

Role of autoantibody in the pathogenesis of patients with atopic bronchial asthma

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Abstract

© 2015 Asian Network for Scientific. Bronchial Asthma is considered as the most spreading human chronic diseases. The diagnostic of the disease at its beginning is very difficult because the light forms of the disease can't be diagnosed as the symptoms are not very well developed at the outbreak of the disease. The objective of this study was to correlate the climatic and geographic factors and the environmental conditions in the occurrence of Atopic Bronchial Asthma and other autoimmune phenomena, for example the prevalence of abzymes in the pathogenesis of Atopic Bronchial Asthma. In the present work, enzyme linked to immune sorbent assay method and the methods of electrophoresis in agarose gel were used. The results of our study showed the discovery of an excessive auto-antibodies to DNA in the blood vessels of patients with atopic bronchial asthma and there was a direct correlation dependence ($r = 0.0005$) between the level of auto-antibodies to DNA and the severity of the Atopic Bronchial Asthma. The detected auto-antibodies possess catalytic activity of DNA, enzymatic specificity which is associated with the degree of severity of disease. The auto antibodies in patients suffering from severe forms of Bronchial Asthma are specific for monofilament DNA and antibodies in the blood serum of the patients with the light form of asthma is heterogenic: besides antibodies with monofilament substratum, some specific antibodies with bi-filament DNA circulate. Therefore, in the serum of the patients suffering from Atopic Bronchial Asthma antibodies with Catalytic activity DNA was observed-that is abzymes. It was suggested that these "abzymes" maybe directly involved in the removal of debris produced by the metabolism of organism under physiological conditions. Considering all these facts, Abzymes can be regarded as serological markers of autoimmunity and needs to be tested while investigating autoimmunity especially in Atopic Bronchial Asthma and it may also serve as an additional criterion for the diagnosis of asthma even in the early stages and can also help in the evaluation of the effectiveness of the treatment.

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Keywords

Abzymes, Atopic bronchial asthma, Auto-antibodies