Colon Adenocarcinoma Metastasis Through Ileocolic Fistula to Small Bowel in the Setting of Crohn’s Disease

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ABSTRACT

Patients with Crohn’s disease are at higher risk of developing colorectal cancer and gastrointestinal fistula. Few cases in the past described colorectal cancer metastasized within the gastrointestinal tract through a fistula. We report a case of sigmoid colon adenocarcinoma in a patient with Crohn’s disease that metastasized to the ileum through an ileocolic fistula tract. In addition to presenting a unique pathological phenomenon in these patients, this case raises awareness of the importance of regular follow-up and early initiation of inflammatory bowel disease therapies.

INTRODUCTION

Colorectal cancer (CRC) is the third most common type of cancer worldwide, with colon cancer more frequent than rectal cancer.1 Patients with inflammatory bowel disease (IBD) are 2–6 times more likely to develop CRC than the general population.2 Risk of CRC in Crohn’s disease (CD) is increased with the extent and duration of the disease; therefore, guidelines recommend to start surveillance colonoscopy in patients who have 30% or more of colon involvement after 8 years of disease.3 The most common site of...
colon cancer metastasis is the liver because of its anatomical location and the presence of portal circulation. When metastasized, the most common route is hematogenous or localized spread. We report an unprecedented case of adenocarcinoma of the sigmoid colon in a patient with CD that metastasized to the small bowel through an ileocolic fistula tract.

**CASE REPORT**

A 37-year-old White man with a history of ileocolic CD presented with abdominal pain associated with nausea, vomiting, and diarrhea. The patient was diagnosed with CD at age of 19 years old and previously on mesalamine, but was nonadherent to treatment because of intolerance, thus required intermittent prednisone tapers during flares. Most recent colonoscopy before admission was conducted in October 2011 with pseudopolyps and small erosion noted in the sigmoid colon and cecum and without extensive colonic involvement of CD documented. On admission, the patient was hemodynamically stable and afebrile, with a blood pressure of 130/80 mm Hg, a heart rate of 90 beats per minute, and a respiratory rate of 14 per minute. Physical examination was remarkable for diffuse abdominal tenderness and hypoactive bowel sounds. The patient had abdominal computed tomography that revealed prominent wall thickening of the terminal ileum consistent with active inflammation suggestive of a CD flare with a fistulous tract noted between the terminal ileum and the sigmoid colon (Figure 1). Surgery was deferred by colorectal surgery services because of limited evidence of rectal bleeding, abscess, perforation, obstruction or peritoneal signs; thus, the patient was started on budesonide with a plan to start infliximab as an outpatient for fistulizing CD. Colonoscopy before initiating infliximab showed a severe rectosigmoid stricture that could not be traversed with a colonoscopy (Figure 2). Biopsies from the stricture revealed adenocarcinoma of the colon. The patient underwent open total proctocolectomy; however, at the time of surgery, there was involvement of the terminal ileum through the sigmoid colon-ileum fistulous tract, and therefore, a proximal portion of the terminal ileum was also surgically resected (Figure 3). The pathology showed moderately differentiated adenocarcinoma with a mucinous feature of the sigmoid colon with the involvement of the terminal ileum at the fistula site (Figure 4). The patient recovered well from surgery and is currently undergoing adjuvant chemotherapy.

**DISCUSSION**

We have reported an unusual case of colon cancer in a young patient with CD that metastasized through a fistulous tract to the terminal ileum. Prior reported cases of intraintestinal tract metastasis through fistula are almost always through an anal fistula or in closer proximity to the anatomical position. Chronic intestinal inflammation such as IBD leads to a higher incidence of gastrointestinal malignancy. The risk of small bowel adenocarcinoma is higher than CRC in patients with IBD, with an incidence ratio of 5.7 and 27.1 for CRC and small bowel adenocarcinoma, respectively. Despite his young age, our patient developed colon cancer, which was likely secondary to ongoing accelerated inflammation in the setting of noncompliance with medical therapy.
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Patients with CD are more prone to fistula formation with occurrence reported in 17%–50% of patients with CD. The cumulative incidence of fistulizing CD is 21% 1 year after diagnosis that is increased to 50% after 20 years. An ileal-sigmoid cumulative incidence of

Informed consent was obtained for this case report.

DISCLOSURES

Author contributions: M. Tseng, T. Syed, and R. Vachhani conceptualized and prepared the manuscript. P. Zot prepared the pathology report. All authors revised and approved the final version. M. Tseng is the article guarantor.

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