Case Report

Brunner's gland hyperplasia with dysplasia: A case report with a review of the literature

FZ Chabib, A Essaid

ABSTRACT

The hyperplasia of Brunner's glands, also called Brunner’s Gland Hamartoma or Brunneroma is a rare proliferative lesion from Brunner's glands of the duodenum. These lesions previously were described as benign, without malignant potential. Endoscopy has revolutionized the care of these polyps: it allows the macroscopic and histological diagnosis; it also allows curative treatment and monitoring at short term. We report a rare case of a large brunners hamartoma (BH), localized in the duodenal bulb who discovered at the occasion of upper gastrointestinal hemorrhage. This observation has two special particularities: Histopathological examination of this Brunner’s gland hyperplasia revealed, foci of low-grade dysplasia: Complete excision successfully despite its size and its delicate location.

INTRODUCTION

Benign tumors of the duodenum are rare (0.008%). Hamartoma of Brunner's glands (H.B) is only 10.6% of these tumors. In the literature to date less than 200 documented cases were reported and 57% of these tumors are bulb location. Malignant transformation is still extremely rare with only 24 cases reported in the literature. This is a report of a patient presenting with upper gastrointestinal hemorrhage who had a large Brunner’s gland hamartoma localized in the duodenal bulb resected endoscopically and whose histology revealed a focus of well marked epithelial dysplasia of a low grade.

CASE REPORT

A 60-year-old woman, without pathological history who complained 4 months before admission of dyspepsia associated with episodes of intermittent immediate post prandial vomiting. Three months later, she presented an episode of hematemesis of small amount which motivated her to consult. Clinical examination and biology was un remarkable. Upper gastrointestinal endoscopy revealed the presence of a large pedunculated bulb polyp about 3 × 1cm, with a small area of erosion at its free end.

The Proctoscopy and total colonoscopy revealed colon free polyps. The polyp was completely resected endoscopically and extracted without incident.

The postoperative course was in significant. The patient was able to leave the hospital the next day with good clinical outcome.

Discussion:

Johann Conrad Brunner (1653-1727) was a Swiss anatomist who discovered Brunner glands.1 Duodenal benign tumors are very rare and only found in 0.008% of patients. The gland adenoma of Brunner, also known as brunneroma name, is about 5% to 10% of these tumors and most often occurs in the fifth or sixth decade of life without sex predominance.2,3 Brunner adenomas have a variable size of 0.7 to 12 cm, with an average of 4 cm.4 The majority (88%) pedunculated5 and occur most often along the posterior wall of the duodenum at the junction of the first and the second portion.6 As these glands are found primarily in the proximal duodenum, over 50% of these adenomas are located in the duodenal bulb, 27% in the second portion of the duodenum, and only 7% in the third part of the duodenum.5

The appearance of atypical glands with malignant potential in adenoma Brunner previously described by Zanetti and Casedei and Fujimaki and these colleagues.7,8

In a Japanese study concerning the incidence of dysplasia and invasive cancer in hyperplasia of Brunner’s glands, it has been
demonstrated that dysplasia occurring in 2.1% of cases, and invasive carcinoma in 0.3% of cases. To date, there were 24 cases of adenocarcinoma from Brunner glands reported in the literature. Table 1. Published cases of duodenal cancer arising from Brunner’s gland (1986–2013)

<table>
<thead>
<tr>
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<th>Author</th>
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SMT = submucosal tumor-like

Generally, they are asymptomatic and are discovered incidentally during an endoscopy. However, patients may present dyspepsia, vomiting or weight loss. In some patients, these adenomas may present as a complication: gastrointestinal bleeding duodenal intussusception. Very rarely, when the size is considerable, it can manifest as a high obstruction, biliary fistula, acute or recurrent pancreatitis, or even simulate a cancer of the pancreatic head. If the hamartoma is symptomatic, the indication for resection is formal. However, in case of accidental discovery, ablation is discussed. Excision was previously surgical, which probably explains the reluctance to operate a non-symptomatic brunnerien hamartoma. In recent years, the development of interventional endoscopy has revolutionized the management of patients with gastroduodenal polyps and allowed their avoid undergoing surgery. Endoscopic resection is simple, less invasive and long-term outcome is favorable and has the advantage of reducing the cost and length of stay compared to surgery. We can distinguish two types of endoscopic treatment: polypectomy with forceps or loop which is the oldest and Endoscopic mucosal resection technique is a newer technique.

The first reported case of polypectomy adenoma Brunnerien was performed by Appel and Bentlif in 1976. Since then, several cases have been reported. When the tumor is small or pedicle, endoscopic polypectomy is the treatment of choice.

Since the majority of brunneriens hamartomas are benign, polypectomy is both diagnostic and curative. However as we have seen through the given literature and through our case, there is a risk of dysplastic transformation and therefore malignant potential, not zero. Hence the bloc resection must be preferred for a good histological evaluation. Surgical treatment should be reserved for cases where invasive carcinoma was histologically confirmed. Patients with dysplastic polyps should be monitored periodically for recidivism. It is recommended endoscopy at 6 months apart the first year, then yearly for five years.

**CONCLUSION**

Brunnerien hamartoma is a benign and rare lesion of the duodenum, which have generally good prognosis, however endoscopists should be aware that there have been rare cases of malignant transformation. The endoscopic excision seems appropriate even in the absence of clinical symptoms, because of the risk of complications and especially the risk of degeneration.
Figure 1: Polyp is put down to the antrum of stomach.

Figure 2: Polyp contained in the snare.

Figure 3: Polyp Caught by a basket.

Figure 4: The hemoclips inserted at the base of implantation.

Figure 5: Histological sections at the polyp.  
A: hyperplasia of Brunner's glands  
B: foci of low-grade dysplasia.

REFERENCES


