CASE 002

CŌRE DIAGNOSTICS

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A 35-year-old female with acute onset high-grade fever, weight loss, and rashes for one month.

CLINICAL HISTORY

A 35-year-old female presented with acute onset high-grade fever, weight loss, and rashes for one month. The physical examination revealed maculopapular rashes with splenomegaly and bleeding diathesis. There was no family history and personal history of malignancy.

INVESTIGATIONS

Peripheral blood and bone marrow examination and flow cytometry:

Peripheral blood examination showed 5.5 g/dl of hemoglobin, a white blood cell count of 2627 x 109/L, and a platelet count of 37 x 109/L. The peripheral blood smears showed presence of blasts with thrombocytopenia and normocytic normochromic anemia. The bone marrow aspiration smears were hypercellular with 40% blasts. The megakaryocytic, granulocytic, and erythroid series cells were relatively suppressed. The blasts showed high nuclear to cytoplasmic ratio, inconspicuous nucleoli, immature to opened chromatin and rare clumped chomocenters. The cytoplasmic is agranular; Auer rods are not present. No dyshemopietic features were observed.

A flow cytometric immunophenotyping on CD45 vs. side scatter revealed a dim population comprising of 47.9% events and exhibited bright positivity for CD10, moderate positivity for CD19, HLA-DR, and dim positivity for CD34, CD79a, and CD38. Also noted was an aberrant partial dim positivity for CD33 and CD13. The overall features were of B-cell Acute Lymphoblastic Leukemia (Figure 1).