Primary Malignant Fibrous Histiocytoma of the Ascending Colon: Report of a Case

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Abstract
We report a rare case of primary malignant fibrous histiocytoma (MFH) of the ascending colon. A 66-year-old man presented to our hospital with epigastralgia, and abdominal ultrasonography and computed tomography showed a large soft-tissue mass in the ascending colon. Barium enema and endoscopic examination showed a huge tumor in the ascending colon. At laparotomy, we found a tumor in the ascending colon and performed a right hemicolecetomy with en bloc lymph node dissection. The resected specimen contained a tumor measuring 14.5 × 8.0 × 4.5 cm, the cut surface of which was yellowish. Based on histological and immunohistochemical studies, the tumor was diagnosed as MFH of the ascending colon. To our knowledge, only 20 cases of colorectal MFH, including our case, have been documented, which we review following this case report.

Key words Malignant fibrous histiocytoma · Colon

Introduction
Malignant fibrous histiocytoma (MFH) is a well-known tumor that usually involves the soft tissues of the extremities, but seldom arises in the alimentary tract. To our knowledge, only 19 cases of colorectal MFH have been reported before. We present a case of MFH of the ascending colon and discuss the features of this condition with reference to the literature.

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Case Report
A 66-year-old man visited Imari Municipal Hospital with a 20-day history of epigastralgia. He was of average build and fairly well nourished, and had no recent history of fever, chills, vomiting, diarrhea, or constipation. His blood pressure was 115/60 mmHg and body temperature 36.4°C. His palpebral conjunctiva was anemic and abdominal palpation revealed a slightly tender mass in the right upper quadrant. No lymph nodes were palpated in either the axillary or inguinal region. His medical history included a cholecystectomy for cholecystolithiasis when he was 50 years old. His family history was noncontributory.

Laboratory data disclosed the following values: red blood cell count, 356 × 10^6/mm^3; hemoglobin, 11.5 g/dl; white blood cell count, 10900/mm^3 with 62% segmental neutrophils, 2% stab neutrophils, 29% lymphocytes, and 3% monocytes; platelet count, 39.3 × 10^6/mm^3; and C-reactive protein (CRP), 7.74 mg/dl. The tumor markers, carcinoembryonic antigen and carbohydrate antigen 19-9, were both within normal limits and urinalysis was negative.

Abdominal ultrasonography (US) showed a large mass, 13 × 10 cm in size, in the right upper quadrant, which had heterogeneous internal echoes including hyperechoic areas. Abdominal computed tomography (CT) showed a large soft-tissue mass in the ascending colon near the hepatic flexure without any signs of metastasis or invasion of the adjacent organs. Barium enema showed a large, irregularly lobulated filling defect of the ascending colon, which was about 13 cm long. Colonic endoscopy revealed an exophytic polypoid tumor with an irregular white surface partly covered by gray exudates in the ascending colon, which occupied almost the whole lumen. Biopsy specimens revealed a few giant malignant cells arranged in a sheet pattern among necrotic granulation tissue. No lymphoma cells were seen. Thus, we made a preopera-
Fig. 1. Abdominal ultrasonography showed a large hypoechoic mass in the right side of the abdomen.

Fig. 2. Abdominal computed tomography scan showed a large mass with soft-tissue density in the ascending colon.

Fig. 3. Barium enema showed an intraluminal irregular mass in the ascending colon.

tive diagnosis of a nonepithelial malignant tumor of the ascending colon.

The patient underwent a laparotomy 30 days after his admission, which revealed a small quantity of serous ascites in the peritoneal cavity and a large mass in the ascending colon. The colonic serosa was thick, edematous, and very inflamed, but there was no invasion to the retroperitoneum or adjacent organs, nor any evidence of metastasis to the liver or lymph nodes. We performed a right hemicolectomy and en bloc lymph node dissection, followed by an ileotransverse colostomy reconstruction.

Macroscopically, the surgical specimen contained a well-circumscribed tumor in the ascending colon, which protruded both intraluminally and extramurally. On the mucosal side, the tumor appeared as a broad-based, slightly pedunculated mass, measuring $14.5 \times 8.0 \times 4.5$ cm (Fig. 4A). The serosal side appeared as a multinodular mass projecting extramurally. The