

SPONTANEOUS LYMPHOCYTE APOPTOSIS IN PATIENTS WITH DIFFERENT LEVEL OF BRONCHIAL ASTHMA CONTROL

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Abstract. *The purpose of this study* was to estimate the features of spontaneous apoptosis of peripheral blood lymphocytes in patients with bronchial asthma (BA) with controlled and uncontrolled course. *Materials and methods.* 27 patients with BA including 11 patients with controlled and 16 patients with uncontrolled asthma were examined. The control group was formed by 11 volunteers. Detection of spontaneous lymphocytes apoptosis was performed by flow cytofluorometry after annexin 5 (An-5) conjugated to fluorescein isothiocyanate (FITC) to evaluate early lymphocytes apoptosis and 7-amino-actinomycin-D staining to evaluate late lymphocytes apoptosis. *Results.* The obtained results of this study indicated multidirectional changes in spontaneous lymphocytes apoptosis in patients with BA that depended on the controllability of the disease. In the group of patients with controlled BA there was a significant increase in early lymphocytes apoptosis (by 317.3 %), which occurred in the vast majority (72.7 %) of these patients. In the group of patients with uncontrolled BA deviations of the mean values of this indicator from the reference did not occur, the incidence rate of early lymphocytes apoptosis did not exceed 18.8 %, and its severity was 2.7 times less. The absence of

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increased spontaneous lymphocytes apoptosis or its suppression in patients with asthma receiving inhaled and/or systemic glucocorticosteroids may be due to their steroid resistance, which makes it worthwhile to conduct further studies in this direction.

Key words: bronchial asthma, controllability, spontaneous apoptosis, lymphocytes.

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