A Mimic of Gastroparesis: An Atypical Case of Gastric Outlet Obstruction Caused by a Gastric Polyp

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Introduction

We present this case, because gastric polyps are rare and typically asymptomatic. This case emphasizes the unique finding of a gastric polyp causing intermittent gastric outlet obstruction and the importance of thorough clinical work-up, in order to prevent misdiagnosis of similarly presenting diseases.

Patient Presentation

- A 36 year old man, with a history of Type 2 Diabetes (DMII)
- Presented with a one-year history of intermittent post-prandial bloating, nausea, early satiety, and emesis within one hour after a meal
- Denied hematemesis, hematochezia, melena, dysphagia, odynophagia, and family history of gastrointestinal cancer
- Metoclopramide was prescribed to the patient prior to this presentation, but without resolution of symptom.

Exam and Labs on Presentation

Physical exam:
General: In no acute distress, but appears anxious.
Cardiovascular: RRR, no murmurs. No JVD.
Respiratory: Clear to auscultation bilaterally.
Abdomen: Soft, non-tender, non-distended. BS+

Hemoglobin 11 g/dL
Mean corpuscular volume 77.6
Platelet count 283 x10^9/L
Serum ferritin 14 mcg/L (24-336 mcg/L)

Clinical Course

- Initially, an esophagogastroduodenoscopy (EGD) was obtained, given the patient's chronicity and worsening of symptoms.
- The EGD revealed a single 20 mm pedunculated polyp with oozing blood at the gastric antrum.
- Intermittent prolapse of the polyp into the duodenal bulb was noted with peristalsis, explaining the patient's symptoms.
- Prior to resection, the stalk of the polyp was injected with epinephrine and was removed with a hot snare.

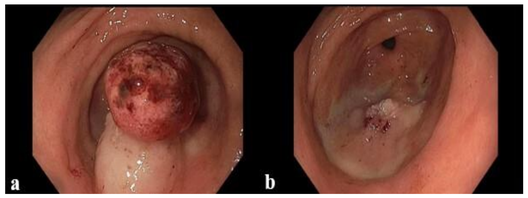

Figure 1a. During the EGD, the polyp was injected with epinephrine. Figure 1b. The polyp was successfully removed.

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- Afterwards, endo-clips were placed at the resection site, in order to prevent bleeding.

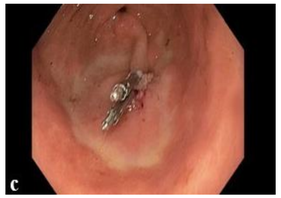

Figure 1c. Endo-clips placed after polyp resection..

Clinical Course

- The histopathology analysis of the polyp showed a hyperplastic polyp with mucosal erosion, but no dysplasia.

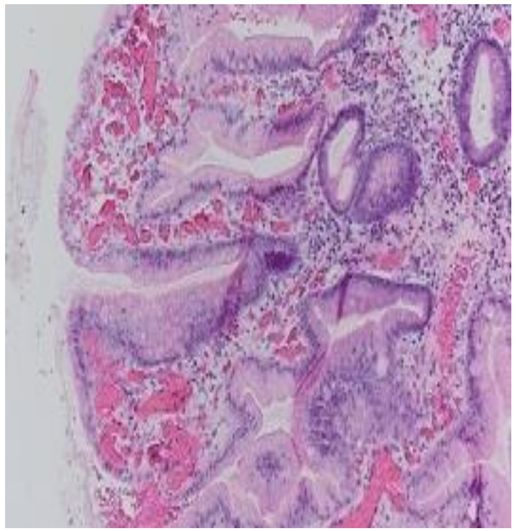

Figure 2. Pathology showed hyperplastic polyp and no dysplasia.

- The pathology was negative for Helicobacter pylori.
- At follow-up, all of the patient's symptoms were resolved.

Discussion

- This case emphasizes the rare finding of a large antral hyperplastic polyp causing intermittent gastric outlet obstruction due to a "ball-valve" effect.
- The erosion of surface epithelium of the polyp was causing bleeding and resultant anemia.

- Gastric polyps, which are commonly hyperplastic, are often incidentally found on an EGD, with rare cases of them causing symptoms. [1]
- It is very rare for gastric polyps to cause gastric outlet obstruction, but if present, it is due to the "ball-valve" effect," which describes the stalked polyp prolapsing in and out of the stomach via the pyloric sphincter and causing obstruction. [2]
- Hyperplastic polyps >1 cm with pedunculated morphology and those causing symptoms (obstruction, bleeding) should be resected. [3]

Learning Objectives

- Gastric polyps can mimic gastroparesis, by obstructing the gastric outlet.
- It is important to perform appropriate work-up, such as an EGD, for symptoms and laboratory data with alarming features.
- This case also highlights the danger of anchoring bias. Our patient had a history of DMII, which increases the likelihood of gastroparesis; however, bias lead to delayed diagnosis and low quality of life for the patient.

Contact

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References

1. Viudez LA, Cordova H, Uchima H, et.al. Gastric polyps: Retrospective analysis of 41,253 upper endoscopies. Gastroenterol Hepatol. 2017 Oct; 40(8):507-514. doi: 10.1016/j.gastrohep.2017.01.003.

2. Macedo G, Lopes S, Albuquerque A. Ball valve syndrome: gastric polypectomy as a safe endoscopic treatment of a potentially troublesome condition. Gastrointest Endosc. 2012 Nov; 76(5):1080-1. doi: 10.1016/j.gie.2012.06.018.

3. Banks M, Graham D, Jansen M, et.al. British Society of Gastroenterology guidelines on the diagnosis and management of patients at risk of gastric adenocarcinoma. Gut. 2019; 68:1545-1575.