

A Very Rare Cause of Upper Gastrointestinal Bleeding: Gastric Metastasis From Colon Cancer

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Abstract

Metastasis to the stomach constitute a very small part of all gastric cancers. It can be manifested as upper gastrointestinal bleeding. The management of bleeding due to colon cancer metastasis to the stomach is difficult and the patient prognosis is poor since patients have advanced stage disease and effective treatment methods are limited. There is no guideline regarding management of gastric metastasis of other cancers. Gastric metastasis from colon cancer is a very rare finding in endoscopy. Here, we present a case of gastric metastasis of colon cancer presenting with melena, which was controlled by argon plasma coagulation.

Keywords: Colon cancer, metastasis, stomach, gastrointestinal bleeding

INTRODUCTION

Metastasis to the stomach constitute a very small part of all gastric cancers.¹ Gastric metastasis is usually observed in advanced disease, and they are usually accompanied by other metastatic lesions and have been associated with a poor prognosis.¹⁻³ At the time of diagnosis 20% of colorectal cancers are metastatic and the most common sites of metastasis are liver, lung, and peritoneum.² Gastric metastasis of colon cancer is an extremely rare clinical entity and limited number of cases have been reported.³⁻⁸

Although the incidence of colon cancer metastasized to the stomach is expected to increase due to the more frequent use of imaging methods and the improvement in the survival of patients with colon cancer, it is rarely seen in gastroenterology clinical practice. Here we report a rare case of gastric metastasis of colon cancer presented with upper gastrointestinal (GI) bleeding and in which the bleeding was controlled by Argon plasma coagulation (APC).

CASE PRESENTATION

A 44-year-old male patient, with a history of colon cancer which was diagnosed 26 months before, was admitted to our emergency unit for melena and anemia. Melena had been intermittent for a month. The patient had a history of four operations due to transverse colon carcinoma, and a history of chemotherapy. He had a history of a mass lesion which was detected in abdomen in examinations performed about 26 months ago due to the non-healing wound on abdominal skin. He had had his first operation due to ileus 24 months ago. During exploration revealed that mass lesion was completely occluding transvers colon and associated with skin metastasis entering the abdomen; hepatic and splenic flexures were resected with end-to-end anastomosis was performed. He had three more operations including colostomy. Chemotherapy was given in external center.

The patient presented to the emergency department with black stool, weakness, and fatigue. In the initial laboratory; WBC: 10.7 (10³/microliter) hemoglobin: 6.4 g/dl, hematocrit: 20.2 urea: 76 mg/dl, albumin: 29 g/L, CRP: 26.9 mg/L, Na: 132 mmol/L was, other laboratory findings were normal. His general condition was good, he had pale appearance, his bowel sounds 7/8 min. Necrotic crusts of approximately 20x12 cm in size and an ulcerated tumoral lesion with a purulent layer on the abdomen were observed on the umbilicus. On the right side of the lesion, a fistula tract and black stool residues from this fistula were observed. A colostomy opening was observed in the right lumbar region of the abdomen and there were operation scars on the abdomen (Figure 1A).

The patient underwent emergency endoscopy. Endoscopy revealed a mass lesion of approximately five centimeters in diameter was observed in antrum with lobulated contours, fragility, with hemorrhagic areas on it. Biopsies were taken from the lesion. APC was applied to the hemorrhagic

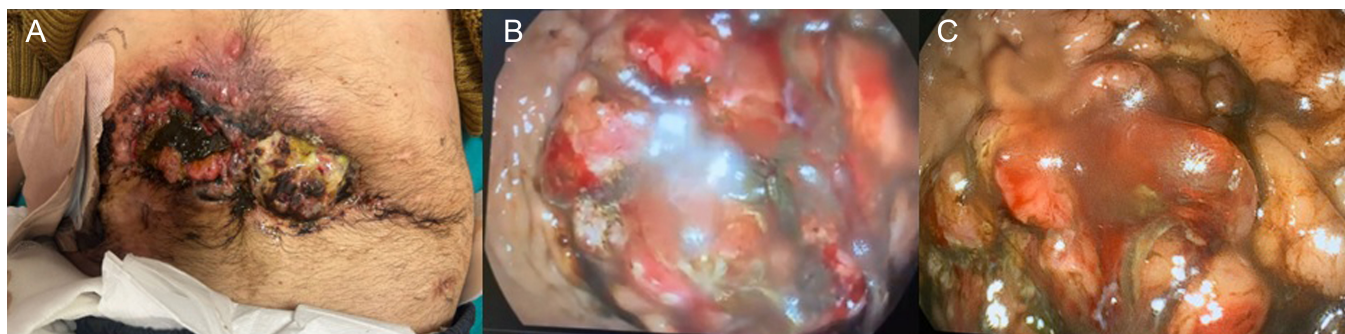


Figure 1. Appearance of skin metastasis area and colo-cutaneous fistula on abdominal examination (A). Endoscopic image of the mass after argon plasma coagulation (B and C).

areas on the lesion (Figure 1B and C). In abdominal tomography, a mass lesion approximately 13x7 cm in size which intestinal loops and its borders cannot be clearly distinguished from the intra-abdominal area, which extends from the subcutaneous tissue in the anterior abdominal wall in the epigastric region to the intra-abdominal area, invades the stomach antrum, and is observed up to the level of the peripherally enhanced multilobulate umbilicus, in which air densities are observed (fistula) (Figure 2). In the patient's pathologic examination, adenocarcinoma areas were showing nuclear atypia, hyperchromasia and crowding, cytoplasmic elongation and glandular array under the intact gastric mucosa (HE40X, Figure 3A). Intact gastric mucosa was stained positively with CK7, while adenocarcinoma areas were stained negative (Figure 3B). Adenocarcinoma areas were stained positive with CK20 and CDX2 while intact gastric mucosa was negative (IHC, 40X) (Figure 3C and D). The patient was hospitalized and followed up by oncology department. A total of three units of erythrocyte suspension were transfused. He was followed up for 14 days in hospital. No re-bleeding was observed during the follow-up period. He died four months later. The patient gave written consent regarding this article.

DISCUSSION

Metastasis to the stomach is rarely seen on endoscopy.⁹ The incidence of metastatic gastric tumors is 0.2-0.8%.⁹ The frequency of gastric metastases in autopsy series was as high as 5.4%.¹⁰ However, since patients with cancer are not routinely screened for gastric metastases, the incidence of gastric metastases in patients with cancer is unknown.⁹ The most common cancers metastasizing to the stomach are lung, breast, and malignant melanoma.^{5,11} Metastasis to the stomach can be seen of different shapes such as ulcerated, non-ulcerated, polypoid mass on endoscopy.^{5,7,10} It can cause clinical and pathologic problems in diagnosis.¹² There is no universally accepted endoscopic

classification and endoscopic treatment modality to treat bleeding due to these lesions due to their very rare existence.

There are a few studies on the clinical outcomes of patients who have metastasis to the stomach.^{5,7} Most of patients with metastases in the stomach are asymptomatic.⁵ Gastric metastasis may cause abdominal pain, nausea, vomiting, anorexia, dyspepsia, hemorrhage, and anemia in these patients. GI bleeding is a common presentation of these tumors (%-15,6-%32,4).^{5,11}

Although, gastrointestinal tumor-related bleeding is rarely massive and causes hemodynamic instability, it is difficult to control bleeding in clinical practice and re-bleeding rates are high.¹³ APC is one of the endoscopic treatments applied in these patients.^{1,13} Bleeding was controlled by APC in our case and no re-bleeding was observed in the follow-up period of approximately one month.

The prognosis of patients with gastric metastasis depends on the type of primary cancer as well as the stage of the cancer. Since these patients have advanced stage disease and the presence of metastases in other organs, the prognosis is poor in patients with gastric metastasis including colon cancer, and it is difficult to manage, and treatment options are limited.^{2,3,7,12,14}

Immunohistochemical (IHC) examination is very important in the differentiation of colon metastasis from primary gastric cancer. Positive staining for CDX2 and CK20 and negative staining for CK7 support the diagnosis of gastric metastasis from colorectal cancer with a higher specificity for the CK7-/CK20+ pattern.² Since our case had positive staining for CDX2 and CK20 and negative staining for CK7 in IHC examination, the diagnosis of stomach metastasis of colon cancer was considered.

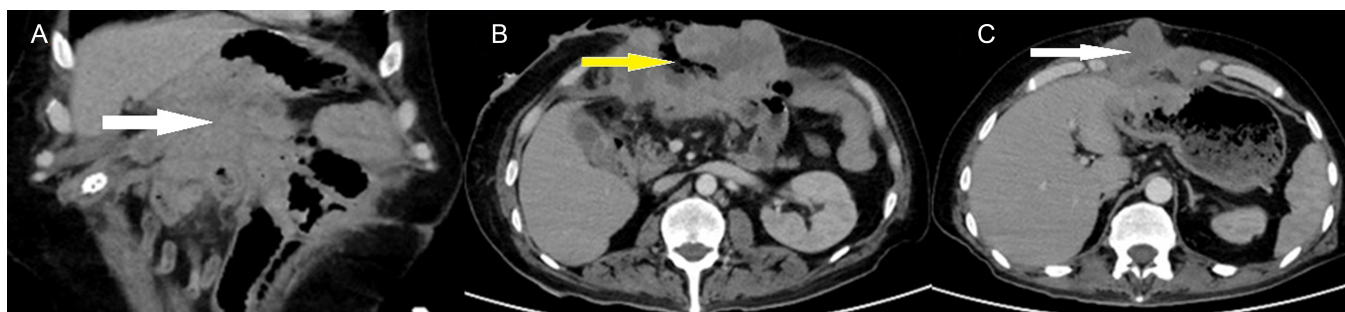


Figure 2. Abdominal tomography (coronal (A) and transverse views (B and C)) showing mass appearance (2A) and colo-cutaneous fistula tract (2B).

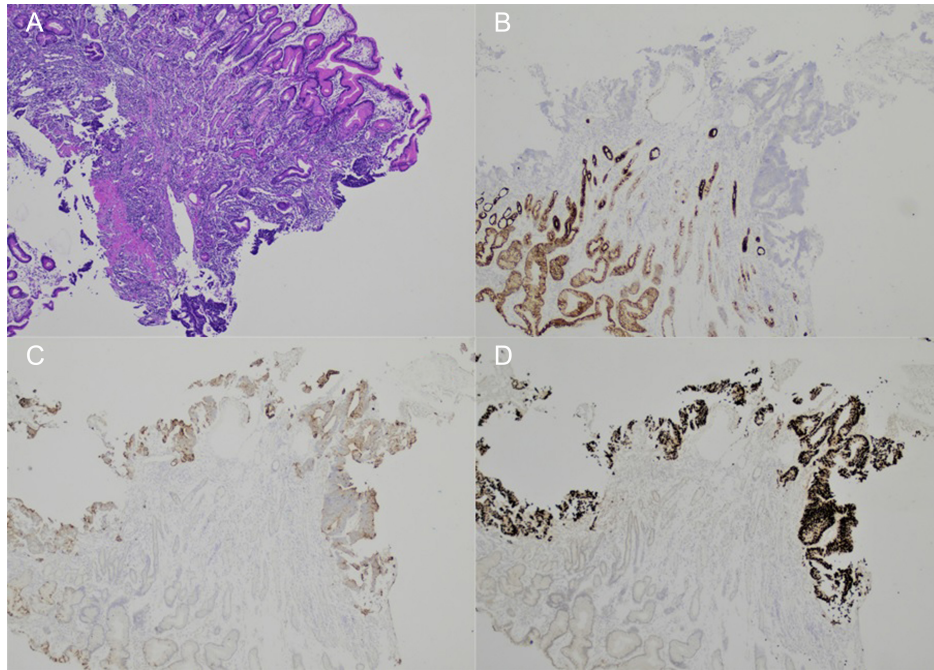


Figure 3. In pathological examination: Adenocarcinoma areas showing nuclear atypia, hyperchromasia and hypercellularity, cytoplasmic elongation and glandular arrangement under intact gastric mucosa (HE40X) (A).Intact gastric mucosa stained positively with CK7, while adenocarcinoma infiltration was negative (IHC,40X) (B).Adenocarcinoma infiltration stained positive with CK20, while intact gastric mucosa stained negative (IHC,40X) (C).Adenocarcinoma infiltration showing positive staining with CDX2 under intact gastric mucosa.

The mechanism of metastasis to the stomach is not known exactly. Metastasis of the primary tumor to the stomach may occur as peritoneal spread, hematogenous spread, lymphatic spread, and direct tumor invasion.⁵ Since our case had metastatic lesions on the abdominal wall, we think that the mass in the abdomen was formed by direct spread of primary colon cancer.

In conclusion, stomach metastasis of colon cancer may present as upper GI bleeding and it may be treated with APC. In case of gastric mass in patients with a history of cancer, metastasis of cancer to the stomach should be considered at beginning and immunohistochemistry analyses must be performed for the diagnosis of primary tumor side.

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