing countries in opposite to developed countries where infection peaks after the age of 60. The median age of patients with GERD enrolled in our study differed among *H. pylori*-infected and no infected individuals. *H. pylori*-infected patients were much younger than no infected persons indicating an earlier acquisition

of infection<sup>11</sup>. Our findings suggest closer pictures to developing world. In terms of ethnicity, in contrast to the findings of Everhart et al. that Blacks and Hispanics were found to have a higher prevalence of *H. pylori* infection, we found no difference in both groups analyzed. The authors concluded this ethnic variation to be probably explained by differences in socioeconomic status<sup>12</sup>. Relationship between smoking status and *H. pylori* infection has given contrasting findings in the literature. Ogihara and collaborators found that current smokers had a 0.82- (95%CI 0.74-0.91) fold greater risk of *H. pylori* infection than those who had never smoked, with current cigarette consumption exhibiting a dose-dependently negative association with *H. pylori*<sup>8</sup>. This association was strong in younger subjects. Authors postulated that smoking-induced increased gastric acidity could play a major role in leading to *H. pylori* infection.

Furthermore, polymorphisms could explain the relationship between smoking status and *H. pylori*. On the other hand, Zhang and coauthors failed to find a statistically significant relationship between smoking status and *H. pylori* infection<sup>13</sup>.

## CONCLUSION

It is concluded that Gastric ulcers may now be more common than duodenal ulcers. Gastric ulcers associated with *H. pylori* infection and/or NSAID use occurred mostly in older people, while non-*H. pylori*, non-NSAID gastric ulcers were more common in younger patients. In the duodenum, single ulcers were associated with *H. pylori* infection, and multiple ulcers were more frequent in the non-*H. pylori*, non-NSAID group.

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