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DISTRIBUTION OF LEUKOCYTES BY EXPOSURE FIBRONECTIN AND PHA-L-GLYCOTOPE IN THE CANCER PROCESS

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Introduction. Fibronectin (FN) is a glycoprotein and plays an important role in cell adhesion, migration, growth and differentiation, participates in the development of various human cancers, is a well-studied cell surface of the connective tissue and very little - in the blood cells of myeloproliferative neoplasms. Given that most clusters of differentiation, immunoglobulin, integrin and selectin on the surface of white blood cells are glycoproteins, there are general patterns of changes in the structure of carbohydrate components of proteins, which are expressed in the redistribution of N- or O-glycans / glycotope on the surface of cells in myeloproliferative neoplasms.

Materials and methods. The aim was to study the number of leukocytes (monocytes, lymphocytes, granulocytes) with localized inside and on the surface of fibronectin and fitohemahlyutynyn L-binders (PHA-L) glycotope in hematological healthy donors (n = 10), patients with polycythemia vera (n = 12), primary myelofibrosis (n = 10). We used the method of flow cytometry with monoclonal antibodies to the matrix FN (AbD Serotec, UK) and corresponding antibodies to mouse IgG (Millipore, USA), which are connected with flyuorystseyinizotiotsyonatom (FITC) conjugate and lectin - PHA-L-FITC.

Results. For myeloproliferative neoplasms number of cells positive to fitohemahlyutynynu L grown on the surface of lymphocytes level eksponovannya poliantennyh N-glycans in patients with polycythemia vera has not changed, and for primary myelofibrosis, this figure decreased almost 7 times (p < 0.001).

Analysis FN density display on the surface of lymphocytes showed that the group of patients with myeloproliferative novoutvoryuvannya there are changes (p < 0.01) in this indicator depending on the degree of malignancy, polycythemia vera by FN level is reduced by 3.2 times, with primary myelofibrosis - in 1.5 times, while for chronic myeloid leukemia doubles. An important feature is that enhance fibronectin on the surface of lymphocytes correlates with the number of these cells in the blood of patients (r = 0,64, p < 0.05).

Conclusions. Thus, in the peripheral blood of patients with myeloproliferative novoutvoryuvannya circulating white blood cells with modified structures of glycoproteins on the surface, and the increased number of lymphocytes exposed FN may be an additional prognostic indicator of this very aggressive, fast-moving process.