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IMAGES IN MEDICINE

Hairy cell leukemia

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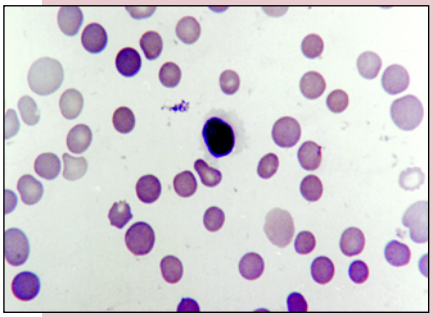
CLINICAL DATA

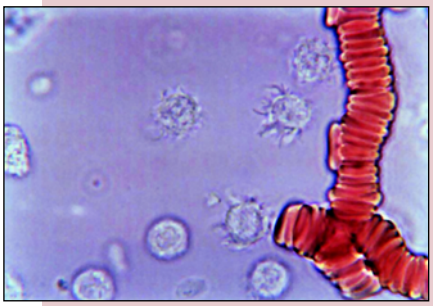
Male, 60 years old, admitted in the Hematology Clinic of Coltea Hospital – presented with fatigue, left upper quadrant discomfort, fever. He has a palpable spleen and pancytopenia.

Imagistic diagnosis: hairy cell leukemia



Peripheral blood smear from the patient (light microscopy, Giemsa stain, X100, immersion): the cell has abundant agranular and weak basophilic cytoplasm, with multiple cytoplasmic projections and round-oval nucleus , with light staining and homogenous nuclear chromatin.

FIGURE 1. Hairy cell



Peripheral blood smear from the patient (sediment after centrifugation) – phase contrast microscopy: cell with a round nucleus and cytoplasmic projections that appear as elongated slender microvilli.

FIGURE 2. Hairy cell

DIFFERENTIAL DIAGNOSIS

Disorders to be considered in the differential diagnosis of hairy cell leukemia include all lymphoid malignancies – prolymphocytic leukemia, splenic marginal zone lymphoma, hairy cell leukemia variant, chronic lymphocytic leukemia, low grade lymphoma, agnogenic myeloid metaplasia, systemic mastocytosis. The hairy cell leukemia diagnosis can be established by flow cytometric analysis of peripheral blood (2,3).

In this case, the immunophenotypic profile is CD19+, Cd22+, CD11c+, Cd103+, CD 25+, CD4-, CD5-, CD10-.

FINAL CLINICAL COMMENTS

Hairy cell leukemia is a rare chronic lymphoproliferative disorder, more frequently seen in males. Eighty percent of hairy cell leukemia patients complain about weakness and have splenomegaly at presentation. The characteristic morphologic appearance of hairy cells on peripheral blood smear is the single most important diagnostic finding (3). Peripheral blood films show typical "hairy" cell with round/oval nucleus and a moderate amount of finely mottled, pale grey cytoplasm with irregular serrated edges (1). The immunophenotype of hairy cell leukemia is distinctive from other lymphoid disorders (3).

REFERENCES

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