



DEVELOPMENT OF ALLERGIC REACTIONS AND ATOPIC DISEASES IN CHILDREN WITH HELMINTH INFECTIONS

Matyakubova Yulduz Rajabboyevna

Assistant, Department of Pediatrics and Neonatology, Urgench State
Medical Institute (Uzbekistan)

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ABSTRACT

Helminth infections remain a significant public health problem among children, especially in developing regions. In recent years, increasing attention has been paid to the interaction between parasitic infections and the immune system. Helminths can modulate immune responses, potentially influencing the development of allergic reactions and atopic diseases such as atopic dermatitis, allergic rhinitis, and bronchial asthma.

Relevance. Helminth infections remain a significant public health problem among children, especially in developing regions. In recent years, increasing attention has been paid to the interaction between parasitic infections and the immune system. Helminths can modulate immune responses, potentially influencing the development of allergic reactions and atopic diseases such as atopic dermatitis, allergic rhinitis, and bronchial asthma.

Objective. To investigate the relationship between helminth infections and the development of allergic reactions and atopic diseases in children.

Materials and Methods. The study included children aged 2–10 years diagnosed with helminth infections. Clinical examination, анамнез collection, and laboratory tests (stool analysis for паразиты, eosinophil count, total IgE levels) were conducted. The presence of allergic and atopic conditions was assessed through clinical criteria and patient history. A comparative analysis was performed between infected and non-infected children.

Results. The findings demonstrated a higher prevalence of allergic manifestations among children with helminth infections. Common symptoms included skin rashes, pruritus, urticaria, and respiratory allergic signs. Elevated eosinophil counts and increased IgE levels were frequently observed. A significant association was found between helminth infections and the development of atopic dermatitis and allergic rhinitis. In some cases, helminth infections appeared to exacerbate existing allergic conditions.

Discussion. Helminths influence the immune system by stimulating Th2-type immune responses, leading to increased production of IgE and eosinophilia, which are key mechanisms in allergic diseases. At the same time, chronic helminth infections may also have immunomodulatory effects, sometimes suppressing severe allergic responses. This dual role suggests a complex interaction between паразиты and host immunity.

Conclusion. Helminth infections in children are associated with an increased risk of allergic reactions and atopic diseases. Early diagnosis and timely treatment of helminthiasis,

along with monitoring of allergic manifestations, are important for improving pediatric health outcomes

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