

ANALYSIS OF DRUG LYMPHOCYTE TRANSFORMATION TEST

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Introduction: Drug hypersensitivity is a considerable problem in medical practice due to its occasionally life threatening manifestations and its limiting impact on the choice of medication. Among the *in vitro* methods, lymphocyte transformation test (LTT) is considered to be one of the best methods for the detection of drug hypersensitivity. In the present study we aimed to determine the cell populations that respond to drugs in the test.

Materials and methods: Patients with previous positive LTT results were enrolled in the study. Lymphocyte transformation tests were repeated as described previously [1]. Using flow cytometry we analyzed the composition of the cell cultures that gave positive LTT results. For labeling the different subsets of cells the following markers were used: CD2, CD3, CD4, CD8, CD19 and CD56.

Results: Out of the 25 previously positive tests done in 17 patients with 25 different drugs only 4 remained positive at the repeated test. In all other cases the previous LTT positivity disappeared. The time frame, in which LTTs remained positive, was between 3 to 9 months. Flow cytometric analysis of 3 positive lymphocyte transformation tests revealed no uniform pattern in the composition of the investigated cell populations following drug activation. Our analysis of the lymphocyte transformation tests suggests that various drugs are likely to target different populations of cells in the test. It is also possible, that the observed differences parallel the different clinical forms of drug hypersensitivity reactions, since these 3 patients had different clinical reactions.

Conclusions: Our data indicate that LTT positivity is not long lasting. To detect uniform patterns in the proliferation of the investigated cell types, additional LTT positive patients need to be investigated.

[1] Bata-Csörgő Zs, Altmayer A, Garaczi E et al. *Bőrgyógy Vener Szle.* 85:34-36, 2009.

Poszttert szeretnék tartani.

Az absztrakt témája klinikai jellegű.