A Case of Gastroduodenal Mucosa-associated Lymphoid Tissue Lymphoma Regression after Eradication of *Helicobacter pylori*

Young Hoon Choi, Jee Hye Kwon, Ji Min Choi, Yoo Min Han, Sang Gyun Kim, Joo Sung Kim, Hyun Chae Jung, Jong Pil Im

Department of Internal Medicine and Liver Research Institute, Seoul National University College of Medicine, Seoul, Korea

Mucosa-associated lymphoid tissue (MALT) lymphoma is a neoplasm with low-grade malignancy that arises from the MALT of various organs. Among the various MALT lymphomas, gastric MALT lymphoma is the most frequently reported, and it has been correlated with *Helicobacter pylori* infection. In contrast, duodenal MALT lymphoma is very rare, and a relationship with *H. pylori* has not been established. This case report describes a very rare case of MALT lymphoma arising in both the stomach and duodenum that regressed after eradication of *H. pylori*. (Korean J Helicobacter Up Gastrointest Res 2013;13:194-197)

**Key Words:** Gastroduodenal mucosa-associated lymphoid tissue lymphoma; *Helicobacter pylori*

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**INTRODUCTION**

In 1983, Issacson and Wright reported that mucosa-associated lymphoid tissue (MALT) lymphoma is a form of lymphoma that arises from MALT. MALT lymphoma occurs frequently in the gastrointestinal tract but can occur in virtually any mucosal site, such as the salivary glands, thyroid gland, lungs, mammary glands, bladder, and skin. Among these sites, MALT lymphoma arising from the gastric mucosa is the most frequently reported, accounting for more than 75% of gastrointestinal tract lymphomas. In contrast, simultaneous MALT lymphoma of the stomach and duodenum is very rare. We describe a case with MALT lymphoma arising in both the stomach and duodenum that regressed after *Helicobacter pylori* eradication.

**CASE REPORT**

A 49-year-old man with hypertension and fatty liver was referred to our hospital in January 2010. He had upper gastrointestinal endoscopy as part of a regular checkup without any symptoms or signs at the outside hospital. An initial upper gastrointestinal endoscopy performed by his first practitioner revealed a polyloid lesion in the duodenal bulb, and the biopsied duodenal specimen was composed of an atypical small lymphoid proliferation with lymphoid follicles in the lamina propria that had a probability of MALT lymphoma. Gastroduodenoscopy in our hospital revealed polyloid lesions with a nodular surface at the duodenal bulb anterior wall side and in the stomach and multiple hyperemic erosions extending from the body to antrum (Fig. 1A∼C). A rapid urease test was positive for *H. pylori*. A histopathological examination proved that the biopsied duodenal specimen was composed of lymphoid follicles and suspicious focal lymphoepithelial lesions consistent with extranodal marginal zone B-cell MALT lymphoma (Fig. 2A, B). The biopsied stomach specimen was composed of small B-cell aggregates with suspicious focal lymphoepithelial lesion consistent with extranodal marginal zone MALT lymphoma (Fig. 2C). EUS revealed wall thickening limited to the submucosal layer in the duodenal bulb. The muscularis propria was intact, and no local lymph nodes were noted. CT detected a broad-based, slightly elevated lesion in the duodenal bulb. The patient had normal hematologic findings and no significant biochemical abnormalities. Bone marrow examination revealed normocellular marrow with no abnormal lymphoid aggregates. The patient was diagnosed with stage IE1 gastric and duo-
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Fig. 1. Endoscopic images. Initial upper gastrointestinal endoscopy displaying a polypoid lesion with a nodular surface at the duodenal bulb anterior wall side (A, B) and multiple hyperemic erosions extending from the body to the antrum in the stomach (C). Endoscopic examinations at 3 months (D, E) and 6 months (F, G) after Helicobacter pylori eradication displaying multiple hyperemic erosions in the stomach and duodenum.

For H. pylori eradication, the patient was treated with a 7-day course of amoxicillin 2,000 mg, clarithromycin 1,000 mg, and lansoprazole 60 mg daily. Two months after therapy, eradication was confirmed by a rapid urease test and an endoscopic biopsy at the gastric body and antrum. Endoscopy with biopsy performed 3 months and 6 months after treatment still revealed evidence of MALT lymphoma (Fig. 1D∼G). Twenty-three months after treatment, an endoscopic biopsy revealed normal results (Fig. 3A, 3B and 2D). At present, 29 months later, the patient remains in complete remission (Fig. 3C, D).

DISCUSSION

The relationship between H. pylori infection and gastric MALT lymphoma is well established, and if only MALT lymphomas are considered, the prevalence of H. pylori infection is as high as 90%. The effect of H. pylori eradication treatment for gastric MALT lymphoma is 60~92%. H. pylori eradication is recommended as the first-step treatment for stage IE1 of gastric MALT lym-
Fig. 2. Microscopic findings (H&E). Initial histopathologic examination of gastric and duodenal biopsy specimens displaying lymphoepithelial lesion (arrows), which is consistent with mucosa-associated lymphoid tissue lymphoma (A, duodenum, ×100; B, duodenum, ×200; C, stomach, ×200). Twenty-three months after Helicobacter pylori eradication, histopathologic examination of a gastric biopsy specimen displaying no lymphoepithelial lesion (D, ×200).

phoma according the Ann Arbor classification, if there has been confirmation of H. pylori infection. However, the association between duodenal MALT lymphoma and H. pylori is not clear. In a few studies on duodenal MALT lymphoma, H. pylori eradication has been shown to be effective alone or in addition to chemotherapy and/or radiation. Other studies have also demonstrated that eradication of H. pylori in duodenal lymphoma is ineffective altogether. In our case, complete remission of gastric and duodenal MALT lymphoma was achieved 23 months after H. pylori eradication therapy. It has been reported in one case in Japan that simultaneous MALT lymphoma in both the stomach and duodenum regressed after eradication of H. pylori. In this report, ectopic gastric mucosa was detected in the duodenum, which is in contrast to our case. Our case suggests that H. pylori eradication can be considered the first treatment not only in stage IE1 of gastric MALT lymphoma but also in simultaneous MALT lymphoma of stomach and duodenum, even if there is no gastric mucosal tissue in the duodenum. If H. pylori eradication fails to treat gastro-duodenal MALT lymphoma, then the remaining treatment options are the same as for the other gastrointestinal MALT lymphomas.

REFERENCES

1. Asenjo LM, Gisbert JP. Prevalence of Helicobacter pylori infection...
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Fig. 3. Endoscopic images. Endoscopic examinations at 23 months (A, B) and 29 months (C, D) after *Helicobacter pylori* eradication displaying no nodular surface lesion.


