Gastric Inflammatory Fibroid Polyposis Presenting with Occult Bleeding and Anemia

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Introduction

• Inflammatory fibroid polyps (IFPs), or Vanek tumors, were first described by Vanek in 1949 as “gastric submucosal granulomas with eosinophilic infiltration.” [1] They were re-named by Helwig and Rainer in 1953 to IFP. [2, 3]
• IFPs are rare, benign, submucosal, sessile or pedunculated polyps that can present with bleeding, anemia, abdominal pain, dyspepsia, weight loss or intestinal obstruction. They typically require surgical excision to alleviate symptoms.
• We present the case of a patient with iron deficiency anemia due to occult gastrointestinal blood loss, which led to the diagnosis of a gastric antral IFP.

Case Presentation

• A 61 year old male was found with microcytic anemia and intermittent nausea and diarrhea with adhesion for a scrotal abscess.
• Focal occult blood was positive and hemoglobin dropped from 9.4g/dL to 7.4 g/dL after 5 days.
• A CT of the abdomen and pelvis noted a soft tissue density in the distal stomach, and the patient was taken for upper and lower endoscopy.

Intervention and Treatment

• Upper endoscopy revealed a 5-cm large, semi-pedunculated, submucosal, polyloid gastric mass, originating from the gastric antrum and prolapsing into the duodenum (Fig. 1-2). Colonoscopy was unremarkable.
• The mass could not be reduced back into the stomach, and was too large to be resected by endoscopic means, so a biopsy was performed.
• An endoscopic ultrasound described the lesion as resectable, without involvement of the muscularis layer of the stomach or other adjacent organs.
• The patient was subsequently taken to the operating room, where he underwent partial gastrectomy with resection of the mass and 2cm margins.

Results

• Endoscopic biopsy showed foveolar hyperplasia with mild chronic gastritis and was negative for Helicobacter pylori.
• Microscopically, the resected lesion showed a spindle cell neoplasm, negative margins for invasion, and was without increased mitotic figures (Fig. 3-4).
• Immunohistochemical staining was CD34+ (Fig. 5), and negative for CD-117 (C-Kit) and S-100.
• These findings are most consistent with the diagnosis of an IFP, which was the suspected cause of the patient’s symptoms.
• The patient did well post-operatively, maintained stable blood counts, and was discharged home without complication.

Discussion

• IFPs are rare, benign, submucosal, sessile or pedunculated polyps that can occur anywhere along the gastrointestinal tract.
• Incidence ranges from 0.1% to 3% of all gastric polyps. Most common in sixth decade, but can present at any age. [4, 5]
• 70-80% occur in the gastric antrum.
• The majority are pre-pyloric, with an average size of 1.5cm. [4, 6]
• Possible mechanisms include: reactive, allergic, a poorly controlled inflammatory repair response [8] secondary to chemicals, parasites, trauma, metabolic changes, [3] and bacteria, such as Helicobacter pylori. [9]
• Most are asymptomatic, and diagnosis is incidental, but can be associated with bleeding, anemia, abdominal pain, weight loss, dyspeptic symptoms and intestinal obstruction.
• One study found that 37.5% of IFPs were associated with dyspepsia, 25% with anemia and 14.5% with GERD. [7]
• Gastric antral or prepyloric IFPs can cause bleeding or outlet obstruction.
• Differential diagnosis includes: gastrointestinal stromal tumors (GIST), schwannomas, spindle cell leiomomas, other benign mesenchymal tumors, [7] eosinophilic gastroenteritis, inflammatory pseudotumor, haemangiopericytoma and haemangioendothelioma. [8]

Conclusion

• While uncommon, inflammatory fibroid polyps are benign lesions that should be considered in the differential diagnosis of patients with gastric submucosal lesions, occult bleeding and anemia.
• Resection with clean margins leads to resolution of symptoms. IFPs typically do not show recurrence, unless there is incomplete resection, which emphasizes the importance of clean margins with resection.

Figure 1. Inflammatory fibroid polyp prolapsing through the pylorus into the duodenum

Figure 2. Polyp in the duodenum

Figure 3. Hematoxylin and eosin sections at scanning magnification demonstrate a classic inflammatory polyp in the submucosa of the stomach. Seen throughout are evenly distributed inflammatory cells

Figure 4. Hematoxylin and eosin sections at 200x show bland spindle shaped cells and a background of inflammatory cells with prominent numbers of eosinophils

Figure 5. Immunohistochemical studies for CD34 demonstrates membranous reactivity throughout the lesion

References