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LARGE, SOLITARY, HIGH-GRADE DUODENAL TUBULAR ADENOMA IN A PATIENT PRESENTING WITH GI BLEED

Paurush Shah, MD

Case

A 71-year-old male with past medical history of hypertension, hyperlipidemia, aortic stenosis, and atrial flutter on warfarin presented to his primary care physician (PCP) a few days prior to admission with complaints of lethargy, lightheadedness, and mild shortness of breath (SOB) for about five days prior to admission. He stated that he had also been experiencing dark stools for one week while therapeutic on warfarin. His blood pressure in the office was slightly low, and he was told drink extra fluids as his symptoms were likely due to dehydration. The patient returned to his PCP a few days later when his lethargy, lightheadedness, and SOB persisted. He denied any nausea, vomiting, abdominal pain, or bright red blood per rectum but he stated that he continued to have dark stools. The patient was advised to go to the emergency room for further workup. Labs at the time of admission revealed a hemoglobin of 4.0 g/dL and an international normalized ratio (INR) of 1.97. The patient had only stopped taking his warfarin two days prior to admission despite noticing dark stools a week prior to admission.

On admission, the patient was maintained on an omeprazole drip, given vitamin K to normalize his INR and was initially transfused four units of packed red blood cells. His hemoglobin only increased to 6.5 g/dL at that time. He received a total of six more units of blood to keep his hemoglobin above 8 g/dL. Once the patient's hemoglobin was above 8 g/dL, he underwent endoscopy, which showed a normal esophagus and a stomach with mild, patchy gastritis in the antrum. Additionally, a large 3 cm pedunculated, friable mass that was oozing blood was found in the third portion of the duodenum and was likely the cause of the patient's melena. The mass was biopsied and cauterized. The patient then underwent colonoscopy which

confirmed the presence of melena. The patient had a repeat endoscopy two days after the initial procedure, which again showed a 3 cm polyp on a broad stalk in the third portion of the duodenum (Figures 1, 2). The polyp was removed by piece-meal, hot-snare polypectomy (Figure 3). Two endoclips were applied for hemostasis (Figure 4). Pathological analysis showed a tubular adenoma with focal superficial high-grade dysplasia and mucosal cell margins negative for adenomatous mucosa. After removal, the patient's hemoglobin stabilized and he was discharged.

Discussion

Duodenal adenomatous polyps are most common at the gastro-duodenal junction and have a 3%-5% risk of progressing to adenocarcinoma in one's lifetime.¹ Similarly, neoplasms of the duodenum are rare in the absence of FAP syndromes but may often become clinically relevant.¹ In patients with familial adenomatous polyposis (FAP) syndromes, the duodenum is the most common extra-colonic site of adenomas.² Neuroendocrine tumors or tumors at the ampulla of Vater may sometimes be found in the duodenum, but these too are rare. Because these tumors are rare and do not present with specific signs or symptoms and because the duodenum may be overlooked during upper endoscopy, these masses can cause significant morbidity or even mortality if they are not found. There is a paucity of literature on solitary, large, high-grade duodenal adenomas despite the fact that they can cause significant pathology as in this patient's case.

Numerous reasons have been proposed as to why neoplasia infrequently occurs within the small bowel or when there are lesions, why malignant transformation is also rare. One

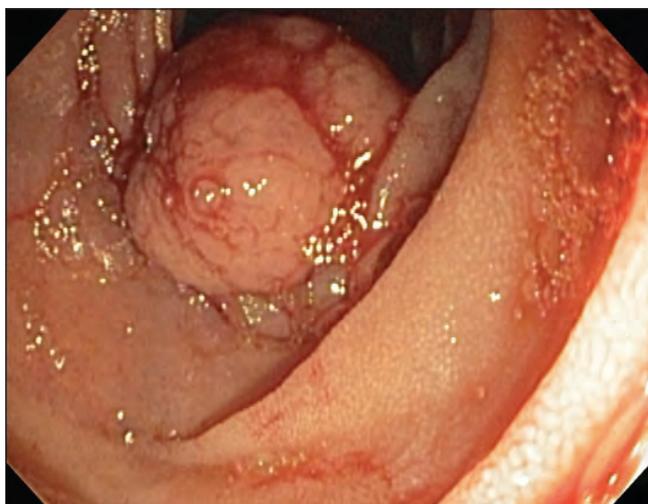


Figure 1.

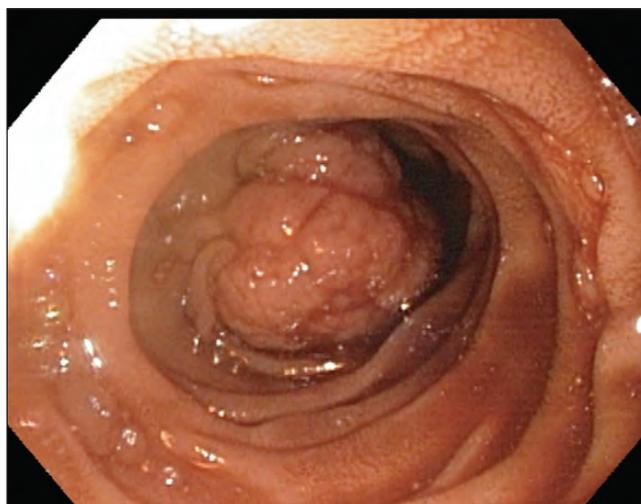


Figure 2.

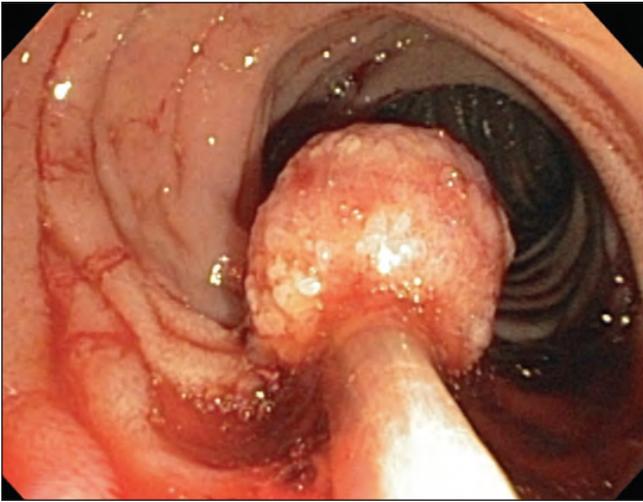


Figure 3.

commonly cited reason is the rapid transit of materials through the small bowel. This allows minimal time for the digested materials to contact the small bowel mucosa minimizing any possible harmful effects.³ Additionally, if there are toxins in digested material, the increased fluid content of small bowel chyme should dilute offending substances.³ Also, the more alkaline pH of the small bowel may play a role by decreasing bacterial growth and thereby exhibiting a protective effect. Finally, widespread lymphoid tissue throughout the gastrointestinal (GI) tract may hinder the inception of tumors and their malignant transformation.³

When patients do present with symptoms, the most common manifestations are non-specific and include vague epigastric pain, fatigue, and hematochezia or melena if the mass is bleeding. Patients may also present with general malaise, nausea, vomiting, constipation, or obstruction.^{3,4}

As is commonly the case with duodenal or small intestinal tumors, this patient had very few specific symptoms on presentation. He only described some fatigue and lightheadedness, but he did present with the classic upper GI tract bleeding

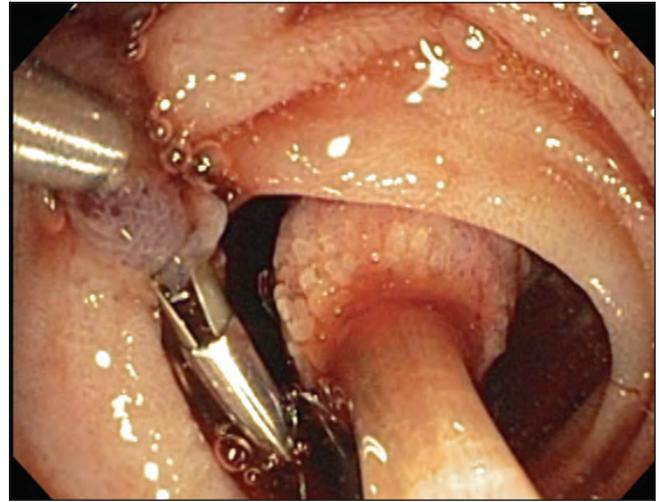


Figure 4.

(UGIB) sign of dark stools. Because of this presentation, more common causes of UGIB like ulcers or gastritis were suspected. A high-grade duodenal adenoma was not considered initially, but was found with thorough GI examination via esophagogastroduodenoscopy. Though the common causes must always be ruled out first, it is always important to think of less common causes of common presentations. Thankfully for this patient that was the case, and after the polyp was removed and warfarin was held for a short time, the patient did very well without any further bleeding and with resolution of presenting symptoms.

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