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Acute Myeloid Leukemia with BCR-ABL1 Translocation: A Rare Entity

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Editorial

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Abbreviations: AML: Acute Myeloid Leukemia; CML: Chronic Myeloid Leukemia

Introduction

Acute myeloid leukemia (AML) with BCR-ABL1 is a provisional entity in WHO classification of hematological malignancies and it is a denovo AML in which patients show no evidence of Chronic myeloid leukemia (CML) [1]. It accounts for <1 % of all AMLs and it primarily occurs in adults with male predominance [2]. Patients present with leucocytosis with blast predominance along with anemia and thrombocytopenia. Compared with CML patients less frequently splenomegaly and lower peripheral blood basophilia [3]. Morphological features include presence of peripheral blood and bone marrow myeloblasts showing minimal differentiation to granulocytic maturation. Average bone marrow cellularity is less than CML and dwarf megakaryocytes are also less common [2,3].

Immunophenotypic studies demonstrate expression of CD34, CD13 and CD33 with aberrant expression of CD7, CD19 and Tdt [4]. Genetic profile demonstrates p210 fusion in most cases with few cases showing p190 transcripts. Loss of chromosome 7, gain of chromosome 8 and other complex karyotypes in addition to (9;22)(q34.1;q11.2) are also seen [5]. AML with BCR-ABL1 appears to be an aggressive disease with poor response to traditional AML therapy or tyrosine kinase inhibitor therapy.

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