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Primary splenic malignant lymphoma mimicking metastasis of rectosigmoid cancer: A case report

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ABSTRACT

INTRODUCTION: Primary splenic malignant lymphoma is quite a rare disease, and its preoperative diagnosis is difficult.
CASE PRESENTATION: An 80-year-old man was diagnosed with advanced rectosigmoid cancer with liver and splenic metastases, for which he underwent single-incision laparoscopic high anterior resection for the primary rectosigmoid cancer. After chemotherapy, he underwent laparoscopy-assisted splenectomy and open partial hepatectomy of segment 3 and segment 5/6 of the liver. The resected specimen of the spleen showed primary splenic malignant lymphoma.
DISCUSSION: A diagnosis of primary splenic malignant lymphoma seems to be made only occasionally at splenectomy. Patients with primary splenic malignant lymphoma treated by curative resection at an early clinical stage have a more favorable prognosis. Laparoscopy-assisted splenectomy is useful for reducing surgical invasiveness.
CONCLUSION: Primary splenic malignant lymphoma should be included among the differential diagnoses of splenic tumors in patients with colorectal cancer with multiple metastases. Curative resection might be a therapeutic option for the treatment of primary splenic malignant lymphoma. Laparoscopy-assisted splenectomy is a useful strategy for reducing surgical invasiveness.

1. Introduction

Preoperative diagnosis of primary splenic malignant lymphoma (PSML), which is a relatively rare disease, is difficult. A review of previous literature showed that the initial diagnosis of PSML is made only occasionally at splenectomy [1]. We report herein a rare case of PSML mimicking splenic metastasis of rectosigmoid cancer. This work has been reported in line with the SCARE criteria [2].

2. Case presentation

A previously healthy 80-year-old man visited our hospital for evaluation of elevated biliary enzyme levels in November 2016. He had no symptoms, such as fever, weight loss and night sweats. Laboratory tests demonstrated alkaline phosphatase (ALP) of 471 U/dL (normal 105–340 U/dL) and lactate dehydrogenase (LDH) of 570 U/L (normal 110–230 U/L). The serum levels of carcinoembryonic antigen (CEA) and carbohydrate antigen 19-9 (CA19-9) were 62.5 ng/mL (normal 0–5 ng/mL) and 452.4 U/mL (normal 0–37 U/mL), respectively. Computed tomography (CT) scan showed rectosigmoidal wall thickening in the pelvis, a liver tumor in segment 5/6, splenic tumors (Fig. 1a), and a left lung tumor. The left lung tumor, located in segment 10, presented pure ground-glass opacification with pleural indentation. Colonoscopy showed a type 2 rectosigmoid tumor, 45 mm in size, located 15 cm from the anal verge. Examination of biopsy specimens of the rectosigmoid tumor revealed moderately differentiated adenocarcinoma. Positron emission tomography with 2[18 F]-fluoro-2-deoxy-D-glucose (FDG-PET) revealed a rectosigmoid cancer with a maximum standardized uptake value (SUVmax) of 11.6, a left lung tumor with a SUVmax of 3.1, a liver tumor and splenic tumors with excessive uptake values, consistent with the CT scan findings. There were no excessive uptake values in the thoracic and abdominal lymph nodes. These findings led to a preoperative diagnosis of advanced rectosigmoid cancer with liver and splenic metastases and primary left lung cancer. Therefore, the patient first underwent single-incision laparoscopic high anterior rectosigmoid resection in December 2016. Examination of the surgical specimen revealed moderately differentiated adenocarci-

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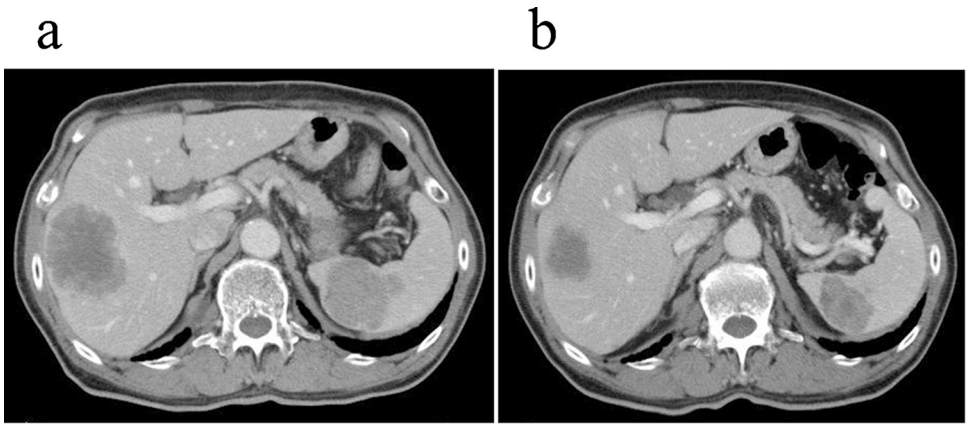

Fig. 1. Abdominal computed tomography (CT) findings. (a) before rectal surgery (b) after chemotherapy.
An abdominal CT scan performed after chemotherapy demonstrated significant reduction in the hepatic and splenic tumors.

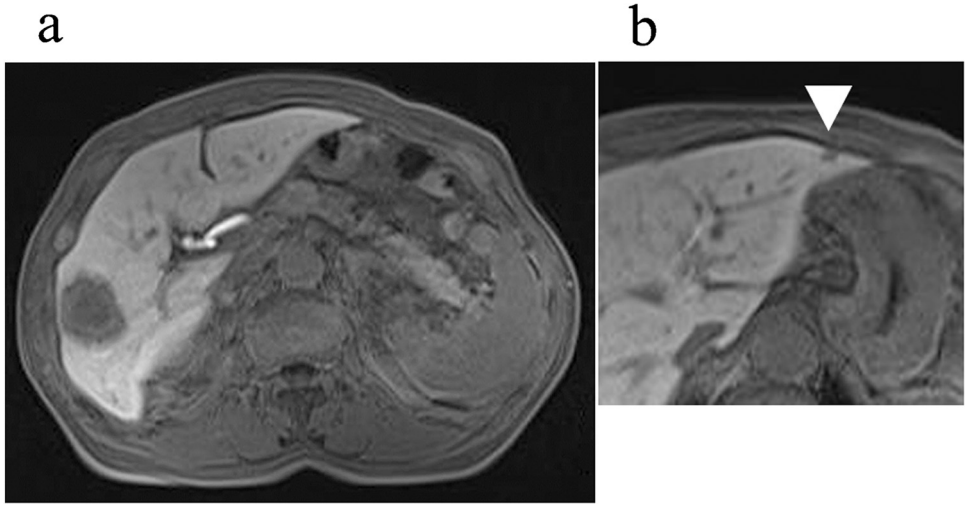

Fig. 2. Magnetic resonance imaging (MRI) findings.
Contrast-enhanced magnetic resonance imaging showed a signal-hypointense mass in segment 5/6 of the liver. A similar small nodule (arrowhead) was apparent in segment 3.

noma penetrating the serosa, with regional lymph node metastases. Six courses of XELOX (capecitabine and oxaliplatin) plus panitumumab chemotherapy were administered after rectosigmoid cancer surgery. CT scan performed after chemotherapy demonstrated significant reduction in size of the hepatic and splenic tumors (Fig. 1b), although the tumor in segment 10 of the left lung had enlarged. On dynamic contrast-enhanced magnetic resonance imaging (MRI), T1-weighted imaging showed a signal-hypointense mass in segment 3 of the liver, in addition to the already-known tumor in segment 5/6 (Fig. 2). The serum levels of CEA and CA19-9 decreased to 8.3 ng/mL and 7.7 U/mL, respectively. In May 2017, the patient underwent laparoscopy-assisted splenectomy and open partial hepatectomy of segment 3 and segment 5/6 of the liver. First, the spleen was mobilized from the retroperitoneum using the three-port laparoscopic technique (Fig. 3). After mobilization of the spleen, a J-shaped subcostal incision was made and splenectomy and partial hepatectomy of segment 3 and segment 5/6 of the liver were performed. Intraoperative evaluation showed no lymph node swelling in the abdominal cavity. Pathological findings of the liver tumors were compatible with metastases of rectosigmoid cancer. Macroscopically, the splenic tumors were whiter and firmer than liver tumors (Fig. 4). Microscopically, the splenic tumors demonstrated a diffuse proliferation of large lymphoid cells that were composed of diffusely proliferating atypical cells with irregular

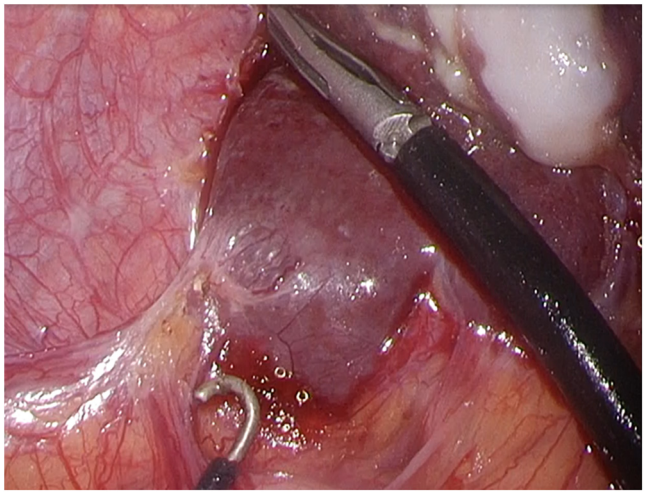

Fig. 3. Intraoperative findings.
The spleen was mobilized from the retroperitoneum laparoscopically.

medium, to large round or oval nuclei and a high nucleus/cytoplasm (N/C) ratio (Fig. 5). Immunohistochemically, the tumor cells were positive for the B-cell marker CD20, but not for CD3, CD5, and CD10.