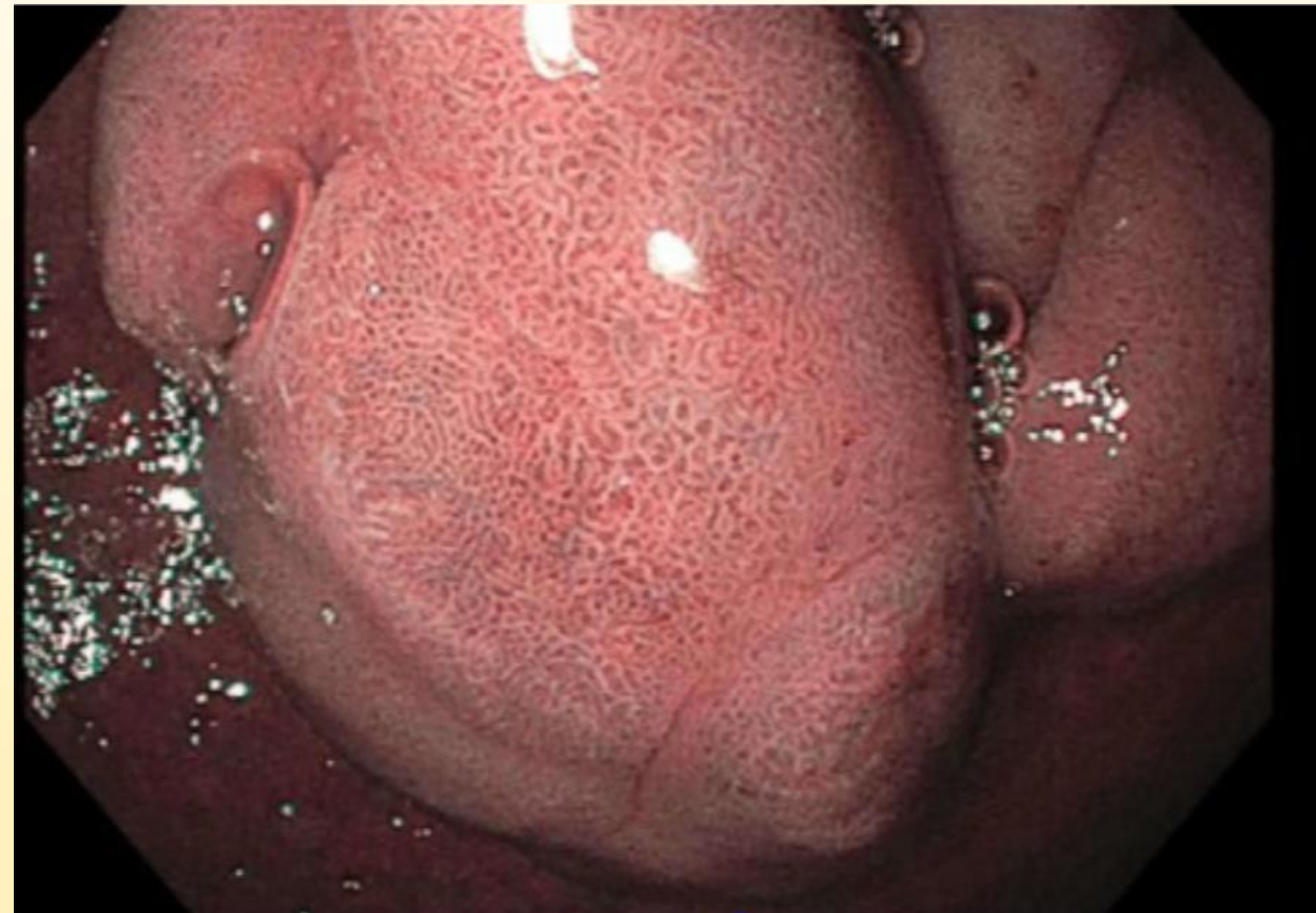


INTRODUCTION

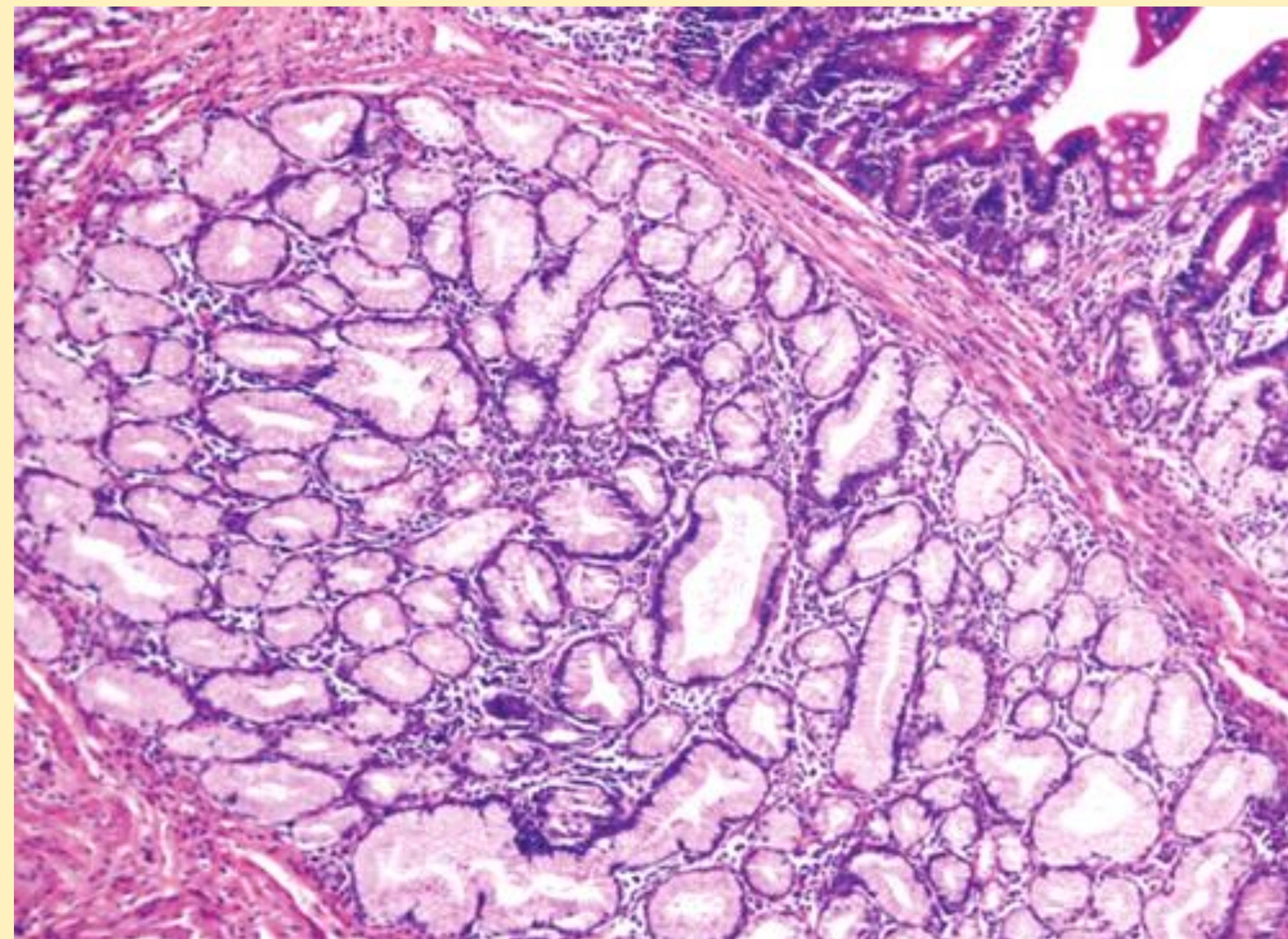
- Brunner's gland hyperplasia (BGH) is a rare, benign polypoidal tumor that is typically found in the first or second part of the duodenum and is usually diagnosed in the fifth or sixth decade of life with equal sexual predilection.
- They account for less than 1% of all primary tumors of the small intestine and are caused by hyperplasia of the exocrine glands within the duodenum, averaging 1-2 cm in size.
- They typically present asymptotically and are diagnosed incidentally during upper endoscopy, but can sometimes present in the setting of gastrointestinal hemorrhage or intestinal obstruction.

CASE DESCRIPTION

- A 67-year-old Hispanic male presented for colon cancer screening. His past medical history included hypertension, hyperlipidemia, diabetes mellitus type 2, and chronic kidney disease stage 3. Review of systems was positive for dyspepsia and his physical exam was unremarkable. Laboratory studies were significant for a microcytic anemia that was consistent with a diagnosis of IDA.
- Endoscopic evaluation revealed gastritis that was biopsied and a single 5 cm pedunculated polyp with no bleeding in the duodenal bulb that was biopsied. Colonoscopy revealed diverticulosis throughout the entire examined colon, and non-bleeding internal and external hemorrhoids.
- Histopathological analysis revealed moderate nonactive chronic gastritis that was negative for intestinal metaplasia but positive for *Helicobacter pylori* (*H. pylori*) infection and Brunner gland hyperplasia of the duodenal bulb polyp.
- The patient was prescribed Clarithromycin triple therapy for *H. pylori* infection and given a referral for endoscopic ultrasound at an outside facility for the purposes of measuring the submucosal depth and attempting polypectomy.



- 5 cm polyp found within the duodenal bulb with biopsy results that revealed Brunner gland hyperplasia.



- Photomicroscope of Brunner's gland hyperplasia showing hyperplastic lobules of Brunner's glands.

DISCUSSION

- BGH has an incidence of <0.01% and 70% are found in the duodenal bulb, 26% in the second portion of the duodenum, and 4% in the third portion, correlating with exocrine gland distribution. 88% are pedunculated polyps with the other 12% being sessile, and they average 1-2 cm in size.
- They are caused by hyperplasia of the exocrine glands within the duodenum but their etiology remains unknown. *H. pylori* could possibly play a role since 71% of BGH cases are associated with concomitant *H. pylori* infection.
- BGH is typically diagnosed in asymptomatic patients and discovered incidentally on upper endoscopy, but clinical manifestations can consist of gastrointestinal bleeding, IDA, or duodenal obstruction.
- Diagnosis is made via endoscopic biopsy. Histopathological analysis will reveal a lack of encapsulation and dysplasia, as well as sheets of Brunner's gland.
- Although BGH is typically a benign lesion, some have malignant potential. Removal is recommended in BGH lesions larger than 2 cm regardless if the patient is asymptomatic. Endoscopic polypectomy is typically the first-line treatment with surgical excision reserved for only massive lesions or polypectomy failure.

CONCLUSION

- This case highlights an example of a very large 5 cm, benign, pedunculated BGH lesion incidentally found within the duodenal bulb of a male patient, who presented for the purpose of being worked-up for IDA, and was also found to have a concomitant *H. pylori* infection, thereby further validating the purported hypothesis of *H. pylori* as an etiological factor in BGH.