

Early Gastric Cancer Arising From Hyperplastic Polyps After Argon Plasma Coagulation for Gastric Vascular Ectasia

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CASE REPORT

A 58-year-old woman was admitted to our department with liver cirrhosis associated with hepatitis C virus, type 2 diabetes, and chronic kidney disease.

Initial esophagogastroduodenoscopy was performed to assess for iron deficiency anemia (Hb, 8.7 g/mL) and revealed gastric vascular ectasia (GAVE) with hemorrhages in the antrum (Figure 1). No atrophy or polyps were found in the stomach, and argon plasma coagulation (APC) therapy was performed to treat GAVE. The APC treatment was repeated every 3 months for 3 years, and the follow-up esophagogastroduodenoscopy showed multiple polyps in the antrum (Figure 2). Biopsy indicated hyperplastic polyps without dysplasia (Figure 4). Serum *Helicobacter pylori* antibody level and antigens in stool were within the normal range, and we diagnosed inflammatory polyps due to APC. Thus, the follow-up was planned.

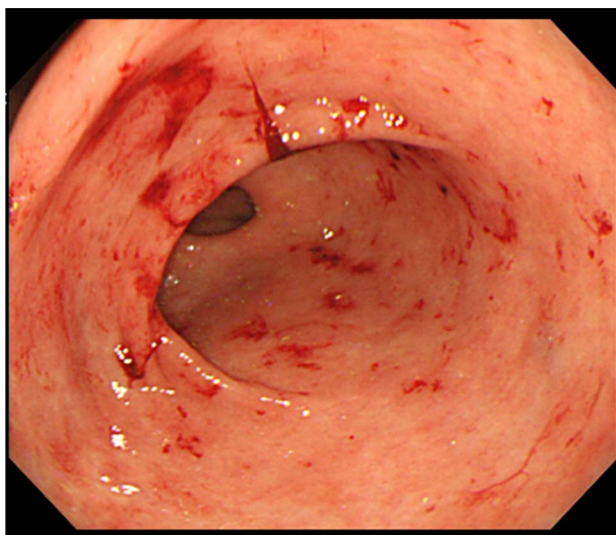


Figure 1. Esophagogastroduodenoscopy showing gastric vascular ectasia (GAVE) with hemorrhages in the antrum.

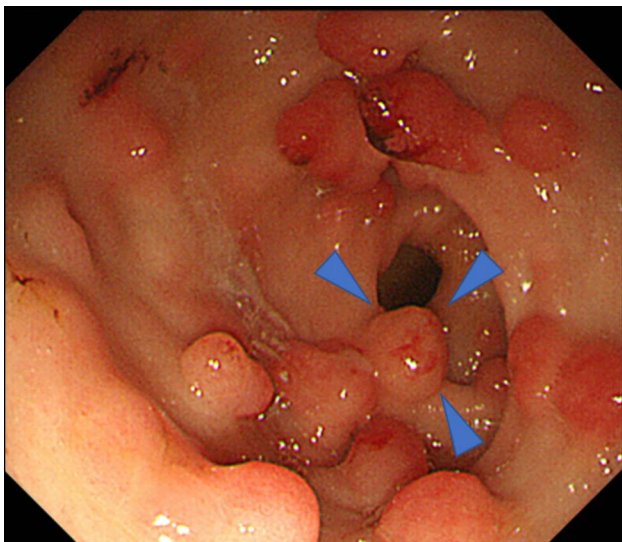


Figure 2. The follow-up esophagogastroduodenoscopy showed multiple polyps in the antrum.

Nine years after the first APC treatment, we found a growing polyp in the antrum. The size of the polyp was 13 mm, and it was accompanied by a change in whiteness compared with the surrounding polyps (Figure 3). We performed endoscopic resection to control bleeding and to observe potential out-of-field malignancies. Histological analysis demonstrated tumorigenic growth of atypical adenoducts and structural atypia, and well-differentiated adenocarcinoma was diagnosed (Figure 4). Hyperplastic gastric polyps developing after electrocoagulation therapy for GAVE were first reported after endoscopic laser therapy by Geller et al in 1996.¹ In general, common gastric hyperplastic polyps arise from atrophic gastric mucosa caused by *H. pylori* infection or autoimmune gastritis.²⁻⁵ In our case,

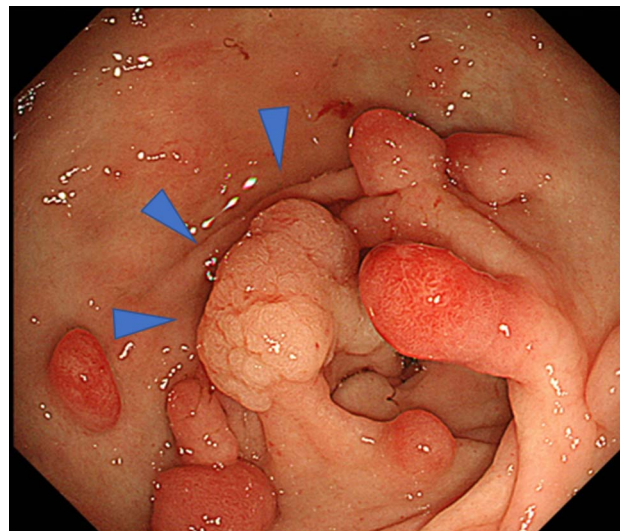


Figure 3. The size of the polyp was 13 mm, and it was accompanied by a change in whiteness compared with the surrounding polyps.

H. pylori infection was negative and no atrophy of the gastric mucosa evaluated by endoscopy was found. When hyperplastic polyps after APC become enlarged, endoscopic resection should be considered for the diagnosis of malignant transformation.

DISCLOSURES

Author contributions: Y. Sakakibara drafted the manuscript; S. Harada, K. Mori, H. Ishida, and E. Mita collected the data; and Y. Sakakibara critically revised the manuscript for important intellectual content. All authors approved the final version of the paper for publication. Y. Sakakibara is the article guarantor.

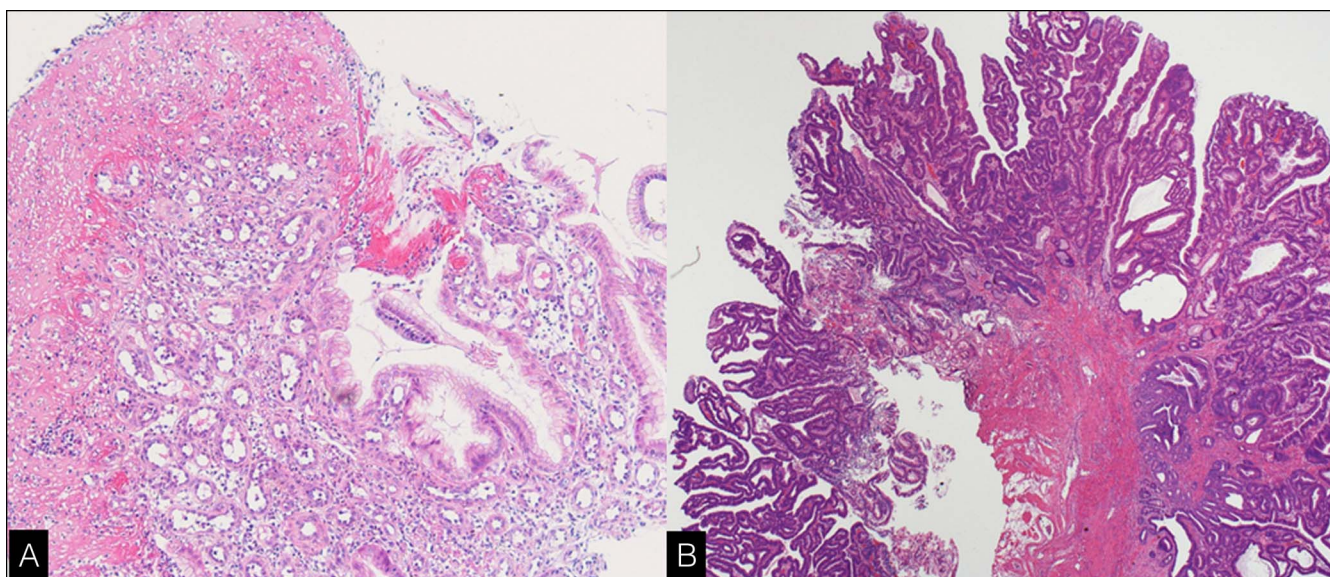


Figure 4. Histopathological examination (hematoxylin and eosin stain; original magnification, $\times 40$) (A) granulation with inflammatory cell infiltration and glandular ducts show mild hyperplastic changes but no atypia. (B) Tumorigenic growth of atypical adenoducts and structural atypia, and well-differentiated adenocarcinoma were diagnosed.

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Informed consent was obtained for this case report.

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