Introduction: A granulocytic sarcoma is a rarely seen solid tumor composed of immature white blood cells or myeloblasts, occurring outside of the bone marrow. The tumor is often associated with acute myeloid leukemia (AML) and may develop at the start or the recurrence of the disease. Granulocytic sarcoma may be confused with solid neoplasms due to its nonspecific clinical and radiological findings. Granulocytic sarcoma should be suspected particularly in the presence of a solid mass in patients with myelodysplastic disease, and further tests should be conducted for diagnosis. In this report, a case of ovarian granulocytic sarcoma in a patient with remission phase AML is presented and discussed in light of the literature. The bone marrow aspiration specimens of granulocytic sarcomas may reveal very slight or no changes in cell morphology.

Case: This is a rare case of ovarian granulocytic sarcoma in a patient with AML in the remission phase. The patient was a 35-year-old female in the remission phase of AML who had had chemotherapy and bone marrow transplantation, and her only presenting complaint was pain in the inguinal region. During her former hospitalization at another clinic, her urinary system ultrasonography revealed a solid mass 68x75 mm in size adjacent to the uterus and left ovary which extended into the Douglas pouch with minimal accompanying fluid. This image was suspected of being a subserous myoma. In the following contrast magnetic resonance imaging performed of the lower abdomen, infiltrations were observed in the left adnexal lodge (leukemia/lymphoma? metastasis?) and in the pelvic bones. The primary tumor had not been clarified. After examining the bone marrow, we pre-diagnosed the solid mass in the left adnexal lodge as a "granulocytic sarcoma". The patient then underwent laparoscopic left salpyngo-oophorectomy and morcellation. The histopathological results confirmed the diagnosis of "granulocytic sarcoma". The patient was transferred to the Hematology Clinic for therapy.

Conclusion: Granulocytic granuloma is a rare tumor. It is rarely seen prior to establishing a diagnosis of leukemia. This tumor should be considered, particularly in the presence of a solid mass in patients with myelodysplastic disease. It can be confused with myomas since it can present as a solid mass close to or adjacent to the uterus. A detailed patient history is crucial for diagnosis.

Keywords: Granulocytic sarcoma, ovaries, extramedullary leukemia, chloroma