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A case of gastrocolic fistula secondary to adenocarcinoma of the colon

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ABSTRACT

INTRODUCTION: Gastrocolic fistula secondary to colon carcinoma is a rare entity. The common cause of gastrocolic fistula is different between eastern and western countries. Gastrocolic fistula may present many manifestations.
PRESENTATION OF CASE: We present a case report of gastrocolic fistula in a 59-year-old male patient with colon adenocarcinoma, diagnosed on digestive endoscopy, CT scanning and barium enema. Radical en-bloc surgery was undertaken based on patient's symptom, the size and the nature of the tumor.
DISCUSSION: The typical symptoms of gastrocolic fistula include abdominal pain, vomiting, diarrhea, emaciation, anemia, hypoaluminemia, weight loss and ascites. There are many methods to diagnose gastrocolic fistula, but barium enema is the most accepted way nowadays.
CONCLUSION: It is rare for gastrocolic fistula case to be caused by colon adenocarcinoma, and has been rarely reported inside China. The best therapy of gastrocolic fistula remains radical en-bloc surgery.

1. Introduction

Gastrocolic fistula is an abnormal communication between a portion of the stomach and the transverse colon. It is rare for gastrocolic fistula secondary to colon adenocarcinoma [1–3]. The common cause of gastrocolic fistula is different between eastern and western countries. It is reported that gastric cancer is the common cause of gastrocolic fistula in eastern countries, while in western gastrocolic fistula is often caused by colon cancer [4–6]. The most frequent manifestations of gastrocolic fistula are abdominal pain, vomiting with fecal odor, diarrhea, emaciation, anemia, hypoalbuminemia, weight loss and ascites [7]. Herein, we present a case of gastrocolic fistula diagnosed by gastroscopy and colonoscopy, abdominal CT scan and barium enema. The Colonoscopic biopsy proved gastrocolic fistula originated from colon, which was caused by colon adenocarcinoma. After comprehensively evaluated the condition of patient based on the examinations, a R0 en-bloc tumor resection was taken.

2. Case presentation

A 59-year-old male complained of upper abdominal pain without obvious predisposing causes for nearly 11 months. At that time, the patient felt a mass of the size of an egg in his right upper abdomen. About six months ago, he felt the mass grew bigger. Physical examination revealed a palpable right upper quadrant mass of a diameter of approximately 6 cm. The mass was fixed, with obscure boundary, firm texture, and light tenderness. Initial laboratory examination revealed a hemoglobin level of 9.1 g/L, a carcinoembryonic antigen level of 7.54 ng/ml (normal range 0–5 ng/ml), a carbohydrate antigen 19–9 level of 45.33 U/ml (normal range 0–27 U/ml) and positive fecal occult blood test. Abdominal Doppler ultrasound revealed multiple enlarged lymph nodes around the mass, suggesting digestive cancer with lymph node metastasis and high probability originated from colon cancer. Total abdominal plain contrast CT scan showed obviously irregular thickness between ascending colon walls and remote border with hepatic flexure of the colon wall, showing colon cancer invading outside the serosa, with omentum, lymph node metastasis, and a gastric antral fistula was formed between colon and stomach (Fig. 1). Then barium enema revealed a small fistula between the greater curvature and the ascending colon (Fig. 2). Next, gastroscopy showed fistula located at the greater curvature closed to posterior wall of stomach (Fig. 3), after we changed to a thinner fiberscope, which barely passed through the fistula into the colon. The colonoscopy demonstrated a large mass with a central hole surrounded by hyperemic, fragile mucosa, necrosis and obstructing the bowel lumen. It was difficult for the colonoscopy to pass through. Colonoscopic biopsy of the edge of mass showed colorectal adenocarcinoma (Fig. 4). Upper gastrointestinal contrast also proved that there was a fistula between the greater curvature and ascending colon.

Based on these examinations particularly the biopsy result, individualized operation was undertaken. Postoperative pathology

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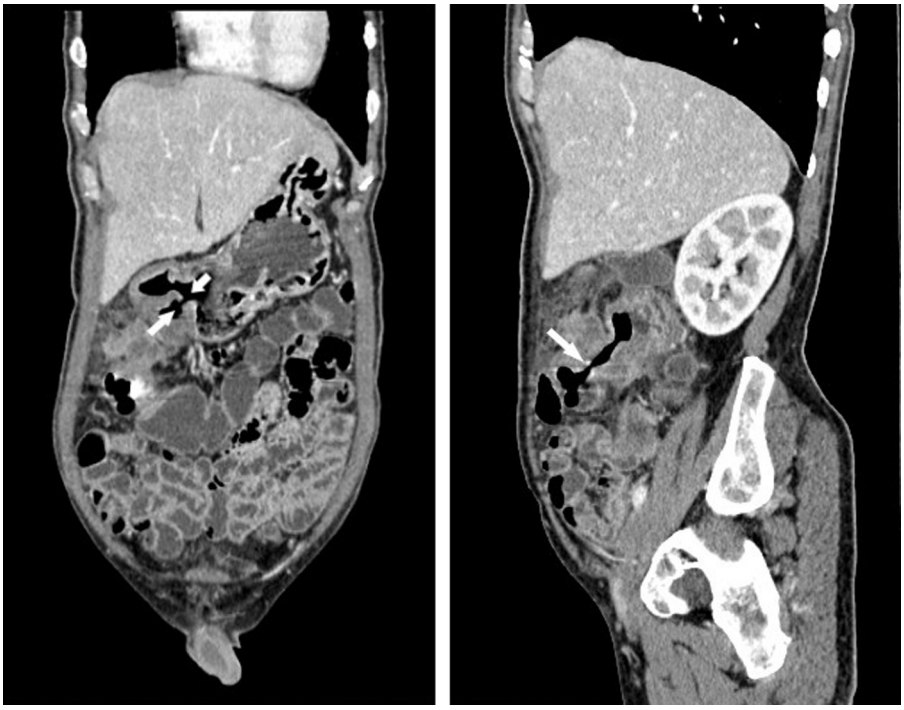

Fig. 1. Preoperative Sagittal and Coronal CT scan revealing gastrocolic fistula demonstrated by contrast in the stomach and ascending colon.

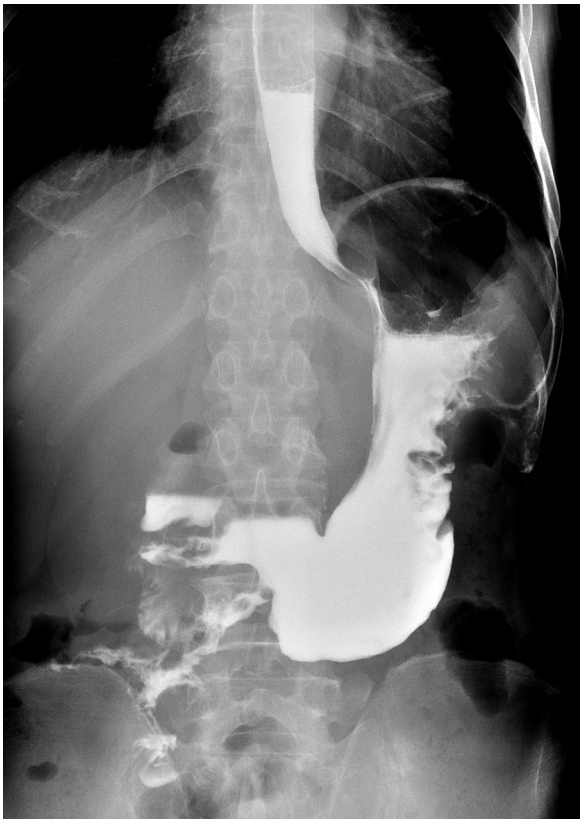

Fig. 2. Gastrocolic fistula appeared immediately after passage of the barium enema into the gastric lumen.

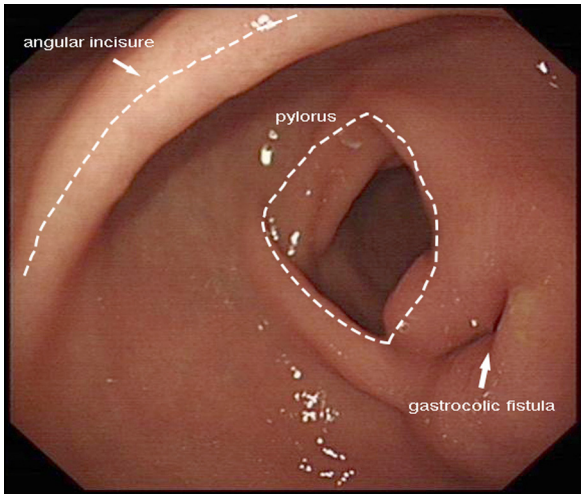

Fig. 3. Gastrocopic view of gastrocolic fistula located in the greater curvature.

specimen also proved that the tumor was colon adenocarcinoma invading into wall of stomach.

3. Discussion

In western world, the most common cause of gastrocolic fistula is transverse colon adenocarcinoma, with a reported incidence of 0.3–0.4 percent in operated cases [8,9], while gastric cancer is the most frequent cause in eastern countries [10], especially in Japan. The typical clinical manifestations of gastrocolic fistula are abdominal pain, vomiting with fecal odor, diarrhea, emaciation, anemia, hypoalbuminemia, weight loss and ascites. Short stature and delayed puberty in adolescent were also reported [11].

There are three types of fistula: (1) External, i.e., colocutaneous fistula, between colon and the skin without involving other organ. (2) Internal, i.e., gastrocolic or cologastric, based on which organ it originates. (3) Complicated, such as gastrojejunocolic, gastropan-