Immaculate Fistulas Without Original Sin Between the Stomach and the Jejunum

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ABSTRACT

A 28-year old man was referred to Eulji university hospital for suspected gastrojejunal fistulae detected by screening upper gastrointestinal endoscopy. He presented no symptoms. He had no previous history of abdominal trauma, peptic ulcer, gastric cancer or gastric surgery. Upper endoscopy revealed gastrojejunal fistulae without any pathological changes on the gastric antrum and body. Abdominal computerized tomography showed a fistulous tract between the posterior wall of the gastric body and the jejunum. An upper gastrointestinal series showed contrast medium flow into the proximal jejunum from the posterior wall of the gastric body, allowing the diagnosis of the gastrojejunal fistula between the proximal jejunum and the stomach. In summary, we report innocent spontaneous gastrojejunal fistulae formation without any predisposing factor.

Key words: primary, spontaneous, gastrojejunal fistula

INTRODUCTION

Generally, the small intestine is not adjacent to the stomach or duodenum and is protected by the transverse colon and mesocolon. Therefore gastrojejunal fistula is rare. However, the inflammatory reactions to penetrating deep peptic ulcer can form a fistula between the stomach and jejunum or nearby structures (1,2). Gastrojejunal fistula may occur when there is an anastomotic ulcer after gastroduodenectomy for peptic ulcer or other diseases. More importantly, in each case where fistulas are identified, cancers should also be considered in differential diagnosis. But innocent gastrojejunal fistula formation without any predisposing factor was not reported yet. The authors report a case of spontaneous gastrojejunal fistula with no leading cause.

CASE REPORT

A 28-year old man was referred to Eulji university hospital for suspected

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gastrojejunal fistulae detected by screening upper gastrointestinal endoscopy. He did not present any symptoms or findings such as abdominal pain, weight loss, chronic diarrhea or soreness suggestive of peptic ulcer, malignancy or inflammatory bowel disease. He had no previous history of abdominal trauma, peptic ulcer, gastric cancer or gastric surgery. He did not take any medication such as aspirin, NSAID, steroid, or warfarin. Physical examination revealed no anemic conjunctiva, icteric sclera, or abnormally palpated node or mass. Abdominal examination showed no surgical scars. The abdomen was soft (no rebound/localized tenderness or muscular guarding). The intestinal peristalsis was not increased or decreased. Laboratory test was not performed. Upper gastrointestinal endoscopy revealed two small gastrojejunal fistulae without any pathological changes on the posterior wall of the gastric body and the lesser curvature of the gastric antrum (*fig. 1*). Abdominal computerized tomography showed a fistulous tract between the posterior wall of the gastric body and the jejunum. But the hairbreadth fistulous tract between the lesser curvature of the gastric antrum and the jejunum was not definite on the abdominal computerized tomography (*fig. 2*). An upper gastrointestinal series showed contrast medium flow into the proximal jejunum from the posterior wall of the gastric body, showing the presence of a fistula between the proximal jejunum and the stomach. There was no thickening or destruction of the gastric mucosal folds. There was no contrast leakage into the peritoneal cavity. But the super-narrow fistulous tract between the lesser curvature of the gastric antrum and the jejunum was not definite on the upper gastro-

intestinal series (*fig. 3*). Therefore, spontaneous fistulae without any predisposing factors between the stomach and the jejunum was diagnosed.

DISCUSSION

Fistulas between the stomach and the jejunum (gastrojejunal fistulas) are rare complications and their differential diagnosis is a variety of causes. Accurate diagnosis is mandatory for proper management. Gastrointestinal fistulas mainly affect elderly and middle-aged women (3). Intake of non-steroidal anti-inflammatory drugs, *H. pylori* infection, peptic ulcer, and anastomotic ulceration after gastric resection are considered risk factors for developing gastrointestinal fistulas (4). Postoperative peptic ulcer may occur due to unsatisfactory reduction of gastric acid production by incomplete vagotomy and inappropriate gastric resection. Moreover, during Billroth II reconstruction, a long afferent loop can lead to exposure of the jejunum to gastric juice, which can result in an anastomotic ulcer due to the weak acid resistance of the jejunal mucosa (5). In addition, operative stress and malnourishment associated with diminutive mesenteric adipose tissue is thought to attribute to the fistular formation in the recurrent gastric ulcer (3). Gastrojejunal fistula secondary to stomach cancer is very rare. But gastric cancer must be ruled out by cautious endoscopy and proper imaging studies (6,7). Unlike the gastrocolic fistula, the symptoms of the gastrojejunal fistula are those of the ulcer itself. But, if the target area of the fistula is very proximal, there is no short-circuiting of stomach contents. If the target region is distal, the nutritional impairments and symptoms can be similar

Figure 1 - Upper gastrointestinal endoscopy revealed two small fistular openings without any pathological changes on the posterior wall of the gastric body (a) and the lesser curvature of the gastric antrum (b)

Figure 2 - Abdominal computerized tomography showed a fistulous tract between the posterior wall of the gastric body and the jejunum. (a) The fistula near the posterior wall of the gastric body was noted; (b) The opening of a fistula in the posterior wall of the gastric body by the virtual gastroscopy; (c) The virtual gastroscopy showed the jejunum through the fistular opening from the stomach side.

Figure 3 - An upper gastrointestinal series showed contrast medium flow into the proximal jejunum from the stomach, indicating the existence of a fistula between the proximal jejunum and the stomach. There was no thickening or destruction of the gastric mucosal folds. There was no contrast leakage into the peritoneal cavity. But the super-narrow fistulous tract between the lesser curvature of the gastric antrum and the jejunum was not definite on the upper gastrointestinal series

to those seen with gastrocolic fistula (8). Indications for operation are not the fistula itself but complications such as long-lasting symptoms, failure of healing following best medical treatments, persistent bleeding, obstruction, or free perforation. But innocent gastro-jejunal fistula formation without any predisposing factor was not reported yet. In case of our young male patient, risk factor such as surgical stress, nonsteroidal anti-inflammatory drug intake, or H. pylori infection was absent. Considering healthy young age and no evidence of known risk factors such as ulcer, we guess that gastric diverticula could be the cause of this case. Our patient did not manifest repetitive bleeding, abdominal pain, ulcer symptoms, or the symptoms of malnutrition. Operative treatment was not indicated due to no symptoms of denutrition, recurrent hemorrhage or free perforation.

CONCLUSION

In summary, this case indicates that spontaneous

gastrojejunal fistula was caused without any known predisposing factor and presented no associated symptoms or nutritional disturbances.

Conflict of interest

The authors declare that there is no conflict of interest.

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