B Cell, Acute Lymphoblastic Leukemia presents with MLL rearrangement \( [t(9;11)] \): An uncommon and distinct subset of childhood acute leukemia presents in an elderly female; A novel case report from the Indian Subcontinent

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Acute lymphoblastic leukemia (ALL) are a heterogeneous group of hematopoietic neoplasms. The less common mature B-ALL subtype are characterized by FAB-L3 morphology, sIg positivity and are usually associated with MYC gene rearrangements and represent leukemic phase of Burkitt’s lymphoma. Rare cases of B-ALL with non-FAB-L3 morphology and without MYC rearrangements have been reported in both adult and pediatric patients as mature B-ALL.

Clonal rearrangements of MLL gene represent a hallmark for aggressive disease, poor clinical outcome and high risk of relapse.

In gene expression profile studies, MLL positive precursor B-ALL shows a profile consistent with an early hematopoietic progenitor that is distinct from conventional B-ALL and AML suggesting that MLL positive precursor B-ALL is a clinically and molecularly unique entity.

A 74-year-old female presented with splenomegaly and anemia. Peripheral blood smears showed predominantly lymphocytes. Bone marrow aspirate was dry tap. Flow-cytometry of peripheral blood showed mature lymphocytes of B and T cells lineage with no light chain restriction. Bone marrow biopsy revealed few nodular aggregates of immature cells. Immunohistochemistry revealed positivity for CD20, PAX5, Bcl2, Bcl6, CD99 and Ki67 high (90%) and negative for CD34, Tdt, CD117, CD10, Cyclin D1 and CD3. Karyotyping of bone marrow revealed reciprocal translocation \( t(9;11)(p22;q23) \) in 20% of all the metaphases.

In summary, we describe here the only case report of \( t(9;11) \) positive B-ALL in an elderly female from the Indian Subcontinent. It is important to report and follow up such cases. Our patient is doing well and is being followed up in the clinic.