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IN SCIENTIFIC RESEARCH

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AN INDIVIDUAL SUSCEPTIBILITY TO SECT BITES: THE ROLE OF GROUPS AND TYPES OF A BLOOD OF THE IMMUNE RESPONSE

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Relevance. In modern pathophysiology, bites from blood-sucking insects are regarded as a complex effect of a biological stressor, combining mechanical trauma and chemical alteration of tissues caused by components of the saliva. The reactivity of the organism, as an integrative property of a living system that enables it to respond to environmental influences by adaptively restructuring metabolic and functional processes, determines the nature of the subsequent pathological process: ranging from physiological protective inflammation to severe immunopathological conditions. Against a backdrop of rising allergy rates among the population and changing environmental factors, the issue of individual sensitivity to insect bites is becoming increasingly significant. Of particular scientific interest is the relationship between the

host organism's genetic markers - in particular, blood group according to the ABO system - and the type of immune response triggered by sensitisation to insect saliva antigens. Understanding these mechanisms is crucial for predicting an individual's risk of developing allergic complications and systemic reactions [1].

Purpose of the study. Determine the pathophysiological mechanisms underlying the development of local reactions to insect bites, analyse the characteristics of immune reactivity based on a questionnaire survey, and investigate the role of blood group as a factor influencing the intensity of the antigenic load on the body.

Materials and methods. To achieve this objective, an analysis was carried out of recent scientific publications on the pathogenesis of insect allergies and the behavioural characteristics of vectors. The practical part of the study was based on the results of a survey of 150 respondents regarding the nature of their typical reaction to a bite. Reactivity was assessed according to criteria for general pathology, distinguishing between normergic, hyperergic and hypoergic states, as well as delayed-type reactions. Statistical analysis of the data obtained made it possible to determine the percentage distribution of different types of immune response within the population.

Research findings. The study found that the intensity of the initial insect attack is directly dependent on a person's blood group. Data from the literature confirm that individuals with blood group 0(I) are most attractive to mosquitoes due to the specific secretion of chemical attractants on the surface of the epidermis. Analysis of the survey results showed that a normergic reaction, manifested by moderate oedema and hyperaemia, was observed in 68% of respondents. A hyperergic response, pathogenetically based on the mechanism of immediate-type hypersensitivity with massive degranulation of mast cells, is characteristic of 30% of respondents. A delayed-type reaction, caused by cell-mediated immune processes, was observed in 16% of participants. A hypoergic state, indicating reduced reactivity or immunological tolerance, was noted in 12% of participants. The smallest proportion was accounted for by a secondary inflammatory reaction (1.3%), which pathophysiologicaly represents the addition of an infectious process to the site of the primary alteration [2-3].

Discussion. The data obtained demonstrate that the type of immune response to a bite is the result of the interaction between genetic predisposition and acquired sensitisation. The high frequency of hyperergic reactions (30%) indicates a significant level of sensitisation within the population, in which specific IgE antibodies to salivary antigens play a key role. The role of blood group in the pathogenesis of these conditions is indirect: the increased attractiveness of individuals with blood group A to insects results in a more frequent antigenic load, which accelerates the transition from normergy to hyperergia. The development of delayed-type reactions (16%) confirms the involvement of the T-lymphocyte component of the immune system in the pathogenesis of chronic inflammation. Secondary inflammation, although rare, is a critical factor in the transformation of an aseptic process into a septic one in patients with impaired skin barrier function [4].

Conclusion. A pathophysiological analysis has shown that an individual's reactivity to insect bites is a dynamic system, in which blood group 0(I) acts as a risk

factor for intense exposure to antigens. The vast majority of reactions are normergic in nature; however, a significant proportion of hyperergic and delayed responses indicates the need for a differentiated approach to desensitisation therapy. The established patterns allow for a better understanding of the mechanisms of homeostasis disruption under the influence of biological pathogens and the development of measures to prevent systemic allergic complications [5].

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ВТОРИННИЙ ФОЛІКУЛІТ ПРИ РЕТИНОЇД-ІНДУКОВАНОМУ ПОРУШЕННІ БАР'ЄРУ ШКІРИ

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Вступ. Ретиноїди — похідні вітаміну А. Вони широко застосовуються у лікуванні акне, псоріазу та кератодермій [2, 3]. Попри доведену ефективність, тривале використання ізотретинолу й адапалену структурно перебудовує епідермальний бар'єр, відкриваючи «вхідні ворота» для вторинної мікробної колонізації фолікулярного апарату [1, 6]. Фолікуліт як небажаний наслідок ретиноїдної терапії, досі залишається мало систематизованим у вітчизняній дерматології. Саме тому дана тема підлягає детальному вивченню.

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