Villous Adenoma of the Duodenum: Partial Resection Versus Pancreaticoduodenectomy

Duodenal Villöz Adenoma: Parsiyel Rezeksiyona Karşın Pankreatikoduodenektomi

Duodenal Villöz Adenoma / Villous Adenoma of the Duodenum

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Özet

Sporadik villöz adenomlar nadiren duodenumda rastlanmaktadır. Kanser riski nedeniyle, endoskopik veya cerrahi rezeksiyon yapılmaktadır. Aynı zamanda pankreatikoduodenektomi de bu vakalar için alternatif bir tedavi seçeneği olabilir. Biz burada endoskopik biyopsisi villöz adenom ile uyumlu olan ve distal duodenum rezeksiyonu ile birlikte duodenojejunostomi yapılan 16 yaşındaki bir kadın hastayı sunduk.

Anahtar Kelimeler

Duodenal Villöz Adenom; Displazi; Parsiyel Rezeksiyon

Abstract

Sporadic villous adenomas are rarely encountered in the duodenum. Due to risk of cancer, endoscopic or surgical resection is performed. Pancreaticoduodenectomy may also be a treatment alternative for these cases. Herein, we present a 16-year-old female patient, who endoscopic biopsy is comply with villous adenoma and applied distal duodenum resection along with duodenojejunostomy.

Keywords

Duodenal Villous Adenoma; Low-Grade Dysplasia; Partial Resection

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Introduction

Although duodenal adenomatous polyps are frequently encountered in cases with familial adenomatous polyposis, sporadic cases are rarely observed. The rate of duodenal polyps detected using gastroduodenoscopy varies from 0.3% to 4.6% [1, 2]. Approximately 90% of these are non-neoplastic. In various studies, 0.4% to 6.9% of the duodenal polyps have been reported to be adenomatous polyps [1, 2]. However, duodenal adenomas are being diagnosed more frequently along with the widespread use of upper gastrointestinal system endoscopy. Similar to colonic adenomas, duodenal adenomas are considered to follow adenoma-carcinoma sequence [3, 4]. It has been suggested in various studies that duodenal adenomas undergo malignant transformation at a rate between 30% and 85% [4-8]. Therefore, surgical or endoscopic resection is recommended for the treatment of duodenal adenomas. However, optimal treatment modality still remains unclear. Different treatment options from surgical local excision to pancreaticoduodenectomy are performed in patients for whom endoscopic resection is not feasible [5, 6]. Endoscopic or surgical local resection is preferred since they preserve the organ and have low postoperative morbidity and mortality rates. However, there is a risk for recurrence as a result of these treatments [5-7]. Although pancreaticoduodenectomy is an effective treatment option, it is less preferred due to intra- and post-operative complication rates [4-7]. Herein, the approach to the patient having duodenal non-ampullary/non-periampullary villous adenoma with low-grade dysplasia was discussed.

Case Report

A 16-year-old female patient was admitted to the Gastroenterology Outpatient Clinic with epigastric pain for several months and accompanying vomiting following meals for the last week. The patient and her parents were informed about the study in detail and their written consents were obtained. The design of the study was approved by the ethics committee of Van Regional Training and Research Hospital. Her personal history was unremarkable. Her family history revealed no gastrointestinal malignancy in any of her first- or second-degree relatives. On her physical examination, no pathological finding was determined. All laboratory values were within the normal ranges, except for hypochromic microcytic anemia (hemoglobin, 11.1 g/dL). On upper gastrointestinal system endoscopy that was performed for iron deficiency anemia, a polypoid mass approximately 50 mm in diameter was observed in the distal aspect of the second part of the duodenum (Figure 1). However, the mass was measured as 55 mm on pathology. In addition to conventional visualization, narrow-band visualization was also performed (Figure 1). Both visualizations demonstrated that the mass was sessile and had irregular borders and surface and a round/oval mucosal pattern. No vascular structures were observed on the mass via narrow-band visualization. Multiple biopsy samples were obtained from the mass. Since the pathology was consistent with villous adenoma (with low-grade dysplasia), colonoscopy and control gastroduodenoscopy were performed on the patient. No additional lesion was detected. Thereafter, abdominal computed tomography was performed and the mass causing filling defect was observed in the duodenum (Figure 2). The patient

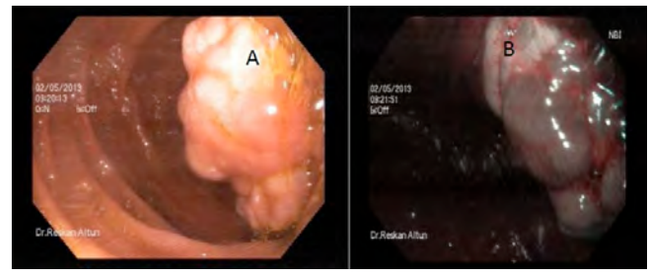


Figure 1. Conventional endoscopic view of the polypoid mass in the distal aspect of the second part of the duodenum(A). Endoscopic narrow-band view of the polypoid mass in the distal aspect of the second part of the duodenum(B)

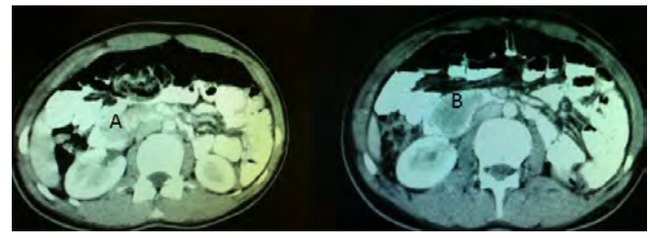


Figure 2. The mass (arrow) causing filling defect in the second part of the duodenum(A). Filling defect (arrow) caused by the mass extending from the second part to the third part of the duodenum(B).

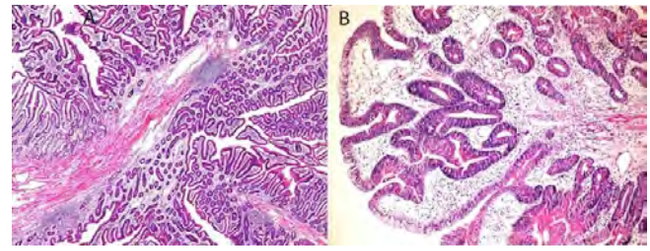


Figure 3. Villous adenoma, peduncle (hematoxylin and eosin staining, 5X magnification)(A). Villous adenoma with low-grade dysplasia (hematoxylin and eosin staining, 10X magnification)(B)

was operated on, and a soft mass approximately 5-6 cm in size was palpated between the end of the second part and the third part of the duodenum on exploration. Since the mass was not in contact with the pancreas or the ampulla of Vater, distal duodenal resection partially including the second part was performed together with end-to-end duodenojejunostomy. The specimen was sent for pathological examination. On microscopic examination with hematoxylin and eosin staining, the polypoid mass was observed to be a villous adenoma with low-grade dysplasia (Figure 3). Extratumoral intestinal mucosa was intact and neither invasion nor dysplasia was detected in the region where the polypoid mass was attached to the mucosa with a thick and short peduncle.

No problem was encountered during the postoperative follow-up of the patient. She was discharged from the hospital on the postoperative 7th day.

Discussion

Although duodenal non-ampullary/non-periampullary adenomatous polyps are rarely encountered, they are the pathologies to be treated since they are precancerous lesions. These lesions are flat or sessile lesions usually located in the second part of the duodenum [8], as was in the present case. These lesions usually appear at mid-seventies and their reported mean sizes range from 13 mm to 29 mm [8]. The present case, interestingly, was 16 years old and the tumor size was 55 mm.

Endoscopic resection was first tried in 1970s and has become an alternative option in benign adenomas and in patients for whom surgery is not feasible [8]. However, relapse rates after endoscopic resection are high; thus, close endoscopic monitoring is recommended for patients [7,8]. Endoscopic resection could not be performed in the present case due to the large size of the adenoma and the lack of technical equipment. Surgical treatment option is debatable in patients in whom endoscopic resection is not feasible, as was in the present patient. A wide range of approaches from radical resections such as Whipple surgery, pylorus-preserving pancreaticoduodenectomy and pancreas-preserving duodenectomy to local excision are being performed [6]. Although tumor control is well-provided in radical resection, the reported complication rates range from 37% to 41% and the reported operative mortality rates range from 1% to 6.4% [9]. Local relapse rates have been reported to be high with local excision via duodenotomy or with wedge resection [6]. In the light of these data, we performed method of distal duodenectomy with duodenojejunostomy, which has a low complication risk, in our patient, who was yet 16 years old. The patient was discharged on the postoperative 7th day without a problem, and she was included in colonoscopic surveillance program, since the presence of accompanying colorectal neoplasia has been reported to be frequent [10].

Competing interests

The authors declare that they have no competing interests.

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