



A CHALLENGING CASE OF UNCOMMON GIANT HYPERPLASTIC GASTRIC POLYP

Pathology

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ABSTRACT

Background: Gastric hyperplastic polyps are common benign epithelial lesions, typically associated with chronic gastritis. However, "giant" hyperplastic polyps, often defined as those exceeding 2-3 cm, are rare and pose significant diagnostic and management challenges due to their propensity for symptomatic complications and, crucially, their potential to harbor foci of dysplasia or adenocarcinoma. We report the case of a 73-year-old male presenting with acute upper gastrointestinal bleeding and abdominal pain. Upper GI endoscopy revealed a large (6-7 cm) lobulated polypoidal lesion in the Antro-pyloric region, extending into the duodenum. Initial endoscopic mucosal resection (EMR) was complicated by active bleeding requiring repeat endoscopic intervention. Subsequent exploratory laparotomy with gastrotomy was performed for definitive polyp removal. Histopathological examination of the resected specimen, measuring up to 5.5 x 2.5 x 1.5 cm with a 2.5 cm stalk all together measuring more than 7 cm, confirmed a giant hyperplastic polyp characterized by extensive foveolar hyperplasia, polypoid frond-like formations and pit abscesses. No evidence of dysplasia or malignancy identified was despite polyp's large size and complete microscopic evaluation.

KEYWORDS

Giant hyperplastic polyp; giant gastric polyp

INTRODUCTION

Gastric polyps represent a diverse group of epithelial and mesenchymal proliferations, with hyperplastic polyps (HPs) being the most prevalent type, accounting for the majority of benign gastric polyps. These are non-neoplastic lesions representing regenerative hyperplasia in areas of chronic inflammation and are strongly associated with inflammatory conditions like chronic gastritis, *Helicobacter pylori* associated gastritis, or reactive/chemical gastritis. While generally considered benign, HPs, especially those exceeding 1 cm in size, carry a well-documented, albeit low, risk of malignant transformation into dysplasia or adenocarcinoma, with reported prevalence of dysplasia varying between 1.9% to 19% and malignant transformation in approximately 0.6% to 2.1% of cases.

"Giant" hyperplastic polyps, loosely defined as those larger than 3 cm, are exceedingly rare. Their substantial size often leads to clinical symptoms such as gastrointestinal bleeding (occult or overt), gastric outlet obstruction, or abdominal pain, necessitating aggressive management. Pathologically, the large size of these polyps complicates their complete endoscopic removal and thorough histological assessment, raising concerns about sampling error and missed malignancy. This report details a challenging case of a giant gastric polyp that presented with acute GI bleeding and required urgent surgical intervention.

Case Presentation

A 73-year-old male patient, with a past medical history of hypertension, type 2 diabetes mellitus, chronic obstructive pulmonary disease (COPD), hemorrhoids and cholelithiasis, presented with chief complaints of abdominal pain and acute gastrointestinal bleeding (GI bleed). Initial blood reports showed raised C-reactive protein (CRP) levels.

Management:

Upper gastrointestinal endoscopy (UGIE) revealed a large (approximately 6-7 cm) lobulated polypoidal lesion involving the Antro-pyloric region and extending up to the first part of the duodenum (D1). An endoscopic mucosal resection (EMR) was attempted after injection of adrenaline (1:20,000) at the base of the polyp. Post-EMR, active spurting hemorrhage was noted from the polyp base, which was managed with repeat adrenaline injection, hemoclips were applied for temporary hemostasis. Given the grave concerns regarding the polyp's large size and the bleeding, an exploratory laparotomy was performed.

A gastrotomy was performed, allowing direct access to an anterior wall gastric polyp and the polyp was completely removed. 2 units of PRBCs were also transfused with adequate pain management. No other polyp was found.

Pathological Findings:

Histomorphological Examination:

Specimen: Gastric Polyp

Macroscopic Examination:

Received specimen of a giant gastric polyp as multiple pieces made of a large polypoidal piece measuring 5.5x2.5x1.5 cm and smaller polypoid fragments altogether measuring 2.5x1.5 cm consistent with a total size of more than 7cm in length. Largest polypoidal piece had adjacent stalk of 2.5 cm in length and many polypoid fronds like processes in 3 dimensions. Entire polyp was submitted and embedded in 5 blocks for complete microscopic evaluation. (Sections A-E).

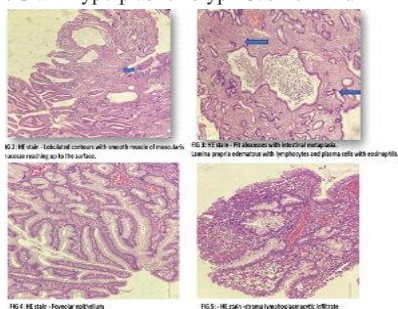


Fig 1: Gross Specimen of the Polyp

Microscopic Examination:

Sections revealed features consistent with a pedunculated giant hyperplastic polyp with prominent polypoid frond-like projections almost entirely composed of gastric foveolar epithelium forming elongated, tortuous and irregularly branching glands extending from base to the tips of polypoid frond like formation. Numerous glands were cystically dilated, many showing collections of neutrophils within the glandular crypts, indicative of pit abscesses. The proliferating foveolar cells displayed reactive changes, including mucin depletion, but notably lacked significant cytological atypia, nuclear stratification, or overt architectural complexity typical of dysplasia or malignancy.

The lamina propria was vascular, edematous, and expanded by a dense chronic inflammatory infiltrate composed predominantly of plasma cells and lymphocytes, with scattered eosinophils and neutrophils. Strands of smooth muscle fibers of muscularis mucosae, were observed extending upwards into the core of the polyp and polypoid fronds, a characteristic feature of hyperplastic polyps. Despite the large size and complexity of the lesion, and meticulous evaluation of all submitted sections, no definitive evidence of low-grade dysplasia, high-grade dysplasia, or invasive adenocarcinoma was seen.

Impression: Giant Hyperplastic Polyp - Gastric Antrum**DISCUSSION**

This case of a giant gastric hyperplastic polyp, approximately 6-7 cm endoscopically and confirmed pathologically, highlights several critical aspects relevant to clinical management and pathological diagnosis. Gastric HPs are common lesions, but those reaching "giant" proportions (typically >3 cm) are rare and often present with significant complications such as acute upper GI bleeding, as seen in our patient.

The initial endoscopic management via EMR, while attempted, proved challenging due to the polyp's large size and subsequent active hemorrhage requiring transfusion. This underscores a key clinical dilemma: while endoscopic resection is the preferred modality for most gastric polyps, extremely large lesions, especially those complicated by bleeding or difficult morphology, may necessitate surgical intervention to ensure complete removal and definitive hemostasis with complete pathological evaluation. The surgical approach allowed for complete en bloc resection, which was paramount for the thorough pathological evaluation.

The polyp was a gastric antral polyp but was large enough to reach into duodenum. The presentation of the patient was also acute bleeding as compared to gastric outlet obstruction or anemia which is more common.

Most polyps are associated with chronic gastritis, which was not found in our case. But due to high vascularity the polyp caused acute bleeding requiring urgent surgical intervention and blood transfusion.

A complete histomorphological examination showed absence of dysplasia or invasive carcinoma, despite the polyp's impressive size and clinical presentation, which reaffirms that not all large gastric polyps are malignant. This case reinforces the vital role of exhaustive sampling and meticulous microscopic evaluation of the resected specimen, as performed in our case to rule out even areas of dysplasia/malignancy, which can be easily missed in large, heterogeneous lesions.

The potential for malignant transformation within hyperplastic polyps increases with size, with prevalence of dysplasia varying and malignant transformation reported in approximately 0.6% to 2.1% of cases. While the malignant potential is generally low, this risk increases with polyp size, particularly for polyps greater than 1 cm. In this case, despite the impressive size, no neoplastic foci were identified. This finding is reassuring for the patient's prognosis and highlights the necessity of complete resection for large polyps.

The patient's co-morbidities (hypertension, diabetes, COPD, cholelithiasis) are important for overall clinical management but are not directly linked to the pathogenesis of the hyperplastic polyp.

CONCLUSION:

This case illustrates the rare occurrence of a symptomatic giant hyperplastic gastric polyp requiring surgical intervention due to its size and acute bleeding. It reinforces that while hyperplastic polyps are generally benign, their "giant" variants pose significant clinical and pathological challenges, necessitating careful consideration of management approaches including surgery for definitive removal. Pathologists play a crucial role in providing a definitive diagnosis through meticulous histomorphological evaluation of the resected specimen, especially for ruling out dysplasia/focal malignancy. This case underscores the diagnostic complexities and the critical need for a high index of suspicion, comprehensive workup, and appropriate management strategies for such unusual gastric lesions.

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