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Case Study

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BRUNNER'S GLAND HAMARTOMA: A CASE REPORT

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SUMMARY

Adenomas or hamartomas of the Brunner glands are small benign lesions, extremely rare and most often discovered by chance during upper gastrointestinal endoscopy. These lesions tend to be asymptomatic, but patients may present with symptoms of duodenal obstruction or bleeding. Histologically, a Brunner's adenoma comprises the cells components of the Brunner gland, fat and muscle cells. We report the case of a 64-year-old woman with chronic epigastric pain secondary to a lesion in the second duodenum. The lesion was successfully removed by surgery. No significant complications were observed. Histology was compatible with a hamartoma of the Brunner's gland.

KEY WORDS: Brunner's glands, adenoma, duodenum, esogastroduodenal fibroscopy.

INTRODUCTION

Brunner's gland adenoma, also known as hamartoma or Brunneroma, is an extremely rare benign tumor that accounts for no more than 5% of duodenal benign tumors with an incidence of <0.01%.[1,2] These lesions usually form pedunculated polypoid masses during their growth and are usually asymptomatic; however, if the tumor becomes large enough, it can cause upper gastrointestinal bleeding and/or obstruction. We report one more case of a Brunner's gland hamartoma.

CASE REPORT

A 64-year-old woman with no particular medical history, had chronic epigastric pain without vomiting, gastroesophageal reflux or upper or lower gastrointestinal bleeding.

Physical examination found a patient in good general condition and a body mass index of 22 kg/m2 with mild epigastric tenderness.

His blood count was normal, total serum bilirubin was 1.2 mg/dl, serum aspartate aminotransferase was 30 IU/L, and serum alanine transaminase was 27 IU/L.

Upper gastrointestinal endoscopy showed a normal esophagus and stomach with a pedunculated polyp measuring 3 cm with no bleeding signs in the second part of the duodenum (Fig.1).

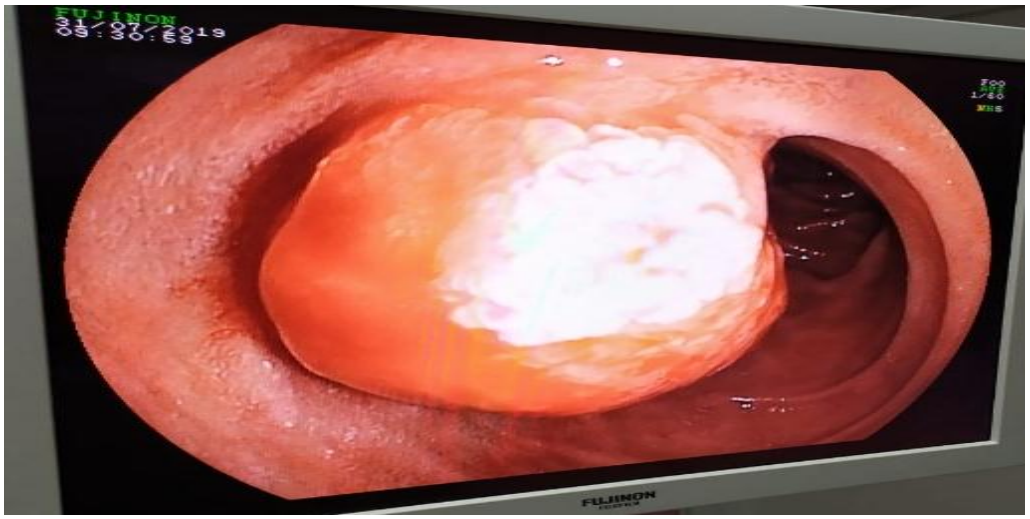

Figure 1: Pedicled polyp in the second duodenum.

Surgical resection was performed. On histological examination the villi have a preserved height, bordered by a regular simple cubo-cylindrical epithelium. The chorion is congestive edematous, the site of a diffuse polymorphic inflammatory infiltrate made up of lymphocytes, plasma cells and some neutrophilic polynuclear cells. Presence of Brunner's glands which are hyperplastic. Absence of pathogenic agents. Absence of epithelio giganto cellular granuloma. Absence of malignant tumor proliferation. Morphological appearance was compatible with a hamartoma of the Brunner's gland (Fig.2) with no sign of malignancy or dysplasia.

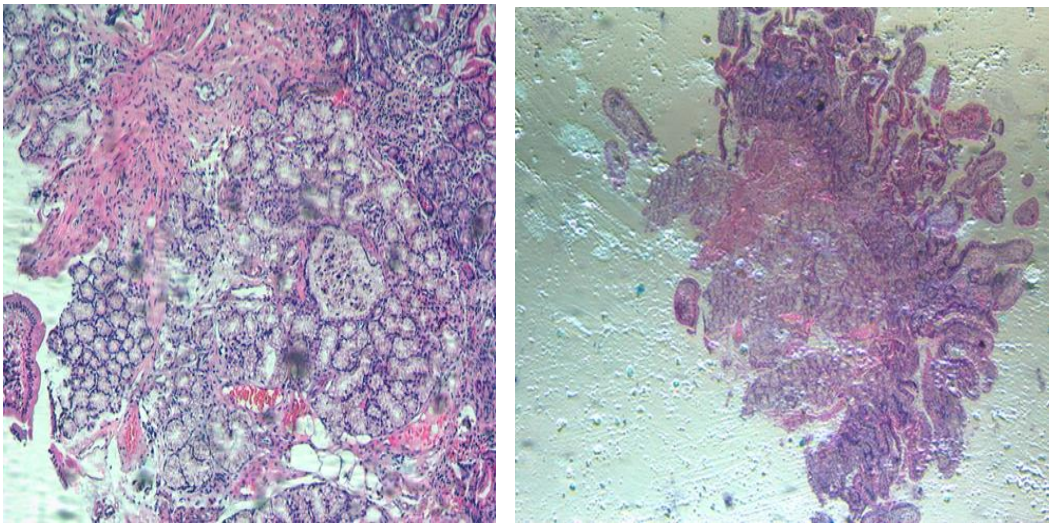

Figure 2: morphological appearance of Brunner's gland adenoma

DISCUSSION

Brunner's adenoma is a rare benign tumor originating from Brunner's duodenal glands.[1] These actinolobular glands were first described by Brunner in 1835. They secrete pepsinogen and mucus to inhibit acid secretion and protect the duodenum from gastric acid and ulcers. It is usually a single pedunculated polyp, with an average size of 2 cm, rarely more than 5 cm, located in the first part of the duodenum.[2]

The exact pathogenesis is unknown. One hypothesis suggests that they may be related to local mucosal irritation, chronic pancreatitis, or helicobacter pylori infection. It is often difficult to differentiate between Brunner's gland hyperplasia and Brunner's gland hamartoma.[3] However, lesions smaller than 5 mm, whether single or multiple, are defined as Brunner's gland hyperplasia, while lesions larger than 5 mm are called hamartomas.[4]

Hamartomas of the Brunner's gland are most often observed in the fifth or sixth decade of life with an equal distribution in both gender.[5] Most patients are asymptomatic, but some may have non-specific symptoms such as abdominal bloating, abdominal pain and nausea. Hamartomas of the Brunner's gland may be found incidentally during upper gastrointestinal endoscopy or abdominal imaging.[6] Although symptomatic lesions are rare, patients may present with hemorrhage or obstruction. Gastrointestinal bleeding may occur as a result of ulcers or tumor erosion, causing melena, iron deficiency anemia, fatigue and, in rare cases, hematemesis.[5] They are mainly found in the duodenal bulb (57%), they can also be observed in the second (27%) and third (7%) parts of the duodenum.[6]

Patients may develop stenosis when the mass becomes too large or in the case of diffuse hyperplasia. These patients often experience persistent nausea, vomiting, weight loss, epigastric pain, abdominal pain and early satiety. Obstructive jaundice due to the location and size of the tumor are other uncommon symptoms.[4-6] These patients tend to have hamartomas larger than 2 cm.

Hamartomas of the Brunner's gland have a characteristic histology[7-8] consisting of an unusual mixture of normal tissues and Brunner's glands, fat cells, lymphoid cells and ductal tissues. Dysplasia is not observed. The differential diagnosis of duodenal mass lesions includes leiomyoma, adenoma, lipoma, adenocarcinoma, carcinoid tumors, lymphomas, leiomyosarcoma, pancreatic or ampullary tumors, and lesions of Peutz-Jeghers syndrome.[3,4]

Treatment depends on the size of the tumor, symptoms and the possibility of malignancy. Asymptomatic hamartomas of the Brunner's gland generally do not require treatment because their neoplastic potential is low.[2] However, significant or symptomatic lesions that result in obstruction or bleeding should be removed. This can be done endoscopically or surgically. Endoscopic treatment is preferred for pedunculated lesions; however, surgical resection is necessary if endoscopic methods fail. In our case, the surgical removal went well.

CONCLUSION

Brunner's adenoma is a rare disease, its symptomatology is not univocal hence a delay in its diagnosis, however with the current imaging, its discovery will probably occupy a large place.

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