LETTER TO THE EDITOR

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Myeloid Sarcoma in the Peritoneum with Leukemic Ascites Presenting with Acute Abdomen Findings: A Rare Case

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To the Editor,

Extramedullary leukemic tumors called myeloid sarcomas can develop before or concurrently with myelodysplastic syndrome, other myeloproliferative neoplasms, or acute myeloid leukemia [1]. Myeloid sarcomas, or granulocytic sarcomas or chloromas, are extramedullary proliferations of blasts of one or more myeloid lineages that interfere with the tissue's normal architecture [2, 3]. Although they can appear anywhere, myeloid sarcomas are most frequently seen in the skin, soft tissues, lymph nodes, and bones [3]. Even though they are extremely uncommon, peritoneal myeloid sarcoma and leukemic ascites should be looked for using immunophenotypic analysis and ascitic fluid flow cytometry when a patient with acute leukemia presents with newly diagnosed ascites [1, 3]. This report presents a rare myeloid sarcoma in the peritoneum with leukemic ascites. This patient consented to the publication of his case in a journal. A 60-year-old woman presented to the emergency department with complaints of dyspnea, abdominal pain, and abdominal distension. Acute abdomen

findings were suggested by early clinical, laboratory, and imaging tests in this uncommon case of myeloid sarcoma with ascites, abdominal pain, and dyspnea. There was a history of high-risk myelodysplastic syndromes with TP53 mutation. The patient underwent allogeneic hematopoietic stem cell transplantation from a full-match HLA-compatible donor 2 years ago. The patient was in remission and was followed up intermittently in the hematology outpatient clinic for 2 years. The patient was admitted to the emergency department with complaints of the sudden onset of abdominal distension, abdominal pain, and shortness of breath. A complete blood count revealed that the hemoglobin value was 11.1 gr/dL, the leukocyte count was $23x10^9$/L, and the thrombocyte count was $108x10^9$/L. The patient was taken into emergency surgery by general surgery with a preliminary diagnosis of acute abdomen because the abdominal tomography performed for abdominal distension revealed widespread ascites and an appendicitis diameter of 9 mm. Abdominal and pelvic computed tomography showed widespread edema in the abdominal fat planes, widespread ascitis in the abdomen, and non-contrast-enhancing thickening of the peritoneal surfaces, as shown in Figure 1. After the operation, the patient was transferred to the hematology service, and in her peripheral smear, around 90% myeloid blasts were observed. The patient's flow cytometry detected approximately 93.3% CD13, CD33, CD 34 positive malignant cell population. The patient's ascitic cytology sent during the operation revealed findings consistent with myeloid sarcoma, characterized by myeloid blasts. Peritoneal myeloid sarcoma involvement with leukemic ascites was considered with the current findings in the patient. Because the clinical, laboratory, and radiological symptoms were first thought to be caused by an infectious or other malignant illness, our case serves as an example of the diagnostic difficulties associated with myeloid sarcoma. Regardless of the alternative theory that was first assumed, the diagnosis was made since our patient's ascites included cells with immature myeloid characteristics together with signs of disease recurrence in the bone marrow. Peritoneal myeloid sarcoma can be challenging to diagnose since it is frequently mistaken for spontaneous bacterial peritonitis and other types of peritoneal primary or secondary neoplasms, namely sarcomas, melanomas, or carcinoid tumors. It is necessary to rule out any other pertinent causes of ascites [3-5]. This article aims to draw attention to a rare symptom of a common illness. A thorough work-up is crucial when myeloid sarcoma is suspected, particularly in individuals with a history of AML and MDS, because the disease can manifest in quite odd places.

Keywords: Acute myeloid leukemia, myeloid sarcoma, leukemic ascites, abdominal pain

Informed Consent: Informed consent was obtained from the patient.

Conflict of Interest: No conflict of interest was declared by the authors.

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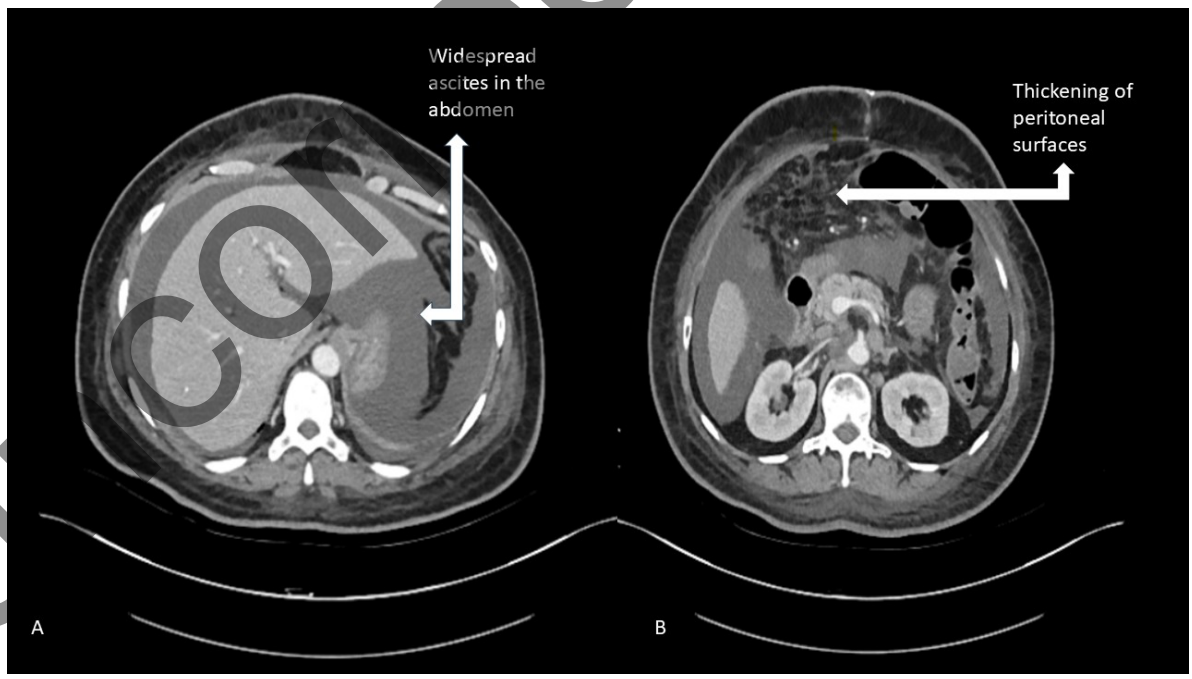

Figure 1. CT scan of the abdomen and pelvis, A. Widespread ascites in the abdomen, B. Thickening of peritoneal surfaces