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Characterization of Specific IgE Antibody Related to Antigen 5 of Echinococcus granulosus

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Abstract:

Background: Anaphylactic reactions, such as urticaria, edema, respiratory symptoms, and anaphylactic shock often complicate the course of Cystic Echinococcosis (CE). Methods: To investigate the role of the IgE immunoreactive antigen 5 (Ag 5) in the sero-positive patients with CE, we determined N-terminal of 57 kDa subunit of Ag5 responsible for IgE and C-terminal of this active antigen related to induction of IgG specifically. Results: Immunoblotting analysis showed that specific IgE to 57-kDa subunit related to inter-chain disulphide band of two 22 kDa and 38-kDa component of Ag5 and conformational epitope on this subunits. In addition, since the 57 kDa component arise from the removal of the C-terminal portion of 22 kDa subunit of Ag5, thus IgE specifically recognized N-terminal of 22 kDa subunit which remain bounds to the other component, whereas IgG reacted with C-terminal of 38 kDa component of Ag5. Conclusion: Recognition of the specific binding site on the 57 kDa subunit of Ag5 could leads to understanding the mechanism regulating IgE/IgG production in some immune circumstances that IgE tends to some dominate, whereas in other IgG predominates.

Keywords:

Cystic Echinococcosis ، Antigen 5

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