THE INFLUENCE OF DESLORATADINE ON ALLERGENSPECIFIC APOPTOSIS CD4+CD25+ T REGULATORY CELLS IN ATOPIC PATIENTS

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Summary

The aim of this study was to analyze whether apoptotic disorders of $CD4^+CD25^+$ T regulatory cells exist in atopic patients having dust mite induced allergic disease, including allergic asthma, and to investigate the influence of the H_1 antagonist desloratadine on apoptosis of $CD4^+CD25^+$ T regulatory cells.

Peripheral blood mononuclear cells of patients (n=6) and healthy subjects (n=6) were stimulated by specific allergen (Dermatofagoides farinae) and in control series by phorbolmiristatacetate. PBMC were labelled with anti-CD4, CD25, CD95, Bcl-2 monoclonal antibodies. Also annexinV-propidium iodide (AnV-PI) test was provided. Lymphocyte subpopulations and apoptosis were analyzed by flow cytometry.

This investigation demonstrates that $CD4^+CD25^+$ T regulatory cells from patients having dust mite induced allergic disease, including allergic asthma in the presence of specific allergen responded by an increase in apoptosis and might be involved in the pathogenesis of atopic asthma. Desloratadine prevents allergenspecific apoptosis of CD4+CD25+ T regulatory cells in atopic patients.

Treatment with H_1-receptor blockers could be important in specific immunotherapy for its enhancing clinical effectivety.