ISSN: 2692-5516

Case Report

Advances in Hematology and Oncology Research

A Rare Case of Brunner's Gland Adenoma causing Melena

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Submitted: 11 July 2020; **Accepted**: 20 July 2020; **Published**: 05 Aug 2020

Introduction

Brunner's gland adenoma is a rare benign, proliferative lesion arising from the Brunner's gland of the duodenum and is known by various names as Brunneroma or polypoidal hamartoma. Brunner gland adenoma was first reported by Cruveilhier in 1835 [1]. We report Brunner's gland adenoma in a 50-year-old female who presented with melena and review briefly Brunner's gland adenoma's clinical presentations, radiological, pathological features and therapy.

Case Report

A 50-year-old female presented with complaint of pain epigastrium for last 3 months and melena for 1 week. She had no history of fever, jaundice or hematemesis. On examination, she had pallor (haemoglobin 10.7 gm/dl). Her abdomen was soft, with no evidence of organomegaly, on per abdominal examination. On upper gastrointestinal endoscopy, she had broad based polypoidal growth projecting at D2. Computed Tomography (CT) scan abdomen revealed broad based polypoidal growth, projecting into D2, with right posterior hepatic artery aneurysm. She was operated and distal gastrectomy with Rou-en-Y gastrojejunostomy (RYGJ) was done. Resected specimen showed pedunculated duodenal polyp total measuring 5x3x1 cm (stalk measuring 1cm). Gastroduodenal junction was not identified. Cut surface of polyp showed solid areas. On microscopic examination, section from duodenal polyp showed lobule formation separated by thin fibrous septa. Lobules were made of Brunner's gland, lined by cells having small basal nuclei, and ample light basophilic cytoplasm. There was no evidence of dysplasia or malignancy. So final impression was duodenal polyp: Brunner's gland adenoma. Twenty days later, embolization of right hepatic artery aneurysm was done. She had no postoperative complications and was discharged after some days.

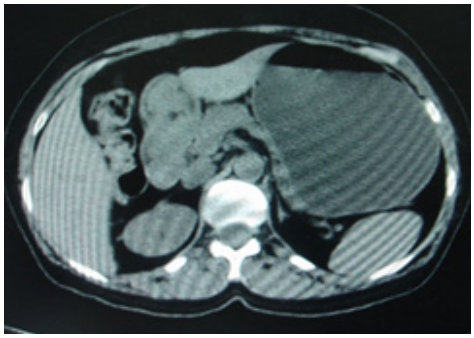


Figure 1: Non-contrast CT image abdomen showing polypoidal mass projecting into D2.

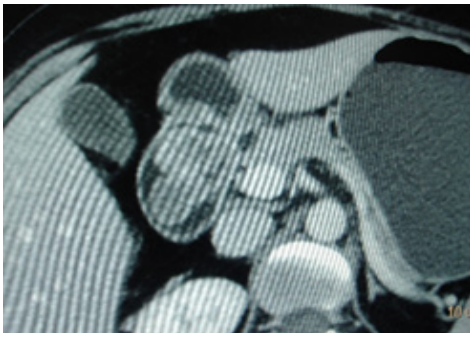
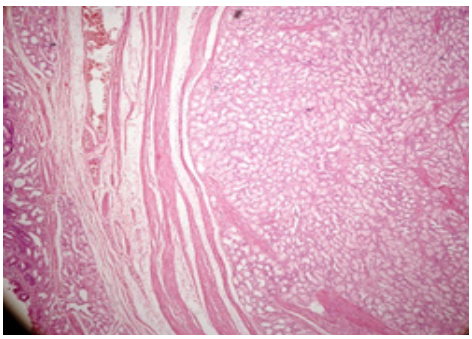
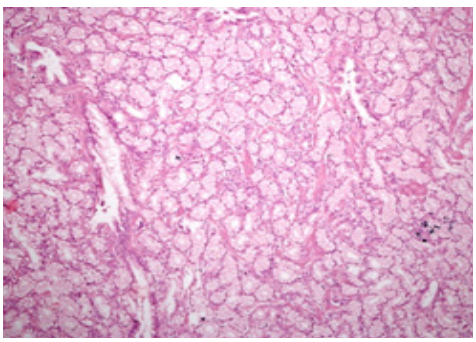


Figure 2: Contrast CT image abdomen showing enhancing polypoidal mass projecting into D2.





Figures 3 and 4: Section from duodenal polyp showing lobule formation separated by thin fibrous septa. Lobules were made of Brunner's gland lined by cells having small basal nuclei and ample light basophilic cytoplasm. There was no evidence of dysplasia or malignancy.

Discussion

Brunner's glands are found in highest concentration in the proximal duodenum with rarely extension to the proximal jejunum [2]. These glands secrete a viscous alkaline fluid that is thought to protect the duodenal mucosa from the effects of gastric acid. Brunner glands also secrete enterogastrone, a hormone that inhibits gastric acid secretion [3].

Benign tumors of duodenum are rare, with Brunner's gland adenomas accounting for only 11% of these lesions [4]. Brunner's gland adenoma tend to predominate in the fifth and sixth decades, with no sex predominance [2]. Brunner's gland adenoma are generally 1-2cm in diameter, but size may range from 1-12cm [4]. In our case polyp was measuring 5x3x1cm. The most common location for Brunner's gland adenoma is posterior wall of duodenum, near the junction of first and second part. Rarely Brunner's gland adenoma are found in the pyloric channel, ampulla of Vater, jejunum or proximal ileum [2,5]. The etiology of Brunner's gland adenoma remains obscure.

Brunner's gland adenoma can be symptomatic or asymptomatic. Asymptomatic ones are usually found incidentally. Symptomatic Brunner's gland adenoma are composed of hyperplastic Brunner's gland and admixture of glandular, adipose and muscular tissues [6]. Brunner's gland adenoma generally are without malignant predisposition, but few reports of focal atypical gland with malignant predisposition have been published [7].

The most common clinical presentation of Brunner's gland adenoma is either bleeding (due to ulceration or erosion of the tumor) or obstruction. Less frequent presentations include obstructive jaundice, intussusception, recurrent pancreatitis or diarrhea (owing to duodenal motor disturbance) [1,7-10].

On upper gastrointestinal series, Brunner's gland adenoma is generally seen as a smooth surfaced polypoid lesion. On occasion, ulceration on the surface of the polyp may be noted. Endoscopy has dual role in diagnosing and treating Brunner's gland adenoma, since it can verify the histological diagnosis and remove the tumour simultaneously. Endoscopic punch biopsy is usually negative, because the tumour is entirely covered with thick intact duodenal mucosa and the biopsy is not deep enough to reach the submucosal tumour tissue [3,11]. Computed Tomography scan may occasionally be helpful in defining the relationship of lesion to other adjacent organs [11,12].

Symptomatic Brunner's gland adenoma (like in our case) need surgical resection. When the tumour is small or pedunculated, endoscopic polypectomy is the first choice [1,13]. Open surgical excision is reserved for cases where snaring has failed or when tumour is very large [14,15]. In our case, patient presented with melena and Brunner's gland adenoma was large. So patient was managed surgically.

The first reported polypectomy of Brunner's gland adenoma was by Appel and Bentlif in 1976 [16]. It is recommended that patients be placed on acid suppressive therapy after polypectomy, to reduce the risk of bleeding (due to constant exposure to acid in the upper gastrointestinal tract and the increased vascularity of the anatomic area) [8]. There is still no consensus on surgical management of incidentally found asymptomatic Brunner's gland adenoma [8,11]. There have been no reported cases of recurrence of Brunner's gland adenoma after polypectomy or surgery [3].

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