

中文題目：骨髓移植後之急性骨髓性白血病復發以中樞神經單一骨髓性肉瘤表現

英文題目：Isolated central nervous system relapse as myeloid sarcoma of acute myeloid leukemia after allogeneic stem cell transplantation

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Case report: A 27-year-old female with acute myeloid leukemia (AML) who had undergone standard induction and consolidation chemotherapy was diagnosed as relapse after 4-months of follow-up. The patient received salvage chemotherapy and received allogeneic peripheral blood stem cell transplantation.

Ten months after transplantation, right side weakness and slurred speech developed gradually. Magnetic resonance imaging (MRI) (Panel A) of brain showed a homogeneously enhanced mass lesion at right cerebellopontine angle with mild focal edema. Complete tumor excision was performed. The Hematoxylin and Eosin [H&E] stain (Panel B) of specimen revealed normal brain tissue was replaced by sheets of medium-to-large immature cells with high nucleus/cytoplasm ratio and round to oval nuclei with blast-like chromatin and prominent nucleoli. Immunohistochemical examination of these immature cells revealed positive for myeloperoxidase and CD34, negative for CD3 and CD79a. Bone marrow examination showed no leukemic involvement. Isolated central nervous system relapse of acute myeloid leukemia as myeloid sarcoma was the definite diagnosis.

This patient received scheduled radiotherapy and was followed up in outpatient department regularly. The patient now has nearly normal daily activity with little neurological sequelae.

Discussion: Myeloid sarcoma, first documented in 1811, is an unusual hematologic neoplasm with myeloblast as major component; it can represent the initial manifestation of relapse in a previously treated AML in remission. Relapse in the central nervous system without bone marrow leukemic involvement is very rare. The possible mechanism may be weaker graft-versus-leukemic effect in central nervous system than bone marrow.

Due to the rare nature of such cases, there are currently no standard treatment guidelines for extramedullary relapse after transplantation. Treatment options include systemic chemotherapy, donor lymphocyte infusions, repeated transplant or radiation for localized lesion.