

Diagnostic accuracy of morphology in mature B cell neoplasms, correlation with immunophenotyping

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Abstract

Background: Mature B cell neoplasms consist of entities arising from mature B lymphocytes which involve primarily the blood, bone marrow and lymphoid organs. The value of these investigations is discussed to emphasize the importance of morphology as front line diagnostic test and the correlation with flow cytometric immunophenotyping (FCI).

Objective: To emphasize the importance of conventional morphology as frontline test supported by (FCI) in diagnosis and separation of mature B cell neoplasms.

Methods: We reviewed retrospectively the marrow smear and FCI of 195 patients with mature B cell neoplasms in a two year period 2017-2018.

Results: 170 out of 195 patients showed morphological features of cells typical for chronic lymphocytic leukemia (CLL), small lymphocytes, clumped chromatin and scanty cytoplasm in all cases, compatible with FCI. 7 out of 195 patients have morphological features of circulating cells of hairy cell leukemia (HCL) small-to-medium lymphocytes, eccentric round-to-oval nucleus, and scanty cytoplasm with hair-like projections compatible with FCI. 18 out of 195 patients have the morphological features of circulating cells are lymphoma cells (large cells with a high N: C ratio, a non-cleaved nucleus and prominent nucleoli, or smaller cells with more basophilic cytoplasm and a cleaved nucleus). 16 out of 18 cases have the FCI compatible with Non-Hodgkin lymphoma (NHL), and 2 cases are unspecified by FCI.

Conclusion: In this study, conventional morphology and FCI are 100% compatible in cases of CLL and HCL and 88.9% compatible in cases with NHL.

Biography

Emilda Belortaja is a pursuing her Graduation in General Medicine from the Medical University of Tirana, Albania. She is a fourth year resident in clinical biochemical laboratory in the University Hospital Centre "Mother Theresa" in Tirana. She is thrilled to continue working with the supportive group of laboratory specialists, who play a crucial role in her development as a resident with keen interest in research.

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