



Giant Brunner's Gland Hamartoma as a Cause of Iron Deficiency Anemia

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CASE REPORT

A 56-year-old man initially presented for evaluation of iron deficiency anemia. Further evaluation with esophagogastroduodenoscopy (EGD) and colonoscopy revealed a large, benign-appearing mass in the duodenum (Figure 1). Subsequent endoscopic ultrasound (EUS) revealed a 3 x 4-cm subepithelial mass arising from the submucosa with numerous cystic spaces and mixed echogenicity (Figure 2).

Transduodenal resection per hepatobiliary surgery revealed a 3 x 12-cm polyp (Figure 3). Surgical evaluation also revealed ulcerations of the mucosa surrounding the polyp, which were thought to be the cause of his iron deficiency anemia. Pathology revealed Brunner's gland hyperplasia with secondary polyp formation that extended to the margin. The interface between normal small intestine and the polyp was visible. Both showed an intact unremarkable mucosal surface without inflammation. The transition from small nests of Brunner's glands and other submucosal elements to a multinodular proliferation composed entirely of closely spaced Brunner's glands was also noted (Figure 4). On follow-up one month after resection, the patient's hemoglobin level normalized and he no longer required iron supplementation.

While Brunner's gland hamartomas are rare, with an incidence of 0.008%, they also account for 5-10% of all benign duodenal tumors. These lesions usually present in the fifth or sixth decade of life and have low malignant potential. Brunner's gland



Figure 1. EGD showing a large, benign-appearing mass in the duodenum.

hamartomas are usually 1-3 cm in size, so our case was unusual with a large 12-cm Brunner's gland, which was successfully



Figure 2. EUS revealing 3 x 4-cm subepithelial mass (arrows) arising from the submucosa with numerous cystic spaces and mixed echogenicity.

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Figure 3. Resected 3 x 12-cm polyp.

removed by means of transduodenal resection. Interestingly, although the patient's gastric biopsies did not show evidence of *Helicobacter pylori*, there has been an association of Brunner's gland hamartomas with concurrent *H. pylori* infections.¹ In one study, dysplastic changes were noted in 2.1% of cases, with only 0.3% of those being invasive carcinoma.² Treatment for Brunner's gland hamartomas is usually conservative in asymptomatic patients, while surgical or endoscopic resection is indicated for symptomatic patients.



Figure 4. Brunner's gland hyperplasia with secondary polyp formation that extends to the margin.

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DISCLOSURES

Author contributions: M. Khosla and F. Khosravi collected data, reviewed the literature, and wrote and revised the article. J. Cashman and A. Das revised the article. M. Khosla is the article guarantor.