

Pedunculated Tubular Adenoma of the Duodenum

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Primary benign neoplasms of the small bowel are unusual and less common than malignant neoplasms of the small bowel. Diagnostic difficulties and nonspecific symptoms are characteristic of this pathology. We describe a case of upper gastrointestinal hemorrhage with a duodenal neoplasm found incidentally under panendoscopy. After laparotomy, a histopathologic examination revealed a tubular adenoma that measured $5 \times 2.5 \times 1$ cm. A review of the literature revealed that similar cases have rarely been reported. However, clinicians must have a high index of suspicion for unexplained gastrointestinal hemorrhage. Only early management can ensure excellent overall survival rate and prognosis for this condition.

Key words: adenoma, benign neoplasm, duodenum

INTRODUCTION

Primary neoplasms of the small bowel are unusual and constitute 1%-5% of gastrointestinal tract neoplasms¹⁻⁴. They are challenging for clinicians because of their delayed presentation and nonspecific symptoms⁵. The diagnosis of elevated lesions of the duodenum has increased in recent years because of the more frequent use of panendoscopy. In patients with a suspected duodenal neoplasm, gastroduodenoscopy is required to establish the location, size and morphology of the lesion. Accurate histological diagnosis before the operation aids in developing a better strategy for surgical intervention. Here, we report a patient with a pedunculated tubular adenoma of the duodenum who presented with gastrointestinal hemorrhage and had a favorable outcome after surgical intervention.

CASE REPORT

A 23-year-old male soldier, who had been healthy, was admitted to hospital for general malaise, dizziness and a fainting spell two days before admission. On physical

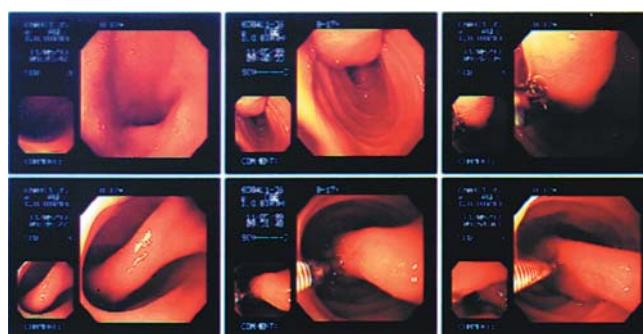


Fig 1. Gastroduodenoscopy revealed a large tumor of about $4 \times 2 \times 1.5$ cm in size, with surface hyperemia and a long stalk, in the second portion of the duodenum.

examination, pale conjunctiva and lips were observed. The abdomen was soft with vague epigastric pain. No palpable mass, hepatomegaly or splenomegaly was found.

Laboratory data revealed a white blood cell count of $5180/\text{mm}^3$, hemoglobin $7 \mu\text{L}$, hematocrit 22%, and stools were melanotic and strongly guaiac-positive. The results of biochemical studies were within normal limits. Subsequent gastroduodenoscopy found a large tumor with a long stalk about $4 \times 2 \times 1.5$ cm in size in the second portion of the duodenum (Fig. 1). An endoscopic biopsy was performed, and the pathology report revealed a tubular adenoma with mild dysplasia.

After integrating the above positive findings, surgical intervention was conducted in view of the malignant potential of the tumor. Operative findings revealed a very large pedunculated tumor in the upper part of the second

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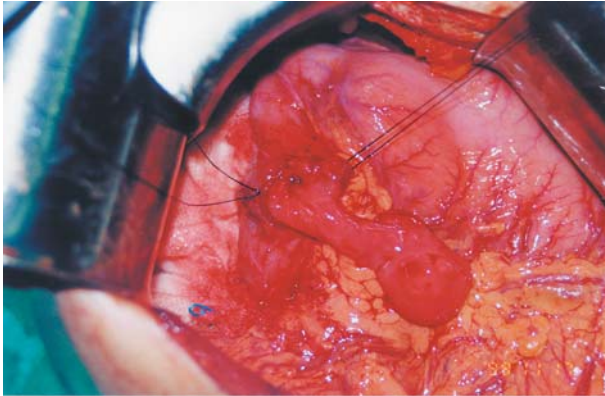


Fig 2. Intraoperative findings revealed a large pedunculated tumor, measuring 5×2.5×1 cm, in the upper part of the secondary portion of the duodenum.

portion of duodenum (Fig. 2). Duodenotomy was performed to remove the tumor and subsequent histopathologic examination revealed a tubular adenoma with mild dysplasia.

DISCUSSION

Small bowel neoplasms are rare, despite the small bowel constituting about 75% of the length of the gastrointestinal tract⁵. The most common benign neoplasms include benign gastrointestinal stromal tumors, adenomas and lipomas. Duodenal adenomas are divided into three types: true adenomas, villous adenomas, and Brunner's gland adenomas. Most duodenal adenomas are tubular adenomas located in the periampullary region.

Most adenomas are asymptomatic and are found incidentally at autopsy. Symptoms of small bowel neoplasms are often vague and nonspecific^{5,6}, and may include pain, malaise, weight loss, gastrointestinal bleeding or hemorrhage, anemia, jaundice, obstruction of the bowel, nausea or vomiting^{1,3}. Patients with benign tumors more commonly present with gastrointestinal hemorrhage (39%)⁵. These symptoms may be present for months or years before surgical intervention.

All patients suspected of having a duodenal neoplasm should undergo gastroduodenoscopy to establish the morphology, size and site of the lesion. It is important for clinicians to distinguish between benign and malignant lesions. Accurate histological diagnosis before surgery allows better planning of the surgical approach. However, endoscopies are limited by the length of bowel they can penetrate, and endoscopic biopsies may fail to confirm the diagnosis of lesions confined to the submucosa. Computed

tomography and barium studies may help to identify lesions; however, these techniques lack the versatility of gastroduodenoscopy. Another useful investigative device is endoscopic ultrasound, which is helpful in characterizing the involvement of the submucosa and the extent of lesions. Endoscopic retrograde cholangiopancreatography may be indicated for lesions located near the ampulla of Vater or for lesions involving the common bile duct or pancreatic duct. In addition, oral radio-telemetry capsules may be useful in evaluating neoplasms of the entire gastrointestinal tract.

The approach to treatment is determined by the location, presenting symptoms and extent of the lesion. Segmental resection is indicated for neoplasms of the small bowel; however, in the duodenum, local resection may be performed if the tumor is histologically benign. Invasive changes or malignant transformation necessitate more extensive resection, such as a pancreaticoduodenectomy. In our patient, laparotomy with resection of the tumor was indicated because the lesion was large and benign. Perez et al have reported that most benign duodenal neoplasms of less than 1 cm in diameter should be treated using endoscopic excision. Most lesions greater than 2 cm in diameter are best treated by surgical resection. For lesions measuring between 1 and 2 cm in diameter, endoscopic ultrasound may be of greatest use^{6,7}. Lesions of 1 and 2 cm in diameter that are limited to the mucosa on endoscopic ultrasound should be treated with endoscopic excision, whereas those invading submucosa should be surgically resected^{7,8}.

In summary, benign duodenal neoplasms are uncommon and difficult to diagnose. With their nonspecific presentation, a high index of suspicion is required for clinicians. Gastroduodenoscopy is a useful diagnostic method and therapeutic tool. Endoscopic ultrasound is useful for detecting submucosal involvement of neoplasms. Small mucosal lesions can be adequately treated with endoscopic excision, whereas larger lesions in the mucosa are best treated by surgical excision. More importantly, curative excision of the tumor is an effective treatment and an overall excellent prognosis is expected. Early management can improve survival rate and prognosis.

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