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T cell acute lymphoblastic leukemia with t(11;14)(p13;q11) and trisomy 8

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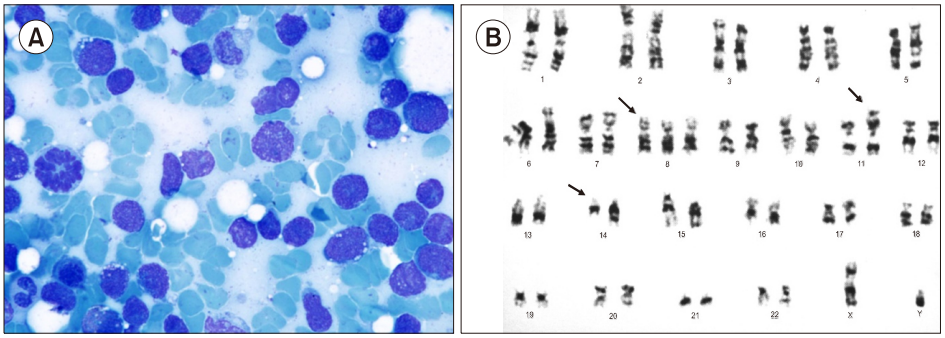

The patient was a 3-year-old boy with previous diagnosis of T cell ALL who underwent hematopoietic stem cell transplantation after complete remission. Three months after transplantation, he presented with massive plural effusion with more than 90% blasts with T cell phenotype on flow cytometry. Bone marrow aspiration also revealed 53% blasts **(A)**. They were positive for CD1a, CD3, CD4, CD8, and tdt. Bone marrow cytogenetic study revealed t(11;14)(p13;q11) in twenty cells and an additional trisomy 8 in fifteen cells **(B)**. T cell receptor genes are located on chromosomes 7q35, 7p14, and 14q11. Their translocations with chromosomes 1, 7, 9, 10, 11, 12, 14 are commonly seen in T cell ALL. Furthermore, t(11;14)(p13;q11) leads to fusion of LMO2-TRA or TRD which is seen in 5–10% of pediatric T cell ALL. A review of Mitelman database showed approximately 100 cases of T cell acute lymphoblastic leukemia with t(11;14)(p13;q11). The most common additional cytogenetic aberrations were deletion 6q and deletion 9p in approximately 12% of cases and then trisomy 8 and trisomy 17 in about 3% of cases. Although prognostic significance of this translocation has not been clearly determined yet, it was accompanied by an early relapse after hematopoietic stem cell transplantation in this patient.