Unusual Presentation of a Large Duodenal Lipoma

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INTRODUCTION

- Lipomas are benign tumors that are generally found in the subcutaneous tissue[1].
- They rarely occur in the gastrointestinal (GI) tract, with some studies estimating their prevalence at 4% among benign tumors of the GI tract[2].
- When present in the GI tract, they are generally found in the colon. Other sites include the small intestine, duodenum, stomach and esophagus.
- Duodenal lipomas are rare, with few reported cases found in literature. They are frequently asymptomatic, and in most cases discovered incidentally when upper endoscopy is performed for other reasons.
- We present the case of a large duodenal lipoma presenting with acute GI bleeding and symptomatic anemia.

CASE PRESENTATION

- A 72 year-old male presented with general weakness, dyspnea and melena for 2 days. Medications included clopidogrel and aspirin due to coronary artery disease. There were no previous upper endoscopies and his last colonoscopy done 4 years prior was pertinent for two lipomas in the ascending and transverse colon, respectively.
- Initial physical exam showed dark stool in rectum, otherwise unremarkable. Initial hemoglobin was 8.2 g/dL, a decrease in 6 g/dL from his baseline. BUN was 12.8 mg/dL, creatinine 0.7 mg/dL and an occult blood test was negative.
- Aspirin and clopidogrel were held, one unit of packed red blood cells was transfused due to symptomatic anemia and the patient was admitted.

Upper Endoscopy

- Esophagus: Normal esophageal mucosa without esophagitis, varices or a hiatal hernia
- Stomach: Normal gastric mucosa and a normal retroflexed exam; no erythema or ulcers
- Duodenum: Normal bulb and a large pedunculated polyp with a large ulcer in the second portion, measuring approximately 4 cm

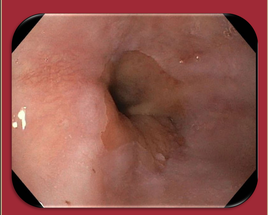


Figure 1a. Upper endoscopy. Normal esophagus.

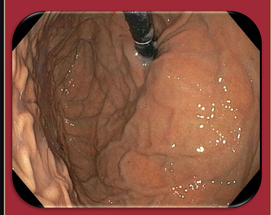


Figure 1b. Upper endoscopy. Normal retroflexion in stomach.

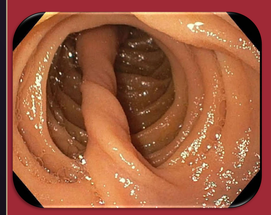


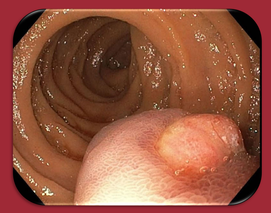
Figure 1c. Upper endoscopy. Duodenum, second portion. Large pedunculated polyp.

ENDOSCOPIC RESECTION

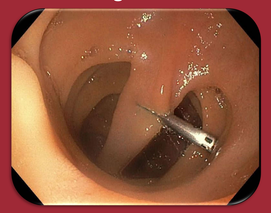
- A large, ulcerated and pedunculated polyp measuring approximately 4 cm was observed in the second portion of the duodenum
- Two clips were placed at the base of the polyp
- An endoscopic snare was placed over the polyp with close approximation to the base; hot snare polypectomy was used to resect the polyp
- After resection, two additional clips were placed for adequate hemostasis and the polyp was removed

Scan here for video

Figure 2

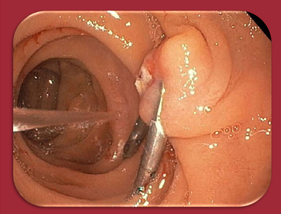


2a. Distal portion of polyp with a distal ulceration

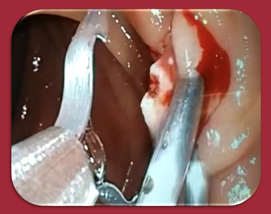


2b. Hemoclip placement at the base for hemostasis

2c. Snare polypectomy of duodenal lipoma



2d. Post polypectomy site



2e. Additional clip placement at post polypectomy site for hemostasis

2f. Resected large pedunculated duodenal polyp measuring 4 cm with distal ulceration

PATHOLOGY

- Final pathologic examination showed submucosal lipomatosis, prominent vessels and an overlying erosion in the polyp
- Immunostain for MDM2 (12q15), which is seen in well-differentiated liposarcomas and atypical lipomatous tumors, was negative, favoring a benign lipoma

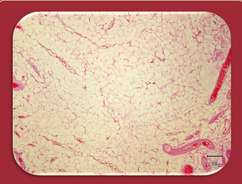


Figure 3a. Submucosal lipomatosis

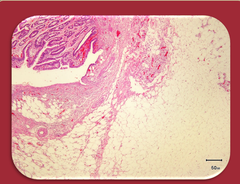


Figure 3b. Erosion in lipoma

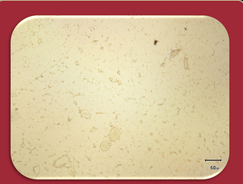


Figure 3c. Negative immunostain for MDM2 (12q15)

PATIENT OUTCOME

- The patient had an uncomplicated post endoscopy recovery period and the remainder of the admission was uneventful
- Melena resolved and the patient was discharged home on the next day
- Dual anti-platelet therapy was the only additional risk factor for bleeding and Cardiology recommended to continue single anti-platelet therapy with clopidogrel
- The patient reported continued use of clopidogrel on follow-up visit at 6 months and denied further bleeding episodes, with stable hemoglobin at 13.5 g/dL

DISCUSSION

Duodenal lipomas are rare benign tumors that usually arise from the submucosa. They may be identified as low-density lesions with the same radiodensity as fat (-60 to -120 Hounsfield units) on CT scan or as a uniform hyperechoic mass arising from the submucosa in EUS. They are usually discovered incidentally given their frequently asymptomatic presentation[3]. If asymptomatic, observation is typically recommended. When symptomatic, they may present with early satiety, gastric outlet obstruction, pain and intussusception. Hemorrhagic duodenal lipomas are an ever rarer occurrence, with severe bleeding usually being caused by an overlying mucosal erosion or ulceration. Some reports suggest that mucosal pressure atrophy or peristalsis leading to elongation may lead to ulcer formation due to necrosis of the underlying mucosa[2]. When symptomatic, management options include endoscopic or surgical resection. Endoscopic options include wound closure with clips and use of snare polypectomy or endoloop. Complications may include perforation and delayed bleeding.

TAKE HOME MESSAGE

- Duodenal lipomas are rare tumors and are usually discovered incidentally due to their asymptomatic presentation
- When symptomatic, they may present with non-specific and vague symptoms and should always be kept in the differential diagnosis when a patient presents with early satiety, gastric outlet obstruction, pain and intussusception
- Our patient had an identified cause of upper GI bleeding; however, he did not present with elevated BUN or BUN/Cr ratio and occult blood testing done at the ER, although not clinically indicated, was negative
- Always consider referral to a Gastroenterologist for upper endoscopy when the diagnosis is uncertain and there is a high clinical suspicion

REFERENCES

1. Ouwerkerk HM, Raber MH, Freling G, Klaase JM. Duodenal lipoma as a rare cause of upper gastrointestinal bleeding. Gastroenterology Research 2010; 3(6):290-292.
2. Gwak SY, Lee MK, Lee YK. A case of a bleeding duodenal lipoma successfully controlled by endoscopic resection. Clin Endosc 2020; 53:236-240.
3. Pei MW, Hu MR, Chen WB, Qin C. Diagnosis and treatment of duodenal lipoma: A systematic review and case report. Journal of Clinical and Diagnostic Research 2017; 11(7):1-5.