

PECULIARITIES OF THE MOLECULAR MARKERS EXPRESSION ON PERIPHERAL BLOOD LYMPHOCYTES IN COMPLICATED RELAPSE OF RECURRENT IDIOPATHIC ANTERIOR UVEITIS

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Uveitis is one of the most common ophthalmic diseases with many phenotype and clinical manifestations, involves a complex of immune-related cells interactions, including neutrophils and lymphocytes. It is important to determine biomarkers of complicated uveitis course because due to opacity of the media it is not always possible to see the eye fundus.

Objective. We aimed to examine ratio of expression of activation markers on peripheral blood lymphocytes (marker of intercellular adhesion (ICAM-1, CD54) to apoptosis marker (Fas,CD95) ratio and autoimmune marker CD5 to "early" marker of lymphocyte activation CD25 ratio in uncomplicated and complicated relapse of recurrent idiopathic anterior uveitis (AU).

Material and methods. Examinations of patients with the relapse of recurrent idiopathic AU were carried out. Group 1 - 12 patients with complicated AU (macular edema and macular dystrophy), group 2 - 15 patients with uncomplicated AU. The age of patients was 39.6 ± 15.0 years. Group 3 (control) - 27 healthy volunteers. An immunohistochemical analysis using monoclonal antibodies (the PAP-method) was employed to assess the expression of activation markers on CD3 lymphocytes. The monoclonal antibody panel for immunophenotyping included CD5, CD54 (ICAM-1), CD25 and CD95 (FAS) antigens.

Results. Absolute number of CD3 with molecular markers was determined; CD54/CD95 (predominance of early activation of cellular immunity) and CD5/CD25 (predominance of autoimmune activation) ratios were calculated. In the group 1 the CD54/CD95 ratio was 1.35 ± 0.54 . This value was increased by 42% ($p=0.009$) in comparison with the control and increased by 38% ($p=0.047$) in comparison with the 2-d group. The CD5/CD25 ratio was 1.43 ± 0.48 in the group 1. This value was increased by 40% ($p=0.04$) in comparison with the control and increased by 33.6% ($p=0.04$) in comparison with the 2-d group. A direct correlation between the CD5/CD25 and the CD8 (cells/ μ l) was: $r=0.4$ ($p<0.05$). A negative correlation was between the CD54/CD95 and the CD4 (%) ($r=-0.4, p<0.05$) and CD19 (cells/ μ l) ($r=-0.4, p<0.05$)

Conclusions. The CD54/CD95 and CD5/CD25 ratios in patients with complicated AU were more than 42% in comparison with control and more than 38% in comparison with uncomplicated AU. The values ratios increase over 40% can be considered as biomarkers of complicated course of uveitis.