

H pylori infection in patients with Behcet's disease

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Received: 2006-10-15 Accepted: 2006-11-23

Abstract

AIM: To evaluate endoscopic findings and the prevalence of *H pylori* in patients with Behcet's disease (BD) who have upper gastrointestinal symptoms.

METHODS: The patients with BD diagnosed according to the International Study Group and followed up in the Department of Dermatology and other related departments and who had any upper gastrointestinal complaints, were included in this study. Forty-five patients with BD and 40 patients in the control group were evaluated by upper gastrointestinal endoscopy and two biopsied specimens were taken during endoscopy for *H pylori*. A two-week triple therapy for *H pylori* eradication was administered to *H pylori* positive patients. Two months after the treatment, the patients were evaluated by urea-breath test for eradication control.

RESULTS: Patients with BD had a mean age of 36.2 ± 11.4 years (18-67 years). The mean follow-up time was 35 ± 14 mo (16-84 mo). Aphthous or deep ulcer in esophagus, stomach and duodenum had never been confirmed by endoscopic examination. Most gastric lesions were gastric erosion (40%) and the most duodenal lesions were duodenitis (17.5%) in two groups. *H pylori* was positive in 33 patients (73.3%) with BD. The two-week triple eradication therapy was successful in 75% of the patients. There was no difference between the groups in respect to prevalence of *H pylori* (73.3% vs 75%, $P > 0.05$), and eradication rate (75% vs 70%, $P > 0.05$).

CONCLUSION: Endoscopic findings, eradication rate and prevalence of *H pylori* were similar in patients with

BD and control group.

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Key words: *H pylori*; Behcet's disease; Vasculitis; endoscopic findings; aphthous ulcer

Ersoy O, Ersoy R, Yayar O, Demirci H, Tatlican S. *H pylori* infection in patients with Behcet's disease. *World J Gastroenterol* 2007; 13(21): 2983-2985

<http://www.wjgnet.com/1007-9327/13/2983.asp>

INTRODUCTION

Behcet's disease (BD), which was first described by Hulusi Behcet in 1937^[1], is a multisystemic, chronic, relapsing vasculitis of unknown origin that affects nearly all organs and systems of patients. Involvement of the gastrointestinal system is called Entero-Behcet's disease. The frequency of gastrointestinal involvement varies among countries, with a lower frequency in Turkey (2.8%-5%), India (5.2%), and Israel (0%); a moderate frequency in France (14%), England (14%), Kuwait, and the United States (21%); and the highest frequency in Scotland (50%) and Japan (50%-60%)^[2]. The most frequent extra-oral sites of gastrointestinal involvement are the ileocecal region and the colon. Compared to the other parts of the gastrointestinal tract, the gastric mucosa appears to be the least frequently involved segment of the gastrointestinal tract. Endoscopic findings are aphthous ulcers, esophagitis, fistulae and stricture in esophagus, aphthous ulcers and erosions in stomach, aphthous ulcers, erosions and bulbitis in duodenum. The most frequent gastric lesions of BD are aphthous ulcers. The most common symptoms are abdominal pain that can be colicky, nausea, vomiting, diarrhea with or without blood in the stool, and constipation. The most common hepatic complication of BD is Budd-Chiari syndrome^[3]. In the literature a few clinical trials exist in the investigation of upper gastrointestinal tract involvement.

MATERIALS AND METHODS

Patients and control group

With the approval by the ethics committee of the Ankara Diskapi Education and Research Hospital, Turkey, a prospective study was conducted in the Department of Internal Medicine and Department of Dermatology. The patients with BD who were followed up in the

Department of Dermatology were sent to the Department of Internal Medicine to have their gastrointestinal symptoms evaluated. They were diagnosed according to the diagnostic criteria by the International Study Group for BD^[1]. **Forty-five patients with BD aged over 18 years with gastrointestinal complaints were included in this study and were evaluated by endoscopic examination.**

Forty patients aged over 18 years with gastrointestinal complaints were included as control group. Informed consent was obtained from all subjects enrolled in the study.

Gastrointestinal complaints

Gastrointestinal complaints were noted before endoscopy and required signed informed consent. Gastrointestinal symptoms include stomach pain, upper abdominal bloating, upper abdominal dull ache, stomach pain before meals, stomach pain when anxious, vomiting, nausea, belching, acid regurgitation, heartburn, feeling of acidity in stomach and loss of appetite. Additional alarm symptoms such as gastrointestinal bleeding (rectal bleeding or melena), dramatic weight loss (dramatic weight loss was defined as weight loss of over 10% of body weight), anemia, severe dysphagia and abdominal mass, family histories of gastric cancer and previous histories of peptic ulcer were noted.

Exclusion criteria

Exclusion criteria include past histories of upper gastrointestinal surgery, pregnancy, severe concomitant illness, and use of *H pylori* eradication therapy (amoxicillin, clarithromycin, metronidazole and tetracycline). Additional proton pump inhibitors, bismuth, antibiotic, aspirin or other nonsteroid anti-inflammatory drugs were stopped for endoscopic examination in the preceding two weeks.

Endoscopic procedure

All endoscopic procedures for the upper gastrointestinal system were performed under appropriate sedation (lidocaine 10 mg/puff for pharyngeal anesthesia and intravenous midazolam 2.5-7.5 mg for premedication) using the same videoendoscope (Olympus GIF Q240). Endoscopic examination was performed by the same gastroenterologist. During endoscopy, two biopsies were taken from the antrum for rapid urease test (RUT) and histological examination. Patients were diagnosed having Hp infection if either of the two tests were positive. If other lesions were found during endoscopic examination, biopsy will be performed. Histopathologic examination was done by the same pathologist.

Therapeutic protocol for *H pylori* eradication

A two-week eradication therapy with amoxicillin 1 g, clarithromycin 500 mg and lansoprazole 30 mg was administered twice daily to the patients who were *H pylori* positive by RUT or histopathologic examination. Two months after the eradication therapy, all were evaluated by the urea breath test (UBT) for eradication control.

Statistical analysis

Statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS, Inc., Chicago, IL) (10.0 software package program). Data were analyzed by

Table 1 Characteristics of patients with Behcet's disease

Age (yr)	36.2 ± 11.4 (18-67)
Female/male ratio	21/24
Mean duration of the disease (mo)	35 ± 14 (16-84)
HLA B5 (+)	89%
Recurrent oral ulcers	100%
Eye lesions	22%
Genital ulcers	98%
Skin lesions	13%
Arthralgia	42%
Deep vein thrombosis	0%
Positive pathergy test	98%

definitive statistics (mean ± SD, maximum, minimum, and percentage). Data between groups were compared with independent sample *t* test and Fisher's exact Chi-square test. *P* values less than 0.05 were considered statistically significant.

RESULTS

Forty-five patients (24 male, 21 female) with BD and 40 patients (21 male, 19 female) of the control group underwent endoscopic examination. General characteristics of the patients with BD are shown in Table 1. The mean age of the patients with BD was 36.2 ± 11.4 years (range, 18-67 years) and that of the control group was 34.8 ± 12.2 years (range, 20-63 years). The mean follow-up time of BD was 35 ± 14 mo (range, 16-84 mo).

Gastrointestinal complaints of the two groups were similar. The major symptom was stomach pain. Alarm symptoms such as gastrointestinal bleeding, dramatic weight loss, anemia, severe dysphagia and abdominal mass, family histories of gastric cancer, and previous histories of peptic ulcer were not noted in all patients. No patient had a past history of upper gastrointestinal surgery.

The endoscopic findings were also similar between the two groups. Esophageal lesions such as ulceration, ulcer, fistula, luminal stricture, pseudomembrane esophagitis, and "downhill" or classical esophageal varices were not confirmed in the two groups, nor were the gastric lesions such as ulceration and ulcer, but as superficial gastritis, erosive gastritis and gastric erosion. The most common endoscopic gastric lesion was gastric erosion (40.1% in the patients with BD and 40% in control group). Erosive gastritis was the second most frequent after gastric erosion. Duodenal lesions, ulceration and ulcer were not found. On the other hand, duodenitis (17.7% in the patients with BD and 17.5% in control group) was the most common endoscopic duodenal lesion in both groups. Aphthous or deep ulcer in esophagus, stomach and duodenum has not been confirmed by endoscopic examination in this study. The endoscopic findings in patients with and without *H pylori* are summarized in Table 2.

H pylori was positive in 33 (73.3%) patients with BD and 30 (75%) patients in the control group by RUT or histopathologic examination. Those patients were treated by a two-week eradication therapy. Two months after the eradication therapy, the patients were evaluated by UBT for eradication control. *H pylori* was negative in 25 of 33 with BD and 21 of 30 in the control group. The two-week

Table 2 Endoscopic findings in patients with and without *H pylori* infection

	Patients with BD n/%		Control group n/%		
	<i>Hp</i> (+)	<i>Hp</i> (-)	<i>Hp</i> (+)	<i>Hp</i> (-)	
Esophageal lesions ¹	-	-	-	-	
Gastric lesions	Gastric ulcer	-	-	-	
	Superficial gastritis	8/17.7	2/4.4	8/20	2/5
	Erosive gastritis	9/20	2/4.4	8/20	2/5
Duodenal lesions	Gastric erosion	14/31.2	4/8.9	12/30	4/10
	Duodenal ulcer	-	-	-	-
Normal	Duodenitis	7/15.5	1/2.2	6/15	1/2.5
		2/4.4	4/8.9	2/5	2/5
Total	33/73.3	12 26.7	30/75	10/25	

BD: Behcet's disease; *Hp*: *H pylori*; ¹Esophageal lesions; ulceration or ulcer, fistula, luminal stricture, pseudomembrane esophagitis, esophageal varices.

triple eradication therapy was successful in 75% in the patients with BD and 70% in the control group. There was no difference between the groups in respect to prevalence of *H pylori* (73.3% vs 75%, $P > 0.05$) and eradication rate (75% vs 70%, $P > 0.05$).

DISCUSSION

Compared to other parts of the gastrointestinal tract, the gastric mucosa appears to be the least frequently involved segment. Cases of a Dieulafoy's ulcer^[4] and a gastric non-Hodgkin's lymphoma associated with BD^[5] have been described. Aphthous ulcers can occur in the duodenum. In two large autopsy series, a total of six patients with BD were found to have duodenal ulcers^[6,7]. Two cases of duodenal involvement have been reported^[8,9]. On the contrary, the prevalence of combined gastric ulcers (3 of 28) or duodenal ulcers (3 of 28), was significantly higher in Chinese patients compared with previous reports^[10]. In our study, aphthous or deep ulcer in esophagus, stomach and duodenum was never been confirmed by endoscopic examination. The most common endoscopic gastric lesion was gastric erosion in the two groups.

The patients who had past histories of upper gastrointestinal surgery and who used *H pylori* eradication therapy were excluded from our study and the patients who were included stopped taking proton pump inhibitors, bismuth, antibiotic, aspirin or other nonsteroidal anti-inflammatory drugs for the endoscopic examination in the preceding two weeks, ulcer can not be confirmed by endoscopic examination. In addition, none of the patients had past histories of peptic ulcer and gastrointestinal bleeding, abdominal mass, and family histories of gastric cancer.

Two studies assessing the frequency of *H pylori* infection in Turkish patients with BD have been reported^[11,12]. In the first study, urease positivity rate was 65% in 34 cases of BD, being not different from that of a control group^[11]. In the second report, a higher prevalence (85%) was noted and the presence of *H pylori* correlated with the disease activity was manifested as the presence of gastrointestinal complaints or endoscopic findings^[12]. In a recent report, only one of 28 patients showed evidence of *H pylori* infection^[10]. In our study, prevalence of *H pylori* was 73%, which was the same with the control group.

A study^[13] reported that eradication rate with a one-

week eradication therapy (amoxicillin 1 g, clarithromycin 500 mg and lansoprazole 30 mg take twice daily) was 65%. In our study, the eradication rate with a two-week eradication therapy for *H pylori* was 75% in the patients with BD, which was similar to that in the control group.

In conclusion, endoscopic findings, eradication rate and prevalence of *H pylori* are similar in patients with BD and patients in the control group.

REFERENCES

- 1 Criteria for diagnosis of Behçet's disease. International Study Group for Behçet's Disease. *Lancet* 1990; **335**: 1078-1080
- 2 Bayraktar Y, Ozaslan E, Van Thiel DH. Gastrointestinal manifestations of Behcet's disease. *J Clin Gastroenterol* 2000; **30**: 144-154
- 3 Bayraktar Y, Balkanci F, Kansu E, Kayhan B, Arslan S, Eryilmaz M, Telatar H. Budd-Chiari syndrome: analysis of 30 cases. *Angiology* 1993; **44**: 541-551
- 4 Arendt T, Kloehn S, Bastian A, Bewig B, Lins M, Mönig H, Fölsch UR. A case of Behçet's syndrome presenting with Dieulafoy's ulcer. *Z Gastroenterol* 1997; **35**: 935-938
- 5 Abe T, Yachi A, Yabana T, Ishii Y, Tosaka M, Yoshida Y, Yonezawa K, Ono A, Ikeda N, Matsuya M. Gastric non-Hodgkin's lymphoma associated with Behçet's disease. *Intern Med* 1993; **32**: 663-667
- 6 Kasahara Y, Tanaka S, Nishino M, Umemura H, Shiraha S, Kuyama T. Intestinal involvement in Behçet's disease: review of 136 surgical cases in the Japanese literature. *Dis Colon Rectum* 1981; **24**: 103-106
- 7 Chong VF, Pathmanathan R. Familial Behçet's syndrome with intestinal involvement—case reports and a review of the literature. *Ann Acad Med Singapore* 1993; **22**: 807-810
- 8 Ozenç A, Bayraktar Y, Baykal A. Pyloric stenosis with esophageal involvement in Behçet's syndrome. *Am J Gastroenterol* 1990; **85**: 727-728
- 9 Satake K, Yada K, Ikehara T, Umeyama K, Inoue T. Pyloric stenosis: an unusual complication of Behçet's disease. *Am J Gastroenterol* 1986; **81**: 816-818
- 10 Ning-Sheng L, Ruay-Sheng L, Kuo-Chih T. High frequency of unusual gastric/duodenal ulcers in patients with Behçet's disease in Taiwan: a possible correlation of MHC molecules with the development of gastric/duodenal ulcers. *Clin Rheumatol* 2005; **24**: 516-520
- 11 Ormeci N, Gurler A, Cakir M, Tolunay O, Bozkaya H, Yasa MH, et al. Prevalence of *H. pylori* in Behçet's disease. In: VII International Conference on Behçet's Disease. *Rev Rhum Engl Ed* 1996; **63**: 558
- 12 Aksoz MK, Unsal B, Zeren I, Onder G, Ekinci N, Kosay S. The upper gastrointestinal endoscopic and rectosigmoidoscopic findings in Behçet's disease. *Turk J Gastroenterol* 1995; **6**: 172-174
- 13 Avci O, Ellidokuz E, Simşek I, Büyükgebiz B, Güneş AT. Helicobacter pylori and Behçet's disease. *Dermatology* 1999; **199**: 140-143