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IMAGE | ENDOSCOPY

# An Unusual Gastric Polyp: Brunneroma

Jad Mhanna, MD[1], Fadi F. Francis, MD[1], Bassel Zein Sabatto, MD[2], Ayman Tawil, MD[2], and Jana G. Hashash, MD MSc[1]

[1]*Division of Gastroenterology, American University of Beirut, Beirut, Lebanon*
[2]*Department of Pathology, American University of Beirut, Beirut, Lebanon*

## ABSTRACT

Brunneromas or polypoid hamartomas are benign lesions arising from Brunner glands. They are usually benign lesions with low potential for malignancy. They are usually located in the duodenum and manifest with different unspecific symptoms, such as abdominal pain, nausea, or bloating. Other more serious manifestations are also reported in the literature that are related to the size of the lesion. Usually, they are treated with endoscopic resection, with some lesions requiring surgical intervention. We present a case of a gastric antral polypoid lesion that was consistent with Brunneroma on histology.

## INTRODUCTION

Brunner glands, first described by anatomist Brunner in 1688, are submucosal glands predominantly located in the duodenal bulb and progressively decrease in size and number distally. They function in secreting alkaline viscous mucus protecting the duodenum from acidic gastric chyme.[1] Curveilheir first described Brunner gland adenoma in 1835. They are also referred to as Brunneroma or polypoid hamartoma. These lesions are usually benign with a low malignancy potential.

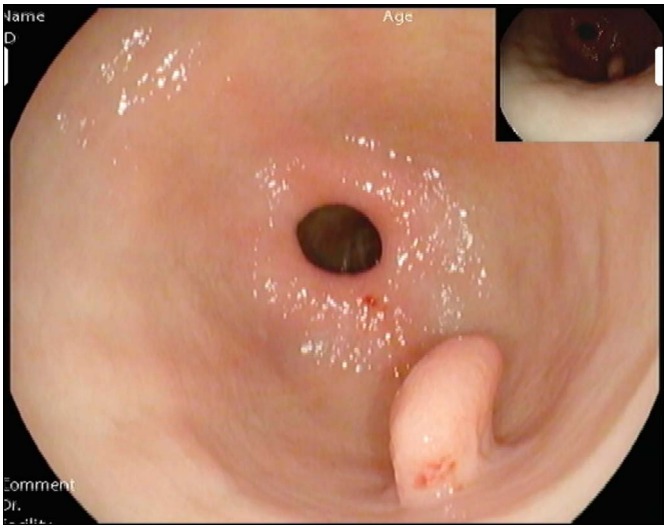


**Figure 1.** Upper endoscopy showing a 2-cm broad-based antral polypoid lesion.

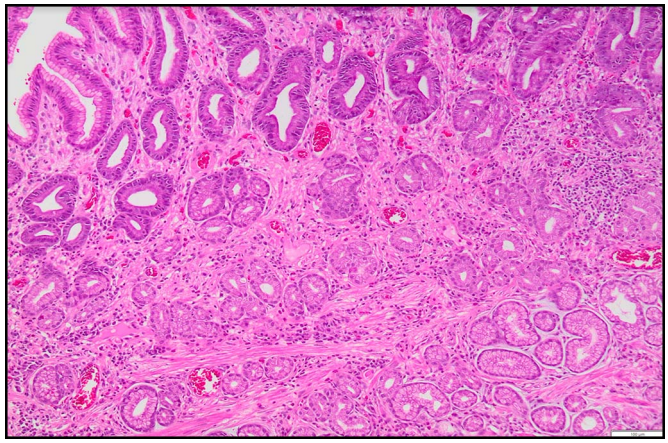

**Figure 2.** Histology showing densely packed cytologically benign glands splaying the muscularis mucosa forming the polypoid nodule.

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**Correspondence:** Jana G. Hashash, MD, MSc (ja38@aub.edu.lb).

## CASE REPORT

We present a 72-year-old woman with hypertension, type 2 diabetes mellitus, and dyslipidemia who was evaluated with upper endoscopy and colonoscopy for new-onset iron deficiency anemia. Upper endoscopy showed a 2-cm broad-based antral polypoid lesion (Figure 1). This lesion was soft, and no submucosal component was appreciated. Owing to the unclear border between normal and polypoid mucosa, methylene blue was injected followed by hot snare polypectomy and then hemostatic clip placement. The endoscopy was otherwise unremarkable. On histology, densely packed cytologically benign glands splaying the muscularis mucosa were noted forming the polypoid nodule (Figure 2). The polyp was excised entirely and included unremarkable underlying submucosal tissue. The polyp was consistent with a Brunner gland nodule/Brunneroma. Despite the polypectomy, the patient remained iron deficient, and a capsule endoscopy is scheduled.

Brunneromas are benign proliferative lesions arising from Brunner glands of the duodenum. In a study by Sakurai et al,[2] of 722 Brunner gland hyperplasia specimens, 2.1% had dysplastic changes, of which 0.3% showed invasive carcinoma. There has been only 1 case report of Brunner gland hamartoma arising from the stomach, namely, the gastric body.[3] In our case, the polyp was located in the gastric antrum. Most Brunneromas are asymptomatic and found incidentally, but some may present with nonspecific symptoms, such as abdominal pain, nausea, or bloating. There have been rare cases of obstruction, gastrointestinal bleeding, duodenal intussusception, and pancreatitis by intermittent obstruction of the ampulla of Vater.

There is a poor understanding of the pathogenesis of Brunneromas. Some studies suggested a correlation with increased acid secretion, inflammation, and *Helicobacter pylori* infection. The most accepted hypothesis is that a Brunneroma is a duodenal dysembryoplastic lesion.[1] Being localized completely in the submucosal layer, endoscopic pinch biopsies are usually negative. These lesions usually require removal for proper histological examination, ideally through endoscopic polypectomy. If endoscopic resection is unsuccessful or cannot be performed because of size, location, or causing complications requiring wider excision, surgical intervention has been used successfully.[4]

## DISCLOSURES

Author contributions: J. Mhanna wrote the manuscript. FF Francis and A. Tawil revised the manuscript for intellectual content. BZ Sabatto edited the manuscript. JG Hashash edited the manuscript and revised the manuscript for intellectual content.

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Informed consent was obtained for this case report.

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