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THE RELATIONSHIP BETWEEN ULCER RECURRENCE AND *HELICOBACTER PYLORI*: A PROSPECTIVE ONE-YEAR FOLLOW-UP STUDY IN CHINA

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Abstract: To study the relationship between ulcer recurrence and *Helicobacter Pylori*. 147 patients with peptic ulcer were divided into *H. Pylori* infected group and *H. pylori* uninfected group by rapid urease test、serum antibody examination and histopathology of gastric biopsy specimens. We assigned all patients to receive dual oral therapy with omeprazole 40 mg/day for 4 weeks and amoxicillin 2000 mg/day for 2 weeks. To all patients, repeated gastroscope was performed at 8 weeks and one-year after beginning therapy to record whether the ulcer was cured. Endoscopic biopsy was also performed to dertermine *H. pylori* status. One year later, *H. pylori* positive patients had a higher ulcer recurrent rate than *H. pylori* negative patients(23.33% vs 2.70%; P = 0.001). Ulcer recurrence was closely related to *H. pylori* infection. *H. pylori* was the risk factor for ulcer relapse.

Key words: *H. pylori* reinfection, peptic ulcer/relapse
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INTRODUCTION

Helicobacter pylori as one of the major pathogentic factors in peptic ulcer had been identified (NIH, 1994). More than 90% of patients with duodenal ulcer and 85% of patients with gastric ulcer had at the same time *H. pylori* infection in gastric antrum which leads to chronic active gastritis(Tytgat et al., 1993). Successful eradication of *H. pylori* may promote ulcer healing and reduce ulcer relapse (Fan, 1996; Rene et al., 1997; Mitchell et al., 1998). It suggests infection by *H. pylori* is related to ulcer recurrence. Can peptic ulcer be cured completely after *H. pylori* eradiction, and what about the possibity of post-therapy reinfection? These questions must be answered. There are reports from developed countries that studies showed that after eradication of *H. pylori*, the ulcer relapse rate decreased to less than 2% per year(Abu-Mahfouz et al., 1997), *H. pylori* reinfection was about 1%. In a developing country like China, it is rarely reported. For identifying the relationship between ulcer recurrence and *H. pylori* infection or reinfection, we conducted a one-year follow-up study of 147 patients with gastric ulcer or duodenal ulcer.

MATERIALS AND METHODS

Patients with endoscopically proven active peptic ulcer (either gastric ulcer or duodenal ulcer) were included in our study. All the patients were enrolled between 1996 and 1998. Patients were excluded if they used NSAIDs or adrenocortical hormones; had undergone previous gastric surgery; had peptic ulcer complications such as perforation and pyloric obstruction; had malignant ulcer; had cardiac, pulmonary, liver or kidney disease.

H. pylori assessment was performed on every patient before our study. Then acid-suppressive therapy and anti-*H. pylori* therapy were administered: proton pump inhibitor 20 mg or 30 mg, once a day for twenty-eight days; and amoxicillin 500 mg tablets, a quarter a day for the first fourteen days. Eight weeks and One year after the first day when patients began to take therapy, endoscopy and *H. pylori* assessment were performed. During the follow-up study, all the patients did not take any other therapy. Peptic ulcer healing was defined as ulcer disappearance or red、white scar under endoscopy. Peptic ulcer relapse was defined as endoscopically confirmed recurrent ulcer after en-

doscopically proven healing of initial ulcer. *H. pylori* was assessed by rapid urease test、serum antibody examination, and histopathology of gastric biopsy specimens (Warthin-Starry's or Giemsa' stain). *H. pylori* infection was diagnosed when one of the three examinations showed positive.

RESULT

Among the 120 males and 27 females whose average age was about 40 years, 41 had gastric ulcer (27.9%), 89 had duodenal ulcer (60.5%), and 17 had both gastric ulcer and duodenal ulcer (11.6%). *H. pylori*-positive patients numbered 121, *H. pylori*-negative patients numbered 26. The total *H. pylori* infection rate was 82.3%. Eight weeks after the therapy, 141 patients had ulcer healed. Ulcer healing rate was 95.92%. Successful *H. pylori* eradication was achieved in 97 patients. *H. pylori* eradication rate was 80.17%. One year later, ulcer recurred in 10 of 141 healed patients. The ulcer relapse rate in a year was 7.09%. *H. pylori*-positive patients had a higher ulcer recurrent rate than *H. pylori*-negative patients (23.33% vs 2.70%; P = 0.001). Among 97 patients with *H. pylori* eradication, 13 patients turned *H. pylori*-positive again. The *H. pylori* reinfection rate in the first year after successful eradication was 13.98%, as against the natural infection rate(9.09%, P = 0.491). The ulcer relapse rate in patients with *H. pylori* eradiction、patients with failed therapy, and patients with initially *H. pylori*-negative condition were 6.45%, 11.54%, 4.54%, respectively. Of the 97 patients with successful *H. pylori* eradication, 6 patients had ulcer recurrence. Four recurrent ulcers were accompanied by *H. pylori* reinfection. So the ulcer recurrent rate in patients with *H. pylori* reinfection was significatly higher than that in patients without *H. pylori* reinfection (30.77% vd 2.50%, P = 0.003). Among patients without successful *H. pylori* eradication, three who had ulcer recurrence were all *H. pylori*-positive. Ulcer recurrence was observed in one patient with *H. pylori*-negative condition initialy.

CONCLUSIONS

After therapy with proton pump inhibitor and amoxicillin, the ulcer recurrence rate in the first year after ulcer healing was 7.09%. In patients with *H. pylori* infection, the ulcer recurrence rate was 23.33%, but was only 2.7% in patients without *H. pylori* infection. *H. pylori* reinfection rate in a year was 13.98%. It was concluded that ulcer recurrence was closely related to *H. pylori* infection; and that *H. pylori* was the risk factor for ulcer relapse.

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