

## **Brunner Gland Adenoma in Gastric Antrum: A Case Report**

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### **ABSTRACT**

Brunner gland adenoma is a very rare tumor of duodenum. It is usually asymptomatic and detected incidentally during endoscopy. It is a benign tumor with minor risk of malignant transformation. The etiology and pathogenesis of these lesions is not completely understood. Here we present a case of gastric polypoid lesion with features of brunner gland adenoma on histology which is a very unusual site of occurrence.

**KEYWORDS:** antrum, brunner gland adenoma, gastric.

### **ARTICLE DETAILS**

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### **INTRODUCTION**

Proliferative lesions of brunner glands are rare and account for less than 1% of all gastrointestinal tumors.<sup>1,2</sup> The proliferative lesions of Brunner glands include hyperplasia, adenoma, hamartoma and in rare instances adenocarcinoma.<sup>3,4,5</sup> They are usually detected incidentally and located predominantly in the first part of duodenum.<sup>1,6</sup> Herein we report a case of brunner gland adenoma (BGA) in an unusual location.

### **CASE REPORT**

A 32-year-old woman presented to our gastroenterology unit with complaints of gastric pain and dyspepsia for the past three months. The patient denies any history of NSAIDs intake. Her bowel and bladder habits were normal. There was no significant past medical history. Clinical examination and routine blood examination were normal. Upper gastrointestinal endoscopy showed a polypoid lesion in the gastric antrum measuring 0.9 x 0.6 cm (Figure 1). The endoscopy was otherwise unremarkable. Histological examination revealed lobules of bland appearing brunner glands separated by thin fibrous septa forming a polypoid nodule which was covered by foveolar epithelium (Figure 2 and 3). There were no features of atypia or malignancy. Special stain for *Helicobacter pylori* was negative. A diagnosis of gastric brunner gland adenoma was made.

### **DISCUSSION**

Brunner gland adenomas are mucus secreting acinar glands predominantly located in the duodenal submucosa.<sup>2,3</sup> Occasionally they proliferate and impart a nodular appearance to the mucosal surface.<sup>1</sup> Benign proliferative lesions of brunner glands include hyperplasia, hamartoma, and adenoma.<sup>7,8</sup> The distinction between these lesions is arbitrary and encompasses a considerable degree of overlapping among these nomenclature.<sup>9,10</sup> Some authors have differentiated benign gland adenoma and hamartoma on the basis of size of the lesion.<sup>3,7</sup> Lesions smaller than 2 cm are termed as brunner gland adenoma and those greater than 2 cm as brunner gland hamartoma.<sup>4,5</sup>

The pathogenesis of brunner gland adenoma is obscure. The suggested reasons are chronic pancreatitis, *Helicobacter pylori* infection, hyperchlorhydria.<sup>2,3,7,8</sup> Some theories conclude them to be dysembryoplastic lesions where some have explained as a hyperplastic reaction to lymphocytic infiltration.<sup>9,10</sup>

The most common site of BGA is duodenal bulb.<sup>1</sup> Therefore our case is unique due to its presentation in gastric antrum which is a very unusual location. There are only two cases of brunner gland adenoma of the stomach reported in literature till date.<sup>4,9</sup>

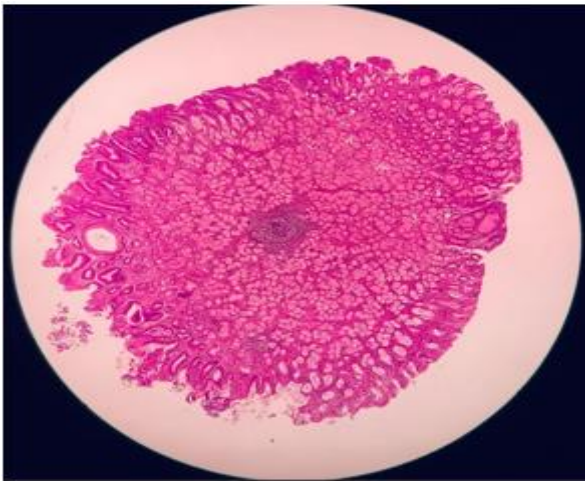
Majority of these lesions are asymptomatic, detected incidentally on endoscopy and can be treated conservatively.<sup>6,9</sup> However patients with brunner gland

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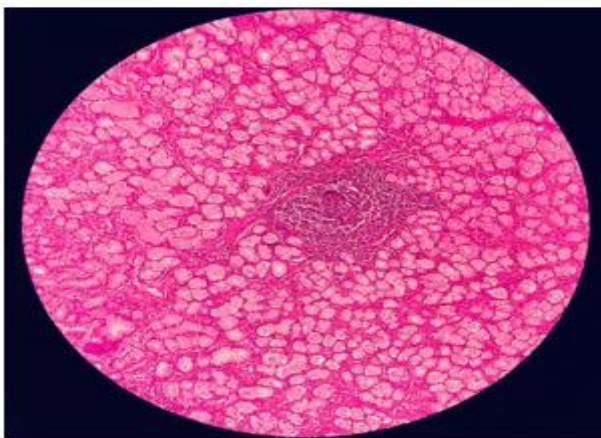
lesions can present with abdominal pain, vomiting, bleeding, pancreatitis, intussusception and obstructive symptoms. 3,5,7,10 Endoscopic or surgical excision of large lesions is effective, diagnostic and safe. It has been studied that the BGA is benign in behavior but carries a minor risk of malignant transformation. 4,8,9 Incidence of recurrence is rare after excision.



**Figure 1: Upper GI endoscopy showing a polyp in gastric antrum**



**Figure 2: Histology showing polypoid lesion lined by foveolar epithelium (40X)**



**Figure 3: Closely packed brunner gland and lymphoid aggregate (400X)**

## REFERENCES

- I. Odze RD, Goldblum JR. Odze and Goldblum Surgical Pathology of the GI Tract, Liver, Biliary

Tract and Pancreas. 3rd edition. Elsevier Saunders, 2015:p. 579-606.

- II. Alsugair Z, Lavrut PM, Chassagne L. A 10 cm pedunculated duodenal Brunner gland hamartoma, case report and literature review. *International Journal of Surgery Case Reports*. 2022; 100: ISSN 2210-2612.
- III. Sorleto M, Stranghoner AT, Wuttig H, Engelhard O, Gartung C. Brunner's Gland Adenoma – A Rare Cause of Gastrointestinal Bleeding: Case Report and Systematic Review. *Case Rep Gastroenterol* 2017;11:1–8
- IV. Chung D, Kim N, Cho H, Kim Y. Cystic brunner's gland hamartoma in the gastric body: A case report. *Korean J Pathol*. 2014;48(5):371–4.
- V. Frenkel NC, Lacl'e MM, Borel RIM. A giant brunneroma causing gastrointestinal bleeding and severe anemia requiring transfusion and surgery. *Case Rep Surg*. 2017;2017:694–49. doi: 10.1155/2017/6940649.
- VI. L. Lu, R. Li, G. Zhang, Z. Zhao, W. Fu, W. Li. Brunner's gland adenoma of duodenum: report of two cases. *International Journal of Clinical and Experimental Pathology*. 2015;8: 7565–9.
- VII. Yi L, Cheng Z, Qiu H, Yang J, Wang T, Liu K. A giant Brunner's gland hamartoma being treated as a pedunculated polyp: a case report. *BMC Gastroenterol* 2019;19:151.
- VIII. Iwamuro M, Tanaka T, Ando S, Gotoda T, Kanzaki H, Kawano S et al. Endoscopic Resection of a Pedunculated Brunner's Gland Hamartoma of the Duodenum. *Case reports in gastrointestinal medicine*. 2016;Article ID 6707235, 5 pages <https://doi.org/10.1155/2016/6707235>
- IX. Mhanna J, Francis FF, Sabatto BZ, Tawil A, Hashash JG. An Unusual Gastric Polyp: Brunneroma. *ACG case reports journal*. 2021;8:e00681. doi:10.14309/crj.0000000000000681.
- X. Rocco A, Borriello P, Compare D, Colibus PD, Pica L, Iacono A. Large brunner's gland adenoma: Case report and literature review.