

## HELICOBACTER PYLORI INFECTION IN PATIENTS WITH DYSPEPTIC SYMPTOMS HAVING NORMAL ENDOSCOPY

Muhammad Farooq Malik, Tassawar Hussain\*, Muhammad Naeem Khan\*\*,  
Shakeel Ahmed Mirza\*\*, Majida Farooq

CMH Skardu, \*AM College Rawalpindi, \*\* Military Hospital Rawalpindi

### ABSTRACT

**Objective:** To find out the frequency of Helicobacter pylori infection in the local population presenting with dyspeptic symptoms but having normal upper gastrointestinal endoscopic findings

**Study Design:** This descriptive study was carried out in gastroenterology department of Military Hospital Rawalpindi.

**Place and Duration of Study:** The study was conducted in the department of gastro intestinal of Military Hospital Rawalpindi from November 2004 to September 2005.

**Patients and Methods:** Hundred cases of dyspepsia having normal upper gastrointestinal endoscopy were taken as study population. Although the gold standard for presence or absence of Helicobacter pylori infection is culture but in this study the diagnostic method used was histopathology of gastric antrum.

**Results:** The male and female ratio was 2:1. Majority of the patients were either 40 years of age or less, mean age being 40.52(sd±13.22). The chief symptoms were pain epigastrium (46%) and upper abdominal discomfort (27%). Helicobacter pylori gastritis was found in 51% of cases.

**Conclusion:** We conclude that Helicobacter pylori infection is quite common in dyspeptic patients apparently having normal endoscopic gastric mucosal findings. Eradication therapy should be instituted in positive cases to avoid its long-term complications.

**Key words:** Dyspepsia, Helicobacter pylori and endoscopy.

### INTRODUCTION

Helicobacter pylori (HP) was cultured for the first time 20 years ago, revolutionising the management of upper gastroduodenal diseases [1]. Dyspepsia is a common symptom experienced by around 25 to 40 percent of the general population each year, but most of the affected people do not seek medical advice. It includes a number of upper abdominal complaints like pain and discomfort, bloating, fullness, early satiety, nausea, anorexia, heartburn, regurgitation, and belching [2-4]. Dyspepsia is responsible for substantial health care costs and considerable time lost from work [5]. Whether Helicobacter pylori infection has any role in causation of dyspepsia without apparent ulcers, remains controversial. However, different studies show an increased prevalence of Helicobacter pylori in dyspeptic patients having even normal endoscopic mucosal findings [6-10]. Infection with this

organism occurs worldwide but the prevalence varies greatly among countries and even in the population groups within the same country [11]. Strong correlation of the prevalence of this infection has been found with socioeconomic conditions and advancing age [12]. Helicobacter pylori can be detected by non-invasive methods or by endoscopic biopsy of the gastric mucosa depending upon clinical settings. Non-invasive methods include the urea breath test, serologic tests, and stool antigen assays [13]. Treatment of this infection aiming at eradication in patients of non ulcer dyspepsia should be undertaken only when the pathogen has been identified [14]. The aim of this hospital based study was to find the frequency of this infection in the local population; hopefully it will provide some help in future management of dyspeptic patients especially for eradication of Helicobacter pylori.

### PATIENTS AND METHODS

This descriptive, non-interventional study was carried out in gastroenterology department of Military Hospital Rawalpindi. A total of 100

**Correspondence:** Maj Farooq Malik, Medeical Specialist, Combined Military Hospital Skardu  
Email: dr\_mfmalik@yahoo.com

Received: 07 Jan 2008; Accepted: 04 June 2008

cases of dyspepsia presenting between Nov 2004 to Sep 2005 included in the study using non-probability convenient sampling. We included all adults equal or more than 18 years (both males and females) having normal upper gastrointestinal endoscopy, both outdoor and indoor cases. Diagnosed cases of peptic ulcer disease; patients who had used Helicobacter pylori eradication therapy or were on long term NSAID therapy as well as HBsAg / Anti-HCV positive cases were excluded from study.. Dyspeptic symptoms included a number of upper abdominal complaints like pain and discomfort, bloating, fullness, early satiety, nausea, anorexia, heartburn, regurgitation and belching. The collected data was entered in a proforma. Necessary clinical examination was performed. Upper GI endoscopy was carried out on all patients. Two to three biopsies were taken from gastric antrum of only those patients having normal endoscopy and samples were dispatched to AFIP for histopathology. Although the gold standard for presence or absence of Helicobacter pylori infection is culture but in this study the diagnostic method used was finding of H-pylori on histopathology of gastric antrum. The findings of histopathology were also entered in the proforma. Patients were disposed off as per clinical condition. There was no further follow up. The data was entered and analysed using SPSS version 10.0.

## RESULTS

A total of 100 cases of dyspepsia were included in study. Majority of the patients were either soldiers serving in armed forces or their families while few of the patients were civilian. Out of hundred patients 67 (67%) were males while 33 (33%) were females (ratio 2:1). The age range of the patients was in 20-75 years range while the mean age was 40.52 (SD  $\pm$ 13.22). The main dyspeptic symptoms in the study population were pain epigastrium (46%) and upper abdominal discomfort (27%) (Table). The antral-biopsy histopathology of 51% patients was positive for Helicobacter pylori infection. Fifty four percent males (n=67) while 41% female (n= 33) had Helicobacter pylori gastritis on histology.

**Table: Percentage of different symptoms in study population(n=100)**

Dyspeptic symptoms	No. of Patients (%)
Pain epigastrium	46 (46%)
Upper abdominal discomfort	27 (27%)
Nausea	3 (3%)
Belching	3 (3%)
Heartburn	4 (4%)
Flatulence/ fullness	7 (7%)
Early satiety	10 (10%)

## DISCUSSION

Dyspepsia is a common symptom experienced by 25 to 40 percent of the general population each year. The role of Helicobacter pylori infection in dyspepsia without apparent ulcers on endoscopy, remains controversial. However, different studies show increased Helicobacter pylori prevalence in dyspeptic patients having normal endoscopic mucosal findings. The results of this study also depict the strong association of Helicobacter pylori infection and dyspepsia even with normal endoscopy, well comparable to local and international data [6-10]. Dyspepsia includes a number of upper abdominal complaints like pain and discomfort, bloating, fullness, early satiety, nausea, anorexia, heartburn, regurgitation, and belching (2,3,4) but is mainly defined as pain or discomfort centred in upper abdomen [15-18]. Dyspepsia especially NUD is a major concern to the physicians now a days because of many reasons:

- It is a chronic annoying disorder affecting commonly the general population.
- Because of repeated sick report by the patients having dyspepsia, a lot of money is spent on diagnostic evaluation and therapeutic management of this condition.
- Absence of persons / soldiers from work or duty because of disturbing symptoms.
- Strong association of Helicobacter pylori with dyspepsia, as this organism is known to cause serious complications like peptic ulcer disease, gastric carcinoma and MALT lymphoma.

Treatment of nonulcer dyspepsia especially in the form of HP (Helicobacter pylori) eradication therapy, as the response to therapy and the cure rate remains controversial. So

while talking of dyspepsia and Helicobacter pylori many major issues arise in one's mind:

Majority of the patients of dyspepsia having normal endoscopy, were having Helicobacter pylori infection on histopathology, a cost effective approach would be to start eradication therapy without testing for HP. However if facilities are available one can go for noninvasive testing for HP first before starting treatment especially in younger patients. The urea breath test is indicated for the initial diagnosis of the infection and for follow-up of eradication therapy at an interval of four weeks to avoid false negative results [19]. HP serologic testing although have sensitivity and specificity similar to those of the urea breath test, inconsistent results have been reported. PCR for HP DNA is a sensitive method for the diagnosis of HP infection and its use as a diagnostic tool along with histology increases the detection rate of HP infection. Stool antigen tests for HP provide an alternative to the urea breath test, with a sensitivity of 89 to 98 percent and a specificity of over 90 percent [20]. Stool tests are suitable for follow-up of infection, provided that an eight-week interval is allowed after therapy. Endoscopy should be done in patients with alarm symptoms like weight loss, haemetemesis and malaena; in those having persistent symptoms in spite of treatment; where symptoms recur after completion of therapy and in elderly patients presenting with new onset dyspepsia.

## CONCLUSION

We conclude that Helicobacter pylori infection is quite common even in those patients of dyspepsia who are having normal upper gastrointestinal endoscopic examination.

## RECOMMENDATIONS

In view of above, following recommendations may be drawn from this study:

- Eradication therapy should be instituted in dyspepsia if test for HP is positive.

- Those who have negative HP test should be given empirical trial of H2 blockers/ PPIs or prokinetic agents for 4-8 weeks.
- If the symptoms still persist other treatment options like behavioral therapy, psychotherapy or antidepressant therapy should be considered though their value is not established.

## REFERENCES

1. Suerbaum S, Michetti P. Helicobacter pylori infection. *N Engl J Med* 2002;347:1175-86
2. Jiwan AAR, Qureshi R. Dyspepsia: family physician's view. *Pak J Med Sci* 2001;17:172-6
3. Ahmed R. Management of dyspepsia. *Pak J Med Sci* 2004;20:55-60
4. Dickerson LM, King DE. Evaluation and management of nonulcer dyspepsia. *Am Fam Physician* 2004;70:10
5. Kurata JH, Nogava AN, Everhart JE. A prospective study of dyspepsia in primary care. *Dig Dis Sci* 2002;47:797
6. Siddiq M, Haseeb-ur-Rehman, Mahmood A. Evidence of helicobacter pylori infection in dental plaque and gastric mucosa. *J Coll Physician Surg Pakistan* 2004; 14: 205-7
7. Marzio L, Cappello G, Ballone E. Evaluation of dyspeptic symptoms in patients with and without helicobacter pylori infection and normal upper gastrointestinal endoscopy. *Dig Liver Dis* 2003;35:138-42.
8. Ziauddin. Endoscopic findings in dyspepsia, a prospective study of 200 cases. *J Postgrad Med Inst* 2003;17:235-39
9. Dooley CP, Cohen H, Fitzgibbons PL, Bauer M, Appleman MD, Perez-Perez GI et al. Prevalence of helicobacter pylori infection and histologic gastritis in asymptomatic persons. *N Engl J Med*. 1989;321:1562-6.
10. de Korwin JD. Gastritis, dyspepsia and helicobacter pylori. *Rev Prat* 2000;50:1431-6.
11. Feldman RA. Epidemiologic observations and open questions about disease and infection caused by helicobacter pylori. In: Achtman M, Suerbaum S, editors. *Helicobacter pylori: molecular and cellular biology*. Wymondham, Horizon Scientific Press, 2001:29-51
12. Sandikci MU, Doran F, Koksall F, Sandikci S, Uluhan R, Varinli S et al. Helicobacter pylori prevalence in a routine upper gastrointestinal endoscopy population. *Br J Clin Pract* 1993;47:187-9.
13. Howden CW, Hunt RH. Guidelines for the management of helicobacter pylori infection. *Am J Gastroenterol* 1998;93:2330-38.
14. Dickerson LM, King DE. Evaluation and management of nonulcer dyspepsia. *Am Fam Physician* 2004;70:107-14.
15. Talley NJ, Silverstein MD, Agréus L, Nyrén O, Sonnenberg A, Holtmann G. AGA technical review: evaluation of dyspepsia. *Gastroenterology* 1998;114:582-95.
16. Hansen JM, Bytzer P, Schaffalitzky de Muckadell OB. Management of dyspeptic patients in primary care: value of the unaided clinical diagnosis and of dyspepsia subgrouping. *Scand J Gastroenterol* 1998;33:799-805.
17. Fennerty MB. Is nonulcer dyspepsia related to helicobacter pylori infection? *Semin Gastrointest Dis* 2001;12:180-5
18. Agréus L, Talley NJ. Dyspepsia: current understanding and management. *Annu Rev Med* 1998;49:475-93
19. Drumm B, Koletzko S, Oderda G. Helicobacter pylori infection in children: a consensus statement. *J Pediatr Gastroenterol Nutr* 2000;30:207-213.
20. Graham DY, Qureshi WA. Markers of infection. In: Mobley HLT, Mendz GL, Hazell SL, editors. *Helicobacter pylori: physiology and genetics*. Washington, D.C: ASM Press, 2001:499-510.