

中文題目：次發性急性淋巴性白血病在骨髓瘤病患接受骨髓移植的個案報告

英文題目：*Successful treatment of secondary acute lymphoblastic leukemia with hematopoietic stem cell transplantation in a pre-treated multiple myeloma patient--A case report*

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**Introduction:** Acute lymphoblastic leukemia (ALL) secondary to multiple myeloma (MM) is rare. Here we'd like to present a case of secondary ALL, who received allo-HSCT after first complete remission, both multiple myeloma as well as ALL are cured.

**Case presentation:** 55-year-old woman who diagnosed with kappa light chain multiple myeloma, her last immunofixation of serum and urine were negative 8 weeks before admission. She admitted because of fever with chills for 1 day. Dyspnea and desaturation were also noted during hospitalization. The laboratory studies revealed bicytopenia and leukocytosis with an excess blast.

Clinical condition ameliorated after antibiotics treatment for possible *Pneumocystis pneumonia*. Bone marrow biopsy was performed for leukocytosis with an excess blast in peripheral blood, and the pathology documented acute lymphoblastic leukemia. Flow cytometry of the bone marrow showed an increased amount of CD34+ blasts with MPO-, cytogenetic analysis had shown no BCR-ABL translocation.

She received CALGB8811 induction (doxorubicin, vincristine, asparaginase, cyclophosphamide, prednisolone). Then 2 cycles of CALGB8811 early intensification (mercaptopurine, cytarabine, asparaginase, cyclophosphamide, vincristine, intrathecal chemotherapy) and MA (MTX, Cytosine arabinoside) regimen were done. During this period, the patient remained in remission and cerebrospinal fluid (CSF) revealed clear during first time intrathecal chemotherapy. Considering she had HLA-matched sibling donor. She had allo-HSCT, conditioned by TBI+Cy in December 2021. Engraftment was obtained on the 13th day, and bone marrow remained no residual leukemia during 3 times examination. Her last bone marrow examination was done in June 2022 which showed no residual disease

**Discussion:** Multiple myeloma is thought a incurable disease and adult acute lymphoblastic leukemia is thought a aggressive illness as well. We'd reviewed Castillo JJ et al 2016 and Chen T et al 2016, both the studies showed secondary

primary malignancy would increase incidence in multiple myeloma or other monoclonal gammopathies. However, secondary hematological malignancy, especially acute lymphoblastic leukemia was rare. The other clinical dilemma was to distinguish plasma cell leukemia from other acute leukemia. In Evans LA et al 2020, the authors suggested multiparametric flow cytometry (MFC) and morphology of peripheral blood smear, which provide a readily available and highly sensitive method to identify. Based on morphology and flow cytometry, B-ALL was documented.

**Conclusion:** Secondary acute lymphoblastic leukemia in patient with multiple myeloma is rare. The patient's cured from both MM and ALL with hematopoietic stem cell transplantation.