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Influence of the programmed cell death of lymphocytes on the immunity of patients with atopic bronchial asthma

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Abstract

Background: Fairly recent data highlight the role of programmed cell death and autoimmunity, as potentially important factors in the pathogenesis of chronic obstructive airway diseases. The purpose of our research was to determine the influence of apoptotic factors on the immunity of patients with atopic bronchial asthma according to the degree of severity. Method: The study was performed on the peripheral blood of patients with atopic bronchial asthma with different severity. The Immunological aspects were determined with ELISA, the fluorimetric method and the method of precipitation with polyethylene glycol. And the quantification of the parameters of the programmed cell death was performed by the method of flow cytometry and electron microscopy method. Results: The data obtained from morphological and biochemical parameters show the deregulation of Programmed Death of lymphocytes of patients with atopic bronchial asthma but individual for each group of patients. This dysfunction might induce the secretion of autoantibodies against DNA. This could explain the accumulation of circulating immune complex with average size considered as the most pathogenic in patients with bronchial asthma especially in the patients of serious severity. It should be noted that Patients with bronchial asthma of mild and severe severity had different way and did not have the same degree of deficiency of the immune system. Conclusion: These data suggested that apoptotic factor of lymphocytes may play an important role in controlling immunity of patients with atopic bronchial asthma. © 2014 VODOUNON et al.; licensee BioMed Central Ltd.

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Keywords

Atopic bronchial asthma, Immunity, Programmed cell death