

Introduction

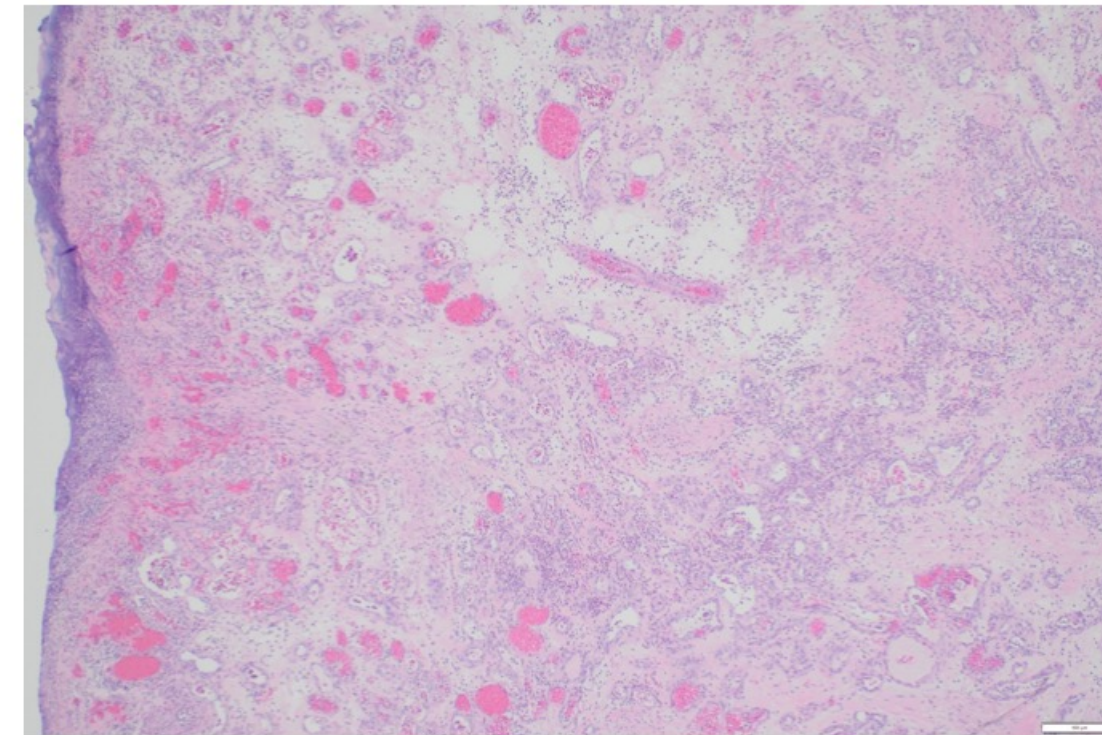
Pyogenic Granuloma (PG) is a benign growth of capillary blood vessels arranged in lobular fashion

- While infection, trauma and hormones are implicated as causes, the exact etiology is unknown.
- **PG is commonly found on the skin and oral mucosa but PG occurrences in the duodenum are extremely rare.**
- We present an unusual case of a duodenal PG as a cause of anemia and gastrointestinal (GI) bleeding in a 68 year old female.

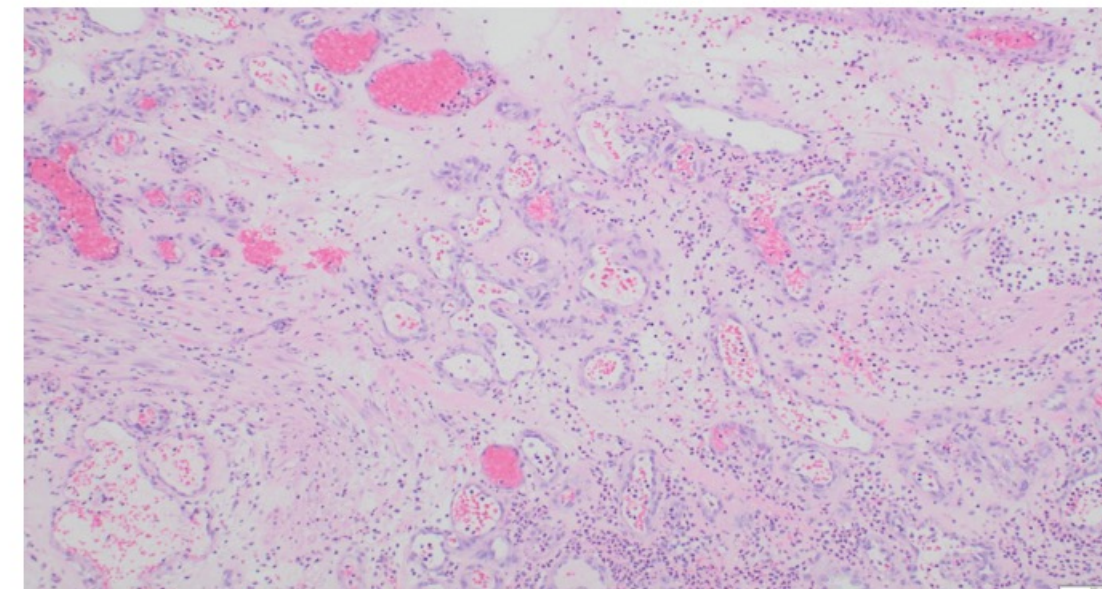
Case Description

- A 68-year-old female with history of laparoscopic adjustable gastric banding presented for evaluation of fatigue and shortness of breath.
- She was found to have microcytic anemia with a decline of hemoglobin 13.3gm/dL to 8.5 gm/dL within one year.
- She underwent bi-directional endoscopic evaluation which revealed normal duodenum, esophagitis, gastritis, and evidence of laparoscopic revision surgery.
- Biopsies were negative for Celiac disease and Helicobacter pylori. Colonoscopy and Small bowel capsule endoscopy revealed no source of bleeding.
- Push enteroscopy demonstrated a 15mm polyp in the third part of the duodenum. Biopsies of the duodenal polyp showed granulation tissue without small intestinal mucosa.
- Endoscopic mucosal resection (EMR) of the polyp with argon plasma coagulation (APC) of the edges was completed.
- Pathology revealed polypoid granulation tissue with surface ulceration and acute inflammation consistent with pyogenic granuloma (PG) of the duodenum.
- The patient was instructed to return for follow-up EGD in six months.

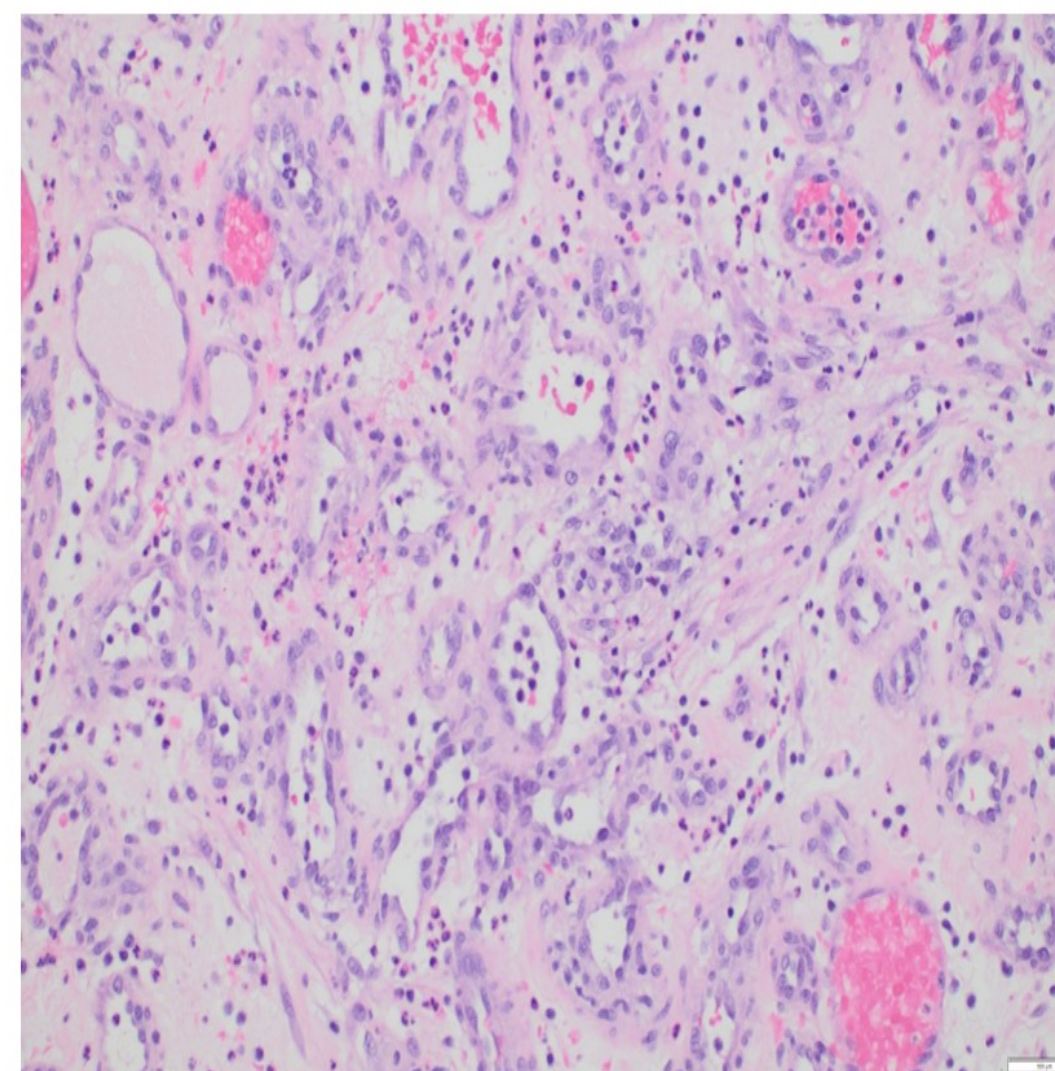
Endoscopic Images and Pathology



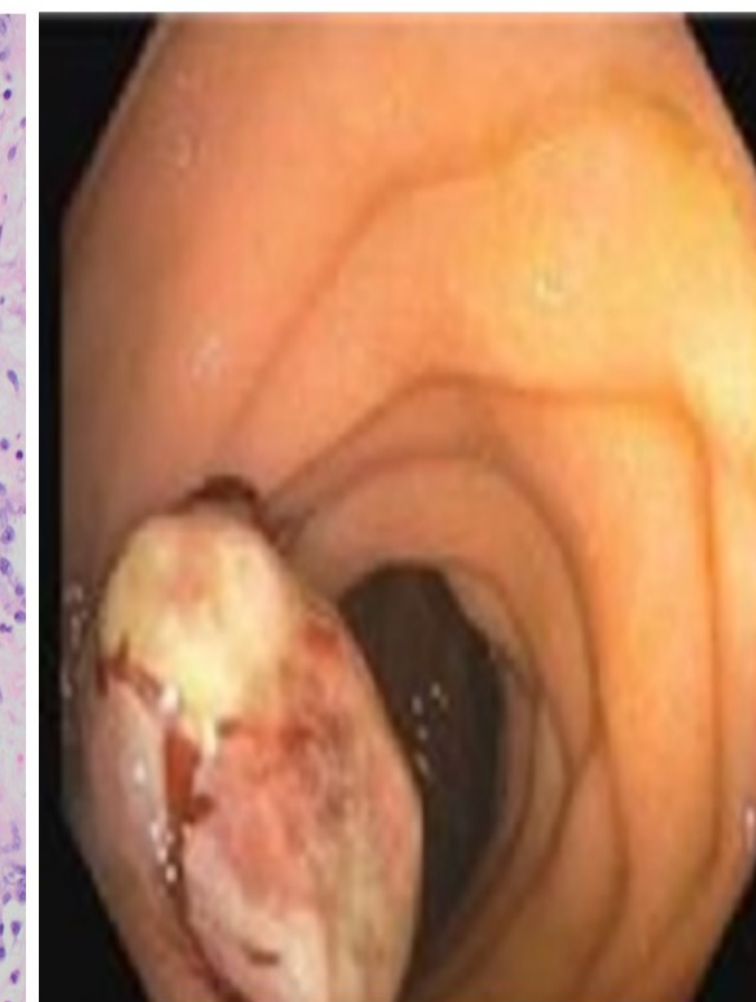
40X Surface erosion at the left side and clusters of small capillary vessels.



100x Clusters of small capillary vessels and neutrophil infiltrates.



A) 200x Clusters of small capillary vessels and neutrophil infiltrates.



Discussion

- An immunohistochemical stain (CD3) of the PG revealed scattered T-cells. PillCam footage was reviewed and confirmed that this lesion was not previously present.
- **Furthermore, very few cases of duodenal PG have been described in the literature.**
- **Diagnostic workup of PG in the GI tract has not yet been agreed upon but commonly utilized techniques include EGD, PillCam Endoscopy, push enteroscopy, and double balloon enteroscopy.**
- Imaging that detects the readily hemorrhaging papule in conjunction with biopsy is ideal.
- Treatment options include EMR, laser ablation or surgery. This case is important because it highlights an extremely rare cause of gastrointestinal bleeding.
- **Diagnosis can be difficult, and it is important for practitioners to be vigilant in recognizing this disease entity because PG can hemorrhage and lead to profuse GI bleeding.**

References

- Estifan E, Patel V, Grossman M. Endoscopic Mucosal Resection of a Proximal Esophageal Pyogenic Granuloma. Case Rep Gastrointest Med. 2019 Sep 29;2019:9869274. doi: 10.1155/2019/9869274. PMID: 31662914; PMCID: PMC6791219.
- Kamal R, Dahiya P, Puri A. Oral pyogenic granuloma: Various concepts of etiopathogenesis. J Oral Maxillofac Pathol. 2012 Jan;16(1):79-82. doi: 10.4103/0973-029X.92978. PMID: 22434943; PMCID: PMC3303528.
- Lewis BS. Small intestinal bleeding. Gastroenterol Clin North Am. 2000 Mar;29(1):67-95, vi. PMID: 10752018.
- Patrice SJ, Wiss K, Mulliken JB. Pyogenic granuloma (lobular capillary hemangioma): a clinicopathologic study of 178 cases. Pediatr Dermatol. 1991 Dec;8(4):267-76. doi: 10.1111/j.1525-1470.1991.tb00931.x. PMID: 1792196.