



Case report

A case report of brunner gland adenoma

*Vidhya Subramanian**, Mahendranath. P, A. Shalini, Sucharita Murugesan

Private practitioner, India

ARTICLE INFO:

Article history:

Received: 1 October 2016

Received in revised form:

30 October 2016

Accepted: 10 November 2016

Available online: 31 December 2016

Keywords: Adenoma, Brunner gland, Polyp duodenum

ABSTRACT

Brunner gland adenoma are rare tumor and etiology remains obscure. Bleeding is the most common symptom, Gastric outlet or duodenal obstruction may also occur. The incidence is less than 5%. This case is presented here for rarity of clinical presentation. A 69 years female came with history of melena . Gastroduodenoscopy diagnosed with duodenal polyp.

Introduction

Hyperplasia of brunner gland with a lesion greater than 1cm was described as brunner gland adenoma.[1] Most cases have been reported between the age group of 40 to 60 years, There is no gender predominance. The anti-acid function of Brunner glands has been postulated that hyperchlorhydria could stimulate these structures to undergo hyperplasia.[2]

Case history

A 69 year female came with complains of abdominal pain , nausea and melena for 2 weeks, No history of vomiting, fever ,loose stools and altered bowel habits. Investigation done,

Peripheral smear revealed Microcytic Hypochromic anaemia, USG abdomen was normal, stool for occult blood was positive, OGD Scopy revealed duodenal polyp.

Gross features : Received a single polypoidal greyish white soft tissue mass measuring 3x1.5x0.5cm, whitish firm in consistency.

Microscopy : Section showed duodenal mucosa with focal superficial ulceration overlying benign neoplasm composed of lobules of Brunner gland separated by fibrous septa and enclosing dilated ducts. [Figure 1, 2]

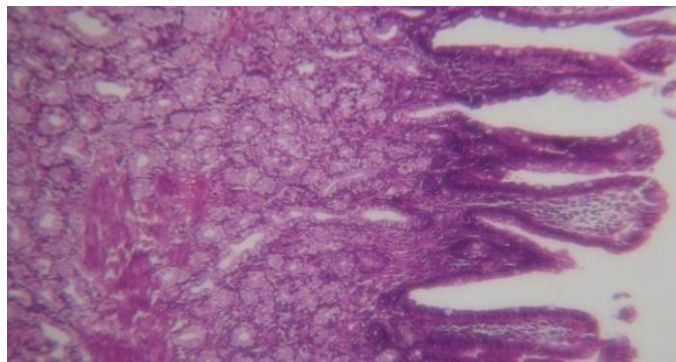


Fig 1 : Brunner gland adenoma (H&E, 10x)

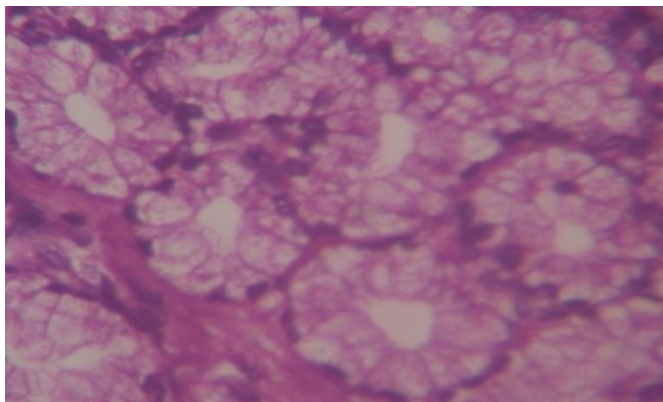


Fig 2: Brunner gland adenoma (H&E, 40x)

Discussion

Brunner glands are branched acinotubular glands in the submucosa of the duodenum. They are located mainly in the proximal duodenum. Hyperplasia of Brunner glands with a lesion greater than 1 cm is described as a Brunner gland adenoma.[1] Several features of these lesions favor their designation as hamartomas, including the lack of encapsulation; the acini, smooth muscles, adipose tissue, Paneth cells, and mucosal glands; and the lack of any cell atypia. [2,3] It is estimated that they represent approximately 5-10% of benign duodenal tumors. They are variable in size, typically 1-3 cm, with only a few reported cases of lesions larger than 5 cm. Brunner gland hamartomas appear pedunculated in the majority of cases.[4] The lesions must be differentiated from adenomas, leiomyomas, lipomas, neurogenic tumors, leiomyosarcomas, aberrant pancreatic tissue, prolapsed pyloric mucosa, and cystic dystrophy of the duodenal wall. Most cases have been reported in patients between the ages of 40 and 60 years, with no gender predominance, though cases have been described from early infancy to 80 years of age. [5]The pathogenesis of Brunner gland hamartoma remains unclear. Because of the anti-acid function of Brunner glands, it has been postulated that hyperchlorhydria could stimulate these structures to undergo hyperplasia.[2] Diagnosis is usually confirmed by the use of imaging studies and upper endoscopy. Smooth-walled polypoid filling defects may be seen in the duodenal bulb or corresponding portion of the duodenum on upper gastrointestinal barium studies.[6] Endoscopy localizes the lesion; however, biopsies are usually negative or reveal only Brunner gland hyperplasia due to the submucosal nature of the tumor.[4] Computed tomography is useful to confirm the absence of extraluminal extension of the lesion as well as to delineate its relationship to the pancreas, common bile duct, and vasculature.[3] Endoscopic ultrasound (EUS) is helpful in assessing the origin, extent, and vascularity of these suspected submucosal lesions. Hizawa and coworkers described EUS

features seen on 6 cases of Brunner gland hamartoma, which were of a heterogeneous solid or cystic mass within the submucosa.[7]

Although Brunner gland hamartoma is not considered premalignant, there have been very rare reports of focal cellular atypia within the lesion. Fujimaki and colleagues reported sporadic immunopositivity for p53 in a focus of atypical glands within a Brunner gland hamartoma.[8] There has also been a case reported of two microcarcinoid foci seen in a pedunculated Brunner gland hamartoma in an asymptomatic patient.

References

1. Rocco A, Borriello P, Compare D, De Colibus P, Pica L, et al. Large Brunner gland adenoma: case report and literature review. *World J Gastroenterol.* 2006;12:1966–1968
2. Zangara J, Kushner H, Drachenberg C, Daly B, Flowers J, Fantry G. Iron deficiency anemia due to a Brunner gland hamartoma. *J Clin Gastroenterol.* 1998;90:353–356
3. Mayoral W, Salcedo JA, Montgomery E, Al-Kawas FH. Biliary obstruction and pancreatitis caused by Brunner gland hyperplasia of the ampulla of Vater: a case report and review of the literature. *Endoscopy.* 2000;32:998–1001
4. Walden DT, Marcon NE. Endoscopic injection and polypectomy for bleeding Brunner gland hamartoma: case report and expanded literature review. *Endoscopy.* 1998;47:403–407.
5. Chattopadhyay P, Kundu AK, Bhattacharyya S, Bandyopadhyay A. Diffuse nodular hyperplasia of

- Brunner gland presenting as upper gastrointestinal haemorrhage. Singapore Med J. 2008;49:81–83
6. Gao YP, Zhu JS, Zheng WJ. Brunner gland adenoma of duodenum: a case report and literature review. World J Gastroenterol. 2004;10:2616–2617
 7. Hizawa K, Iwai K, Esaki M, Suekane H, Inuzuka S, et al. Endosonographic features of Brunner gland hamartomas which were subsequently resected endoscopically. Endoscopy. 2002;34:956–958.
 8. Fujimaki E, Nakamura S, Sugai T, Takeda Y. Brunner gland adenoma with a focus of p53-positive atypical glands. J Gastroenterol. 2000;35:155–158.
 9. Adeonigbagbe O, Lee C, Karowe M, Feeney M, Wallack M, et al. A Brunner gland adenoma as a cause of anemia. J Clin Gastroenterol. 1999;29:193–196.

Cite this article as: **Vidhya Subramanian, Mahendranath. P, A. Shalini, Sucharita Murugesan.** A case report of brunner gland adenoma. **Indian J. Pharm. Biol. Res.**2016; 4(4):29-31

All © 2016 are reserved by Indian Journal of Pharmaceutical and Biological Research

This Journal is licensed under a **Creative Commons Attribution-Non Commercial -Share Alike 3.0 Unported License**. This article can be downloaded to **ANDROID OS** based mobile.