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Title: MATURE B-CELL NEOPLASMS CD5 NEGATIVE: CONFRONTATION CYTOMETRY-CYTOLOGY

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Background:

Lymphocyte immunophenotyping by flow cytometry (CMF) is the gold standard for the differential diagnosis of mature lymphoid neoplasms (MLN).

Aims:

Our work aimed to compare the cytometric data to the cytological aspect of lymphoid cells for the diagnosis of MLN type CD5 negative.

Methods:

This is a retrospective study carried out in the hematology laboratory of the hospital (Farhat Hached, Sousse, Tunisia), including all patients with hyperlymphocytosis during 2 months or more, and a CD19+ and CD5- phenotype over a period of 3 years, from January first, 2019 to December 31, 2021. Data analysis was carried out using SPSS 21 software.

Results:

Out of 120 patients for whom immunophenotyping by CMF (Panel: CD19, CD5, CD23, FMC7, CD22, CD20, CD79b, CD10, CD103, CD43, CD38, CD25, CD11c, CD2, CD3, Kappa, Lambda) 16 patients had a CD19 + and CD5 – phenotype with a sex ratio (M/F) of 0.6. The median age was 63 years [36 – 74]. At the time of the analysis, 50% of patients had splenomegaly and/or lymphadenopathy and almost all patients had hyperlymphocytosis (mean: 23,904/mm³). Examination of the blood smear had revealed the presence of atypical lymphocytes in 12 patients (villous lymphocytes: 4 cases, hairy cells: 2 cases, prolymphocytes: 1 case, lymphocytes reminiscent of follicular lymphoma or mantle cell lymphoma: 2 cases, lymphocytes with cytoplasm extended hyperbasophilic or without specificity: 4 cases). The phenotypic profile: was in favor of marginal zone lymphoma (MZL) in 57.14%, characteristic of hairy cell leukemia in two patients characterized by CD103, CD11c and CD25 positivity and was compatible with prolymphocytic leukemia in one patient.

Summary/Conclusion:

Although the diagnosis was established for the majority of patients, additional examinations such as molecular biology were necessary for others such as follicular lymphoma and marginal zone lymphoma which were suspected but not confirmed.

Keywords: Lymphoproliferative disorder, Cytometry, B cell lymphoma