

Gastric hyperplastic polyps causing upper gastrointestinal hemorrhage in a young adult

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The patient presented to Northwestern Memorial Hospital in July 2011. The polyps were resected by clip-assisted snare polypectomy. Histopathologic assessment of the resected polyps demonstrated multiple, non-ulcerative hyperplastic polyps measuring 1.3-1.8 cm in size, without evidence of dysplasia or malignancy. This case describes a young adult patient with multiple, large gastric polyps causing overt gastrointestinal bleeding. This is a rare presentation in a young individual, as these polyps are typically identified in patients older than 60 years of age and less commonly, pediatric populations.

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Key words: Gastrointestinal hemorrhage; Hyperplastic polyps; Endoscopy; Polyp; Therapeutic endoscopy

Core tip: While uncommon, gastric hyperplastic polyps may be the source of overt upper gastrointestinal hemorrhage in young individuals and must be included in the differential of such symptoms.

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Abstract

Here, we report a case of a young man who presented with a significant upper gastrointestinal bleed treated by endoscopic removal of multiple hyperplastic polyps. Gastric hyperplastic polyps are a relatively uncommon cause of overt gastrointestinal bleeding. While most hyperplastic gastric polyps are asymptomatic, they may present with abdominal pain, iron deficiency anemia or gastric outlet obstruction. These polyps are associated with conditions such as *Helicobacter pylori* gastritis and atrophic autoimmune gastritis, which predispose the epithelium to chronic inflammation and epithelial repair.

INTRODUCTION

Hyperplastic gastric polyps are epithelial proliferations that primarily occur in the antrum of the stomach. On endoscopy, these polyps appear as smooth, dome-shaped lesions. Larger lesions tend to become lobulated and pedunculated, with frequent erosion of the surface epithelium. Histologically, hyperplastic polyps consist of elongated, dilated and distorted gastric foveolar epithelium

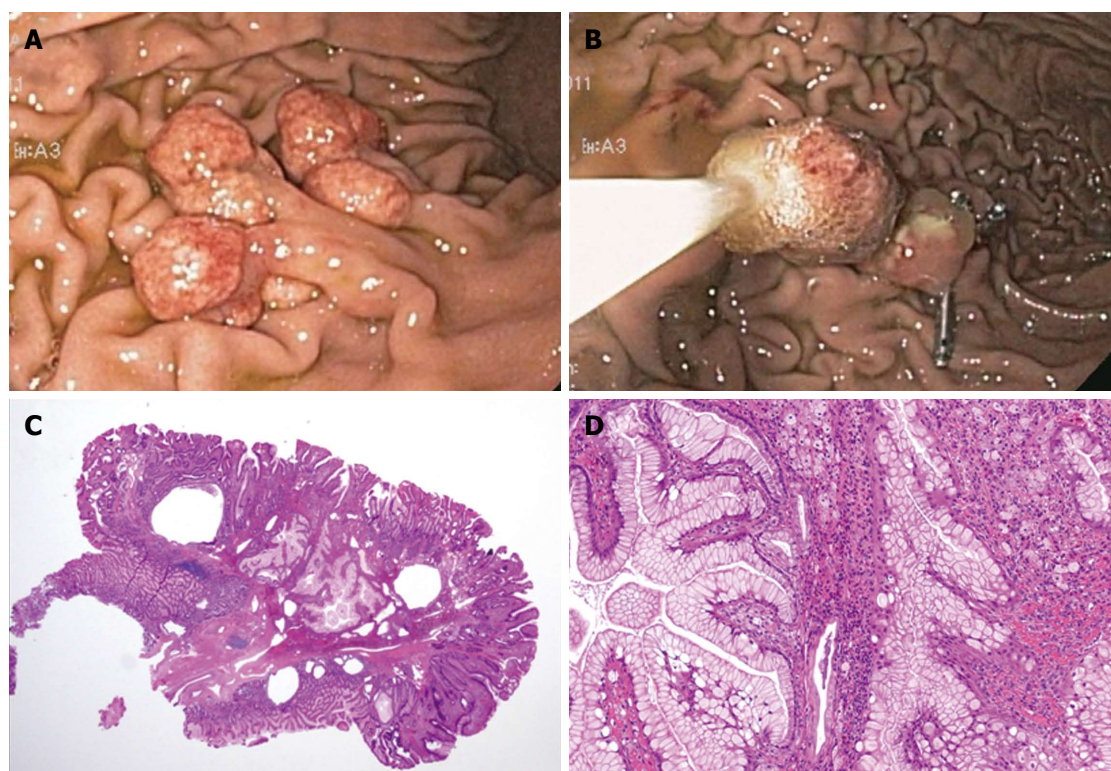


Figure 1 Endoscopic and microscopic evaluation of multiple gastric polyps. A: Endoscopic images demonstrate 5 pedunculated polyps ranging in size from 1.0-1.8 cm clustered in the body of the stomach; B: These polyps were removed using clip-assisted snare polypectomy; C: Microscopic evaluation of one of these polyps reveal a pedunculated lesion with hyperplastic and dilated foveolar glands (HE stain, 10 × magnification); D: At higher magnification, there is increased inflammation in the lamina propria with a small collection of foamy histiocytes (HE stain, 200 × magnification).

and can be associated with local edema and rarely foamy histiocytes^[1-4].

While most hyperplastic gastric polyps are asymptomatic, they may present with abdominal pain, iron deficiency anemia or gastric outlet obstruction^[3-6]. These polyps are associated with conditions such as a *Helicobacter pylori* (*H. pylori*) and atrophic autoimmune gastritis, which predispose the epithelium to chronic inflammation and epithelial repair.

CASE REPORT

A 32-year-old male with a personal history of colonic adenoma and a family history of colon polyps presented with a 3-d history of hematemesis and melena. Initial laboratory evaluation was notable for a hemoglobin drop from 14 to 9.6 g/L. He underwent an upper endoscopy that revealed five large (> 1 cm in diameter), highly vascular, pedunculated polyps localized at the greater curvature. The remainder of the stomach was normal. The polyps were resected by clip-assisted snare polypectomy. Histopathologic assessment of the resected polyps demonstrated non-ulcerative hyperplastic polyps measuring 1.3-1.8 cm in size, without evidence of dysplasia or malignancy (Figure 1). Biopsies did not reveal *H. pylori* or atrophic autoimmune gastritis. No further bleeding occurred during a 6-mo follow-up period. Repeat endoscopy 1 mo after admission revealed two additional hyperplastic polyps at the previous site, which were again removed.

DISCUSSION

Non-neoplastic gastric polyps are benign epithelial proliferations that often require no intervention. However, these polyps may be symptomatic or can grossly mimic malignant tumors^[7]. In these clinical scenarios, such polyps are commonly removed *via* endoscopy. Non-neoplastic gastric polyps can be solitary or numerous in number, and are rarely associated with a number of genetic conditions including Peutz-Jeghers Syndrome, Familial Juvenile Polyposis, and Cronkhite-Canada Syndrome^[1,7]. These polyps are usually asymptomatic and thus go undiscovered in the majority of the population. However, the prevalence of gastric polyps ranges as low as 0.5% to 7% in patients undergoing routine endoscopy^[5,8].

Once found to be the most prevalent type of polyp in the stomach, hyperplastic polyps are now increasingly uncommon due to the eradication of *H. pylori* and resulting decrease in non-atrophic gastritis in industrialized nations^[2-5]. In one large-scale study reviewing over 100 000 endoscopies conducted between 2007-2008, hyperplastic polyps made up only 17% of all discovered gastric polyps^[5]. Fundic gland polyps, characterized as small, sessile gastric lesions associated with antacid use, are now thought to be the most prevalent gastric polyp^[5,9-11].

This case describes a young adult patient with multiple, large gastric polyps causing overt gastrointestinal bleeding. This is a rare presentation in a young individual, as these polyps are typically identified in patients older

than 60 years of age and less commonly, pediatric populations. Furthermore, outside of the setting of anticoagulation or antiplatelet therapy, gastric polyps are typically associated with occult, rather than overt gastrointestinal bleeding^[1-3,5].

In contrast to normal or hyperplastic mucosa, molecular evaluation of hyperplastic polyps have demonstrated rare cases of p53 protein overexpression and neoplastic features such as dysplasia and carcinoma. Polyps with neoplastic foci have also shown increases in Ki-67 labeling indices, demonstrating an increase in proliferative activity^[5]. These observations are suggestive of a dysplasia-carcinoma sequence in the malignant transformation of hyperplastic polyps and argue for a complete eradication of such lesions^[1,6,11,12].

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