Gastric Inflammatory Fibroid Polyp Treated with Helicobacter pylori Eradication Therapy

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Abstract

Gastric inflammatory fibroid polyps (IFPs) are rare benign lesions that occur in the distal stomach. We describe a 56-year-old woman with Helicobacter pylori (H. pylori)-positive gastric IFP treated with eradication. Endoscopic examination revealed a submucosal tumor, 35 mm in diameter, with an ulcerated apex at the antrum. H. pylori were positive by both histology and tissue culture, and eradication (a proton pump inhibitor, amoxicillin, and clarithromycin) was performed. After 6 months, the tumor morphologically changed and decreased in size. This case suggests that H. pylori may play a role in the pathogenesis of gastric IFPs.

Key words: gastric submucosal tumor, inflammation, endoscopic biopsy

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Introduction

Inflammatory fibroid polyp (IFP) is a relatively rare disorder, which is thought to be clinically and histologically benign, and was first described as “polypoid fibroma” in 1920 by Konjetzny (1). It can appear in many different locations throughout the gastrointestinal tract. The most common site is the gastric antrum (about 70% of cases), followed by the small bowel (about 20% of cases) (2). Gastric IFP often appears as an incidental finding on examination of the upper digestive tract, and this tumor might sometimes be accompanied by adenocarcinoma of the stomach (3-5). Recently, several reports have suggested the relationship between gastric IFP and Helicobacter pylori (H. pylori) (6, 7). Herein, we describe a case of gastric IFP that morphologically changed and decreased in size after H. pylori eradication therapy.

Case Report

A 56-year-old woman visited our hospital for a follow-up study of gastric submucosal tumor (SMT). She had been diagnosed with gastric SMT in the antrum 10 years previously, but we could not confirm the histological diagnosis of SMT because the biopsy specimen obtained repeatedly from the lesion revealed normal gastric mucosa. No specific family history was identified. Her body temperature was 36.4°C, blood pressure was 126/78 mmHg, and radial pulse rate was 66 beats/min and regular. She had neither anemia nor jaundice. A neurological examination revealed no abnormal findings and there was no lymphadenopathy. No specific family history was identified. Routine hematological examination and biochemical tests were within normal limits. Serum anti-H. pylori immunoglobulin G (IgG) antibody was positive. Endoscopic examination of the upper digestive tract revealed an SMT with an ulcerated apex, about 35 mm in diameter, in the pyloric gland area, in the anterior wall of the antrum (Fig. 1). She had undergone endoscopic examination the year before, and the SMT was about 25 mm in size at that time (Fig. 2). A biopsy specimen obtained from the ulcer bottom of the lesion showed the proliferation of fibroblasts (Fig. 3A) and the infiltration of inflammatory cells such as plasma cells and eosinophils (Fig. 3B). These findings were compatible with the histological diagnosis of IFP.

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Figure 1. Endoscopic examination revealed a submucosal tumor (SMT) with an ulcerated apex, about 35 mm in diameter, in the pyloric gland area, in the anterior wall of the antrum.

Figure 2. Endoscopic examination one year previously revealed a submucosal tumor (SMT) of about 25 mm in diameter, in the pyloric gland area, in the antrum.

Figure 3. Microscopic findings of the biopsy specimen obtained from the tumor ulcer. (A) Proliferation of fibroblasts was seen and the fibroblasts presented whorl patterns around the small vessels (HE stain, ×20). (B) Inflammatory cells such as plasma cells and eosinophils were also seen (HE stain, ×50).

Figure 4. Endoscopic examination 6 months after *H. pylori* eradication therapy revealed marked changes in the morphological features and size of the tumor. The cure of *H. pylori* infection made this tumor thin and center of IFP became depressed (Fig. 4).

Discussion

IFP is a rare mucosal or submucosal lesion of the gastrointestinal tract that follows a benign course. Most of the fibroblasts presented whorl patterns around the small vessels, indicating a fibroblastic response. Inflammatory cells such as plasma cells and eosinophils were also observed, suggesting an immune response.

(750 mg) and clarithromycin (400 mg) twice daily for one week. After 6 months, *H. pylori* were negative by tissue culture, and the urea breath test was also negative. Endoscopic examination 6 months after *H. pylori* eradication therapy showed marked changes in the morphological features and size of the tumor. The cure of *H. pylori* infection made this tumor thin and center of IFP became depressed (Fig. 4).
broids reported are located in the mucosa and submucosa, although Ishikura et al. reported six lesions (8) and we also reported one lesion limited to the mucosa (5). Endoscopic findings of IFPs are smooth sessile or pedunculated polyps. The final diagnosis of IFP depends on the pathological findings; however, the histological findings of the biopsy specimen are often difficult to diagnose (5, 9). In the present case, the diagnosis of gastric IFP was made for the histological findings of the biopsy specimen obtained from the ulcer bottom of the SMT.

The pathogenesis of IFP remains unknown; however, some authors have proposed that IFP is caused by an allergic reaction to inflammatory stimulus such as bacterial, chemical traumatic, etc., or is a reactive lesion of fibroblastic or myofibroblastic nature (10). Gastric IFP frequently appears in the antrum, and the incidence of gastric IFP was reported to be 3.1% in one series of 5,515 gastric polyps by Stolte et al. (11). Recently, Nishiyama et al. (6) reported a case of gastric IFP in which a carcinoma was overlying or immediately adjacent to the IFP. Thus, if a patient has a gastric IFP, we must take care to search for small gastric neoplasms during endoscopic examinations. Endoscopic resection of IFP is unnecessary unless IFP increases in size or associates with gastric neoplasm, but periodic follow-up endoscopy and careful observation is necessary in treating patients with gastric IFP. In addition, if the patient has a gastric IFP, we must investigate H. pylori infection taking into consideration the relation between gastric IFP and H. pylori infection.

In conclusion, we reported a case of gastric IFP that morphologically changed and decreased in size after the cure of H. pylori infection. Based on the findings in the present case, we suggest that H. pylori infection may be related to gastric IFP in etiology.

References

15. Kolodziejczyk P, Yao T, Tsuneyoshi M. Inflammatory fibroid
polyp of the stomach. A special reference to an immunohisto-
chemical profile of 42 cases. Am J Surg Pathol 17: 1159-1168,
1993.

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