



## Hyperplastic Polyps: "Unveiling the Uncommon in the Ordinary"

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### Abstract

Hyperplastic polyps are one of the most frequently encountered gastric polyps. They are usually asymptomatic and found incidentally during endoscopic examination. With increasing size, they can cause pain abdomen, chronic occult blood loss and even gastric outlet obstruction. Both acute severe upper gastrointestinal bleeding and neoplastic transformation occurs rarely in these types of polyps. We are reporting a case of giant hyperplastic polyp presenting with massive upper gastrointestinal bleeding and histopathological examination showing high-grade dysplasia was successfully managed with snare assisted polypectomy.

**Keywords:** Hyperplastic Polyps; Gastrointestinal Bleeding; Dysplasia; Polypectomy; Hemostatic Clip Application

### Introduction

Upper GI bleeding (UGIB) refers to bleeding originating proximal to ligament of Treitz [1]. The most common causes of UGIB are gastric and duodenal peptic ulcers, esophageal/gastric varices, mucosal erosive disease, malignancy, Mallory-Weiss tears, Dieulafoy lesions and other miscellaneous causes [2]. Hyperplastic polyps (HP) are an uncommon cause of overt UGIB. They are the second most frequently encountered polyp in the stomach [3]. These polyps usually occur in the elderly with equal incidence in males and females. They are usually asymptomatic and found incidentally during endoscopic examinations. Occasionally, they can cause symptoms such as pain abdomen, chronic occult blood loss presenting as iron deficiency anaemia or gastric outlet obstruction. Rarely these polyps can present with acute severe upper gastrointestinal bleeding [4,5]. Neoplastic transformation of HP has been known to occur very rarely (1-4.5%) [6]. We are reporting a case of hyperplastic polyp presenting with massive UGIB & having high-grade dysplasia).

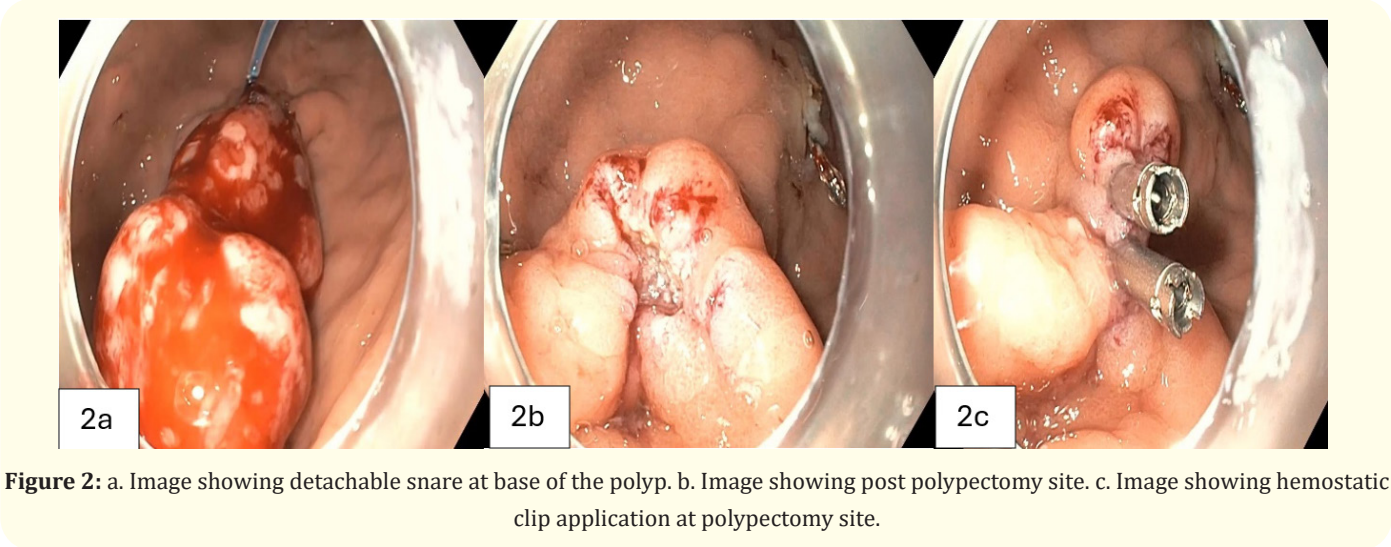
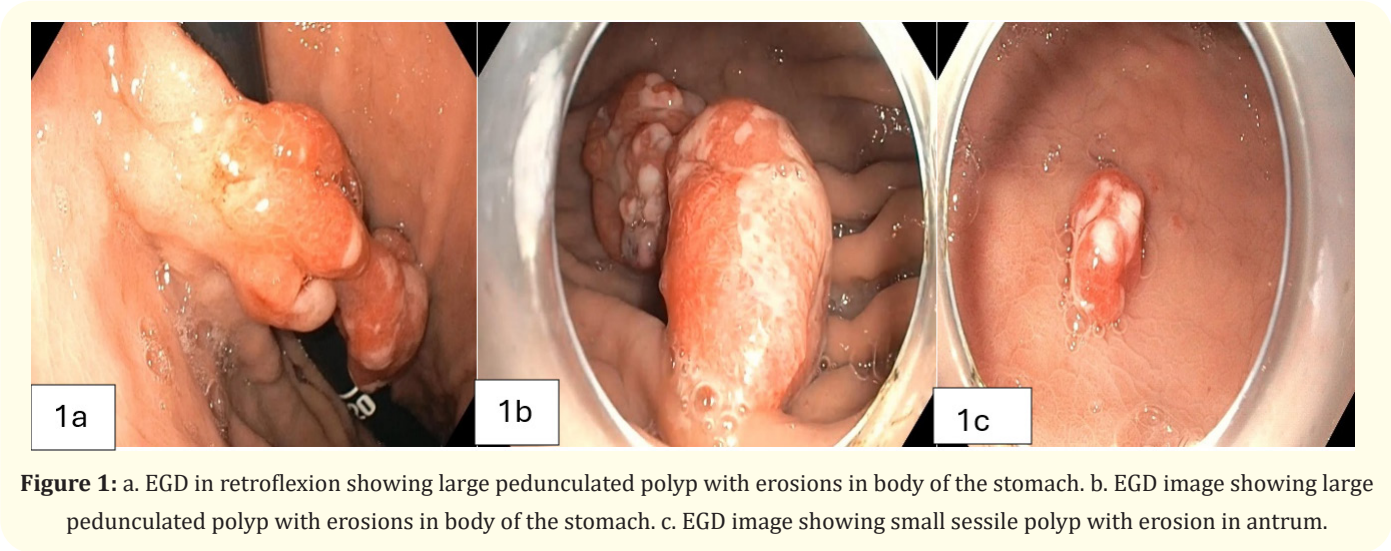
### Case Report

A 76-year-old gentleman with medical history of Type 2 diabetes mellitus, hypertension and coronary heart disease on dual

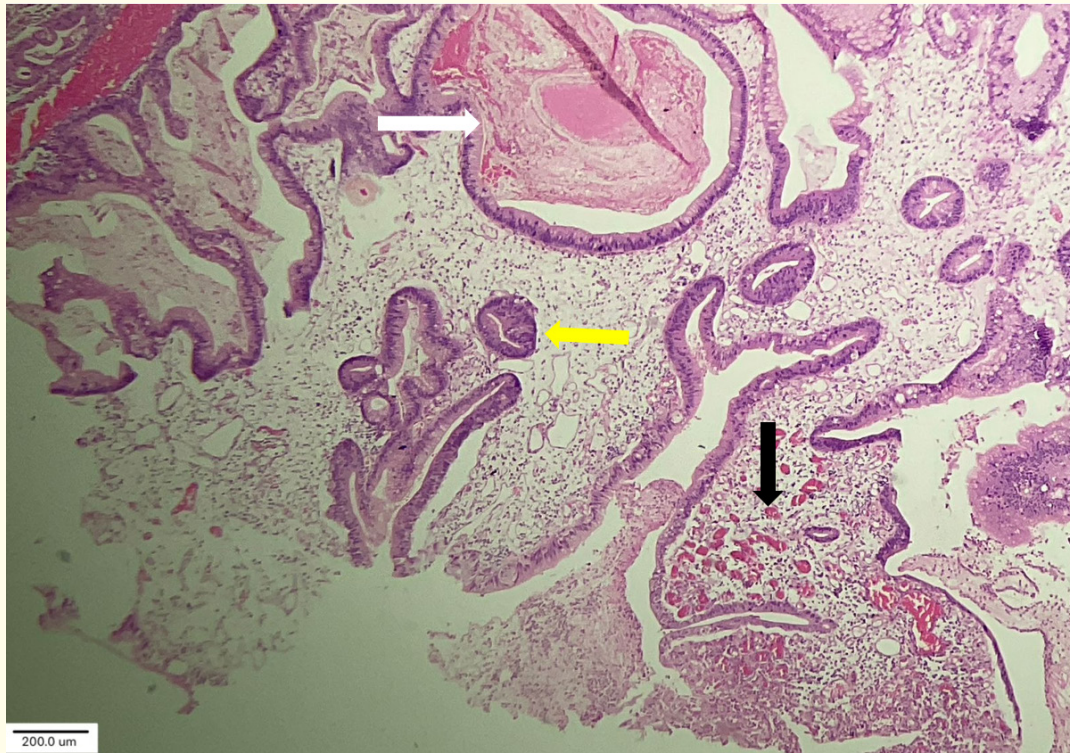
antiplatelets (Aspirin 150mg OD and Clopidogrel 150mg OD) presented with chief complaints of 2 episodes of large volume hematemesis within the past six hours. He also gave history of melena for 12 hours and had dizziness on standing. On examination at the time of admission, he had pallor, tachycardia (120/min) and hypotension (BP- 86/50 mm Hg) Abdomen was soft and on per rectal examination finger was stained with melanic stool. Both the antiplatelet medications were discontinued after cardiology consultation. His initial labs showed anemia (Hb-8.4gm/dl), leukocytosis (12200 cells/mm<sup>3</sup>) and deranged renal function tests (urea-74mg/dl, creatinine-1.3mg/dl). His liver function test and coagulation profile were normal. Ultrasound abdomen shown grade I fatty liver. He was resuscitated with intravenous normal saline and 2 units of packed red blood cell transfusion. Simultaneously, he was also started on pantoprazole infusion (8mg/hour) and shifted to intensive care unit for further management. After adequate resuscitation, he underwent esophagogastroduodenoscopy which revealed two large polyps, one in distal body measuring about 5x2cm in size with overlying erosions with no active bleeding (Figure 1) and another in gastric antrum measuring about 1x1cm in size (Supplementary Figure A). As the patient was on antiplatelet medication

at the time of admission, we scheduled polypectomy after five days after discontinuing antiplatelet medication. On day 5, he underwent detachable snare assisted polypectomy and hemostatic clip application for the large polyp (Figure 2) and simple polypectomy and hemostatic clip application for the small antral polyp. Rapid urease test of gastric antral biopsy turned out to be positive. He

started on Aspirin 150 mg OD after 2 days of polypectomy and discharged. Histopathology report from the large polyp was suggestive of hyperplastic polyp with foci of high-grade dysplasia and adequately resected in plane of sections examined (Figures 3,4). The smaller antral polyp biopsy revealed hyperplastic polyp without dysplasia. He was treated with triple regimen and advised for follow up endoscopy after 6 months.







**Figure 3:** Low-power (10x) hematoxylin and eosin-stained section showing mucosal ulceration with hyperplastic dilated foveolar gland displaying low grade adenomatous dysplasia (yellow arrow) and lamina propria edematous with mixed acute on chronic inflammatory cells (black arrow).

## Discussion

Gastric polyps are defined as luminal projections from the gastric wall above the plane of the adjacent mucosa regardless of its histological type [7]. These are frequently found incidentally when esophagogastroduodenoscopy is performed for any indication. The prevalence and histopathological type of gastric polyps varies widely between different populations. The prevalence of gastric polyps in western world is around 6.35% [3] while in India, it is about 4% [8]. Based on histopathological features, gastric polyps can be classified into epithelial polyps (hyperplastic, fundic gland, adenomatous and hamartomatous) and non-epithelial polyps (gastrointestinal stromal tumor, leiomyoma, inflammatory fibroid polyps, fibroma, lipoma, ectopic pancreas, neurogenic and vascular tumour and carcinoids) [9]. In recent years, aggressive treatment against *Helicobacter pylori* and excessive use of proton pump

inhibitors (PPI) have shown to alter the prevalence of specific types of gastric polyps. In India, the prevalence of fundic gland polyps is about 50%, hyperplastic polyps 41.66% and other 8.34% [8] while in western world, 77% of gastric polyps were fundic gland polyps, 17 % hyperplastic polyps, 0.69 % adenomas, and 0.1 % inflammatory fibroid polyps [3].

HP usually arise from inflamed mucosa. There is a strong association with various types of chronic gastritis, particularly autoimmune and *H. pylori* gastritis and in post antrectomy stomachs. These polyps are also encountered in Cytomegalovirus gastritis, lymphocytic gastritis, amyloid gastropathy, Zollinger-Ellison syndrome, and antral vascular ectasia [10]. These are more frequently observed in the antrum than in other parts of the stomach and are often multiple. These polyps are usually smooth, dome shaped and become lobulated and pedunculated when they become large [11].

They can vary in size from a few millimeters to several centimeters, with the largest polyp reported being 12 cm [5]. Usually, focal clusters of multiple small polypoidal lesions coalesce forming a conglomerate mass leading to giant hyperplastic polyp. There is no definite size cut off to define giant polyp, however, the largest diameter of polyp measuring > 3 cm is considered as giant polyp [12]. In our case the size of large polyp was 5 x 2cm. As the polyp becomes large the surface epithelium erodes and leads to chronic occult blood loss and development of iron deficiency anaemia, one of the most common clinical manifestations of hyperplastic polyps. Incidence of hyperplastic polyps in iron-deficiency patients was reported to be 1.4% [13]. Rarely, patients with large hyperplastic polyps may present with gastric obstruction [14].

There have been only few case reports of hyperplastic gastric polyps presenting as acute gastrointestinal bleeding in the medical literature [4,5,16]. Endoscopic polypectomy is the current recommended management for large hyperplastic gastric polyps. Testing and eradication of *Helicobacter pylori* has been recommended in all cases. The prevalence of dysplasia in hyperplastic polyp ranges from 1.5 to 4.4% and carcinoma between 1.1 and 2.1%. Risk factors for neoplastic transformation are size >1cm, pedunculated polyp, synchronous dysplasia and autoimmune gastritis [6].

## Conclusion

Hyperplastic gastric polyp presenting as acute severe upper gastrointestinal bleeding is very rare. The risk of bleeding from gastric hyperplastic polyp should be considered when anticoagulant/antiplatelet therapy is administered. Consider complete wider resection of hyperplastic polyp in patients with risk factors for neoplastic transformation like size >1cm, pedunculated polyp, synchronous dysplasia and autoimmune gastritis.

Testing and eradication of *Helicobacter pylori* in patients with hyperplastic polyp is associated with decreased recurrence rate.

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