DIAGNOSIS BY IMMUNOPHENOTYPING IN LYMPHOPROLIFERATIVE DISORDERS WITH PERIPHERAL BLOOD INVOLVEMENT (LEUKEMIC LYMPHOMA) - INDICATIONS, PARTICULARITIES.

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Lymphoproliferative disorders with leukemic discharge in peripheral blood are characterized by lymphocytosis in peripheral blood, which is a mark present in all these cases. Diagnosis of these disorders involves the analysis of lymphocytosis, besides clinical examination and anamnesis, the patient first approach, applying methods to identify the nature of lymphocytes, to define whether there is a clonal expansion of lymphocytic and type of lymphocyte.
Immunophenotyping is thus the only method that can meet these criteria, and therefore the method of choice in the diagnosis of this lymphocytosis associated with lymphoma and allows the distinguish from reactive lymphocytosis (infectious, congenital, tobacco, etc.)
Lymphomas with peripheral blood involvement are:
B-cell lymphomas:
Small cell lymphocytic lymphoma (SLL) ● Mantle cell lymphoma (MCL) ● Marginal splenic lymphoma (SMZL), MALT ● Follicular Lymphoma (FL) - rare
T-cell lymphomas:
Sezary Syndrome (SS) ● Lymphoma / adult T-cell leukemia (ATLL) ● Peripheral T-cell lymphoma (PTCL) - rare
The mechanism of discharge is related to the presence of adhesion molecules and interactions with the microenvironment of malignant clonal cell. In this respect we have for example a massive discharge of malignant lymphocyte after therapy with inhibitors of intercellular signaling pathways that "pull" these cells from the microenvironment that protects them. Also, the similarity of intercellular signaling, for example through integrin CD40 in lymphoma with peripheral discharge and CLL, sustain these mechanisms.
Identification of B cell lymphomas permits the identification of mantle cell lymphoma, co-expressing CD5, and using pathognomonic markers CD23 and CD200 and combination of CD79b and CD43 allows a clear differentiation of CLL or SLL. Marginal zone lymphoma (SMZL and MALT) does not express CD5 and have immunophenotype of marginal zone / mature B cell. Splenic lymphoma requires differentiation from hairy cell leukemia, which has specific markers CD103 and CD25. Follicular lymphoma is distinguished by coexpression of CD10 and bcl-2, but requires differentiation from Burkitt and diffuse large cell lymphoma, which have in advanced stages peripheral blood discharge.
T-cell lymphoproliferative are difficult to identify because must be differentiated from reactive lymphocytosis, one of which as infectious mononucleosis may have even atypical, but transient, immunophenotype.
Sezary syndrome is defined by the presence of at least 1000 Sezary cells / mmc, usually helper cells and ATLL has usually memory helper T cell immunophenotype, but there could be different versions of immunophenotype. Rarely, we can have other peripheral T-cell lymphomas with peripheral blood discharge, and requires the differentiation of reactive lymphocytosis.
Immunophenotyping of lymphocytes is an easy and extremely useful method indicated in lymphocytosis analysis and allows fast and accurate diagnosis of chronic lymphoproliferative disorders.