Fellows' Corner

by Kuldeep S. Tagore and Nirmal S. Mann

CASE REPORT

A 55-year-old man was admitted with multiple episodes of melena, anemia, and one near-syncopal event. The patient was in his usual state of health until three days prior to admission he noted a black stool followed by dizziness and a fainting spell. He proceeded to have multiple further melenic bowel movements over the next two days until arriving in the emergency room. He denied symptoms of anemia such as shortness of breath, chest pain, weakness, or fatigue. The past medical history was only significant for hypertension and osteoarthritis. The patient had never undergone an endoscopic evaluation. Significant medications included daily baby aspirin and weekly ibuprofen for arthritic pain. Family history was negative for gastrointestinal malignancies. Physical exam was remarkable for general pallor and pale conjunctiva. Laboratory at presentation revealed WBC count 12.1, hemoglobin 7.8, hematocrit 22, MCV 88, and platelets 117. After fluid resuscitation in the emergency room, repeat hemoglobin had decreased to 4.7. Transfusion of 2 units of blood corrected hemoglobin appropriately to 7.0. Upper endoscopy revealed a 3 × 4 cm pedunculated polyp protruding into the duodenal bulb as depicted in Figure 1. In the stalk, there was a l0 mm ulcer with a visible vessel. Using standard snare polypectomy technique, resection was performed requiring the use of coagulation and cut current with a blend of l, leading the endoscopists to suspect a submucosal origin. The remaining ulcer site was treated with epinephrine injection and heater probe in the standard fashion. The polyp was sent to pathology and later identified in the slide depicted in Figure 2.

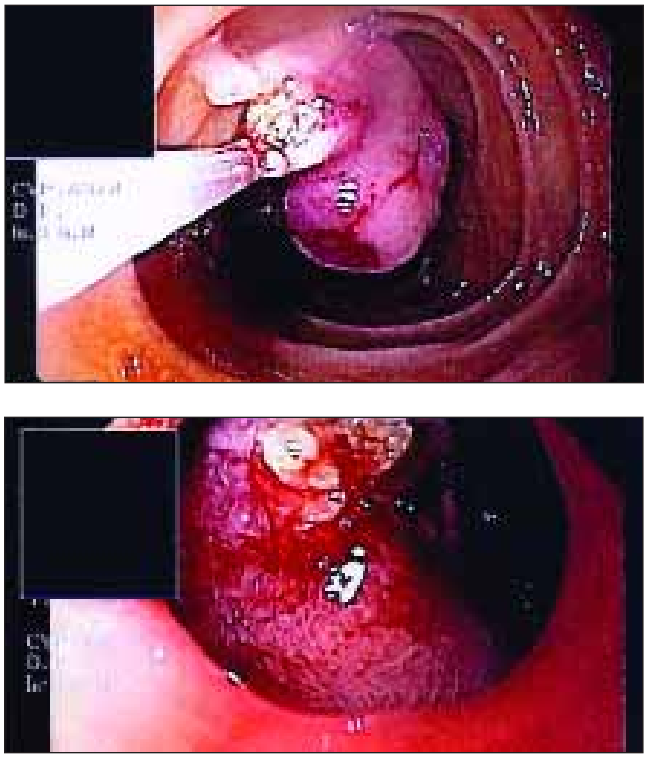

Figure 1. Endoscopic pictures demonstrating pedunculated polyp with an associated ulcer.

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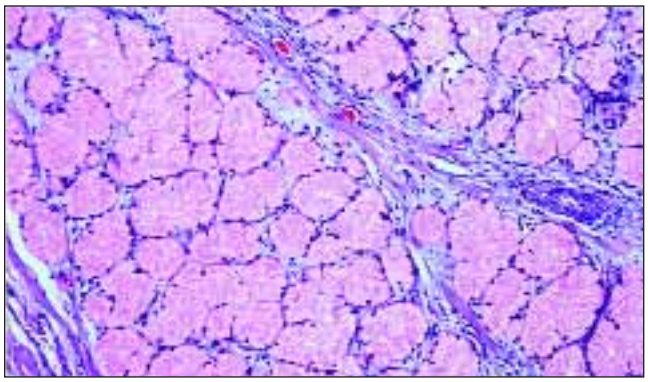

Figure 2. Branched acinotubular glands located in the submucosa of the duodenal bulb polyp.

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Questions

1. What is the diagnosis?
2. With a polyp of this size, would you be concerned about malignancy?
3. What would you include in your differential diagnosis for this type of lesion?
4. What would be your management plan?

Answers

1. Brunner's Gland Adenoma
2. Malignant potential in Brunner's gland adenoma is very low, with only two reports in the English literature (1,2).
3. Consider benign and malignant lesions. Benign: leiomyoma, lipoma, angioma, duodenal duplication cyst. Malignant: adenocarcinoma, lymphoma, carcinoid, leiomyosarcoma.
4. Answers may vary. Endoscopic treatment of the ulcer in the stalk would be standard of care, given the high risk stigmata. However, a polyp of this size in the duodenum may lead some endoscopists to biopsy and consider surgical referral. The case presented illustrates endoscopic resection as a viable, and perhaps, preferable alternative to surgery. On follow up several months later, the patient was asymptomatic with resolution of anemia.

DISCUSSION

Brunner's glands are compound, tubular, mucous glands located in the submucosa of the duodenum that provide abundant alkaline mucus to neutralize the acid contents entering the duodenum from the stomach. It is thought that they provide duodenal resistance to ulcer formation by producing and secreting an enteric hormone called enterogastrone, an inhibitor of gastric acid secretion. Brunner's gland adenomas are usually found in middle age with equal distribution in males and females. Although a rare cause of gastrointestinal bleeding, 40%–50% of Brunner's gland adenomas present with symptomatic anemia and melena (3). Obstruction as a presenting symptom has been noted in up to 50%, presenting as nausea, vomiting, and postprandial pain. Hypotheses on Brunner's gland adenoma pathogenesis include gland hyperplasia by increased acid secretion (4), inflammatory foci (5), and *H. pylori* infection (6). In our patient, *H. pylori* IgG antibody titer was positive at 1.81 (ref range <1.1), and he was treated for two weeks with standard therapy. Given the disproportionate high prevalence of *H. pylori* compared to Brunner's gland adenoma, a clear association cannot be made. While these theories are discussed, it is currently believed that these adenomas are actually hamartomas with a predominance of Brunner's glands in addition to mixed elements (7). There are less than 200 reported cases in the literature with the majority being pedunculated and less than 2 cm in size (7). The case presented stands amongst few case reports (8,9) demonstrating the feasibility of endoscopic resection for symptomatic, large Brunner's gland adenomas thereby obviating the need for surgical intervention. The endoscopist should consider the size, pedunculated accessibility, and severity of symptoms, and comfort level prior to resection. ■

References

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