

Jejunal Perforation Following Laparoscopic Gastrectomy with Jejunal Interposition

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ABSTRACT

Patients with familial adenomatous polyposis (FAP) often have extracolonic polyps. A 19-years old male with FAP had a history of laparoscopic total abdominal colectomy. Laparoscopic central gastrectomy was performed on him due to diffuse polyps in the fundus and corpus in third year after colectomy. Reconstruction was performed with jejunal interposition for further endoscopic examination of the duodenum. An acute abdominal pain occurred in the fifth months after gastrectomy. It was learned that he continued the antacid treatment for only one month. An urgent laparotomy was performed and it was seen that the distal stump of the interposed jejunal loop was perforated. The perforated area was resected. Pathology revealed a jejunal ulcer in the perforation area. Jejunal ulcer perforation on the interposed jejunal loop should be considered in acute abdominal pain in patients with jejunal interposition. It is important to recommend antacid therapy for avoiding this complication.

KEYWORDS

FAP; Jejunal interposition; Complication; Perforation

INTRODUCTION

Familial adenomatous polyposis (FAP) is an autosomal dominant disease caused by adenomatous polyposis coli gene mutation. Benign or malignant extracolonic findings accompany multiple colorectal polyps. Gastroduodenal polyps or carcinomas can occur in FAP. The incidence of fundic gland polyps in FAP patients varies between 20% and 88% [1]. These polyps can have low or high grade dysplasia. This is a potential risk factor for gastric cancer.

A biopsy or resection should be performed for polyps ≥ 1 cm [1]. In this article, we aimed to present the perforation of the interposed jejunal loop in a patient with FAP and previous laparoscopic central gastrectomy with jejunal interposition.

CASE REPORT

A 19-year-old male diagnosed with FAP underwent a laparoscopic total abdominal colectomy in 2017. In third year after colectomy upper gastrointestinal tract

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endoscopy revealed multiple polyps in gastric fundus and corpus. Medical management was not sufficiently controlling his symptoms; therefore we continued with surgical intervention. Laparoscopic central gastrectomy and jejunal interposition between the cardia and the antrum was performed. Proton pump inhibitors (once a day) was recommended and the patient was discharged. The pathology was consistent with fundic gland polyps. An acute abdominal pain occurred in the fifth months after gastrectomy. Physical examination revealed diffuse muscular defense in each four quadrant. It was learned that the patient continued the antacid treatment for only one month. The leukocyte count was $11.6 \times 10^3/\text{ml}$, the hemoglobin was 14.9 g/dl in complete blood count. Biochemical parameters were normal. Direct abdominal radiography in the standing position was normal then oral and intravenous contrast-enhanced whole abdominal computed tomography was performed. Computed tomography revealed an intra-abdominal fluid collection and free air due to gastrointestinal perforation (Figure 1).



Figure 1: Intra-abdominal fluid collection and free air due to gastrointestinal perforation.

An urgent laparotomy was performed and it was seen that the distal stump of the interposed jejunal loop was perforated. This area was resected via a linear stapler. Oral liquid was started on the third postoperative day and the patient was discharged with proton pump inhibitors on the sixth postoperative day. Pathology revealed a jejunal ulcer in the perforation area. He is now in the fourth month of follow up and does not have any additional problems.

DISCUSSION

One of the common reconstructions after gastrectomy is the Roux-en-Y anastomosis. After Roux-en-Y reconstruction, as a result of the rapid transit of hyperosmolar food into the jejunum and a shift of fluid from the intravascular space to the intestinal lumen, distension in the small intestine occurs and bowel movements increase [2]. Duodenal reflux decreases as the duodenum is bypassed. However an insufficient absorption of iron, vitamin B12, and folate occurs [3]. Jejunal interposition, another reconstruction method after gastrectomy, acts as a functional stomach that enables the transit of foods into the duodenum and reduces the risk of Roux stasis and post gastric syndrome. Another advantage is that it provides ease of endoscopic follow-up of the duodenum in FAP patients [2]. This is the reason why we prefer jejunal interposition in our case. Because duodenal polyps are seen in 30% to 70% of FAP patients and the risk of duodenal cancer in FAP patients is 100 to 330 times higher than in the general population [4]. Therefore, close follow-up and early detection of duodenal polyps for patients with FAP are important. The reason for perforation in our patient was a jejunal ulcer. This may be due to hypergastrinemia. After partial gastrectomy, the negative feedback on the G cells of the antrum decreases and this causes hypergastrinemia, increase in acid secretion, and perforation on the ulcer floor [5].

CONCLUSION

Jejunal interposition after gastrectomy provides ease of endoscopic follow-up of duodenal polyps in patients with FAP. Jejunal ulcer perforation on the interposed jejunal loop should be considered in acute abdominal pain in patients with jejunal interposition. It is important to recommend antacid therapy for avoiding this complication.

CONFLICT OF INTERESTS

There are no conflicts of interest.

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