TRANSFORMED FOLLICULAR LYMPHOMA MIMICKING ACUTE LYMPHOBLASTIC LEUKEMIA

A. Ohmoto1, Y. Kobayashi1, S.-W. Kim1, K. Miyamoto1, S. Fukuhara1, D. Maruyama1, T. Watanabe1, H. Taniguchi2, A. Maeshima2, K. Tobinai1

1Department of Hematology, National Cancer Center Hospital, Japan, 2Department of Pathology, National Cancer Center Hospital, Japan

Introduction: Manifestation of the transformation of follicular lymphoma (FL) is diverse.

Case: A 60-year-old man was diagnosed with FL (grade 2, clinical stage IIIA), received six cycles of R-CHOP therapy, and achieved complete remission (CR). Three years later, a follow-up CT scan revealed the regrowth of systemic lymph nodes. A clinical diagnosis of FL relapse was made and the patient received six courses of fludarabine plus rituximab, leading to a second CR. Five years later, the patient felt a mass in the right cervical region. The leukocyte count was 14,100/µl with 24% immature lymphoblasts. The bone marrow showed hyperplasia with 90.2% immature lymphoblasts. The size of blasts was small to medium, with a high N/C ratio and prominent nucleolus. Lymphoblasts were negative for peroxidase, α-naphthyl butyrate esterase, and naphthol ASD chloroacetate esterase. Immunohistochemical analysis of his bone marrow cells showed that CD10 and CD19 were positive, CD20 was slightly positive, and TdT was negative. A diagnosis of secondary acute lymphoblastic leukemia (ALL) was made based on morphologic and immunophenotypic findings. We started induction chemotherapy following the Japan Adult Leukemia Study Group (JALSG) ALL 202-O protocol. The patient’s blasts showed both fusion genes IGH/BCL2 and IGH/MYC, while the primary FL sample was found to have only IGH/BCL2 fusion. Based on these findings, a diagnosis of transformed FL rather than secondary ALL was made. As the clinical course and morphology were typical of those of ALL, we continued the JALSG 202-O protocol. One course of remission induction therapy induced CR and five courses of consolidation therapy were given following the JALSG protocol, and the CR was maintained during consolidation therapy. However, the disease relapsed just after consolidation therapy was completed, and salvage chemotherapy was started.

Discussion and Conclusion: Transformation of FL with additional IGH/MYC gene rearrangement is well-known. However, the information on FL transformation mimicking ALL is limited. From a clinical point of view, the diagnosis of ALL should be carefully made in cases with FL.