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## **THE IMPORTANCE OF THE IMMUNE SYSTEM IN THE TREATMENT OF HERPETIC STOMATITIS**

**Abstract:** This article discusses the importance of the immune system in the treatment of herpetic stomatitis. The author explained the nature of this disease in detail.

**Key words:** immunity, herpes, infection, antibodies, virus

The course of any disease in the human body directly depends on the human immune system. The condition of the body's immune system is also important in the clinical presentation of Hrgs, which affects the development of the infectious process in herpes by changing the proportions of its components. Patients with GVI have various manifestations of immunodeficiency, which allows us to talk about herpes infection as a disease of the immune system. The duration and quality of life of a particular person, specific characteristics, and prognosis of the disease are directly proportional to the disorders of the immune system. With HRGS, the following occurs: secondary immunodeficiency, which is associated with a functional failure of cells or a decrease in their number or an imbalance of the components of the immune system. Sometimes antibodies promote infection by exerting their effect against cells. For example, the IgG molecule contained in NK cells binds specifically to cells through receptors for the Fc fragment, and the virus envelope and cell surface provide a close connection between them, which facilitates the entry of the virus into the cell.

Another defense mechanism is the persistence of the virus in tissues that are not under immune control (neurons, regional ganglia of sensitive nerves). These cells are unable to express the histocompatibility complex of type i, as a result of which the virus in them is unhindered. There are significant differences in the infection of lymphocytes and epithelial cells. Viral replication in epitheliolytic occurs with the formation of 20 virions and damage to nearby cells

of a specific lobe. When B lymphocytes are infected, the virus only reproduces in a small number of cases, and in the rest it is in a latent state.

The ability of HSV to exist in various cells of the immune system leads to the formation of an escape mechanism from the body's defense systems. The immune response of the macroorganism is directed against both virus-infected cells and the virus itself and is determined by two defense mechanisms: specific immunity formed after disease or artificial immunization and natural resistance. Innate resistance to the reproduction of viruses based on Gvi is considered a systemic human disease because HSV can lead to the development of chronic infection in the human body.

In herpetic stomatitis, non-specific immunity, the body's non-specific protective factors are the first to interact with the viral agent. Various components of non-specific resistance are ancient mechanisms of body protection and contribute significantly to the body's response to viral invasion. The tissue macrophage is one of the first cells involved in the immune response to a single viral infection. Macrophages are directly involved in the specific and non-specific immune responses of the body to the introduction of a foreign agent. They capture and absorb pathogens and present antigenic proteins to t-21 and B-lymphocytes, which initiate the development of cellular and humoral immune responses. Macrophages respond to viral invasion with the rapid production of anti-inflammatory cytokines due to the activation of neutrophils, monocytes, macrophages, NK cells, and T and W lymphocytes, including the specific immune response.

The infectiousness of the disease and the emergence of mature extracellular forms of the virus are associated with the intracellular persistence of HSV with incomplete phagocytosis. Neutrophils are important elements of antiherpetic immunity and synthesize interferon, cytokines and defensins. Migration of HSV to sensory ganglia is prevented by polymorphonuclear leukocytes. Disruption of the adaptive reactions of the human body occurs as a

result of changes in the PMYAL function affected by herpes viruses. A decrease in the activity of the PMYAL enzyme increases the lack of components of the immune system. In the absence of clinical manifestations, the decrease in peripheral blood PMYAL activity is one of the reasons for the recurrence of the disease.

In herpetic stomatitis, secretory immunity, the local immunity of the oral cavity, plays an important role in protecting the body from the penetration of antigens through the mucous membrane. Its function is a complex of non-specific biologically active substances (opsonin's, lactoferrin, lysozyme, mucins, interferons, secretory glycoproteins), carried out by cellular and secretory immunity. (T cells, antibodies). In the mucosal immune system, an inductive area (regional lymph nodes, Peyer's patches) is distinguished, where recognition occurs, and an effector area (mucous membrane, lamina propria), where sIgA is produced and effector t lymphocytes are recruited.

The concept of "oral tolerance" is based on a complex system of interactions between oral microflora, immunological protection, and non-immunological non-specific barrier mechanisms. Subepithelial lymphoid tissue is a protective barrier against the introduction of a foreign agent. Non-specific protection of the body is the first in the way of antigens. The main role is given to alkaline protein-lysozyme, which acts as a mucolytic enzyme. The epithelial cells of the salivary ducts are the main source of lysozyme (80%). The latter has a positive effect on leukocyte phagocytosis, helps to implement the immune response through sIgA, and participates in tissue regeneration. The optimal effect of lysozyme is observed at pH5-7. The increase in the amount of oral microflora has a great effect on the secretion of lysozyme.

Lysozyme works directly with the immunoglobulins of the oral fluid. The difference between the secretory immune system and the blood serum is the different composition of immunoglobulins: in the blood serum, high amounts of IgG and IgM and low amounts of IgA are released; in oral fluid, IgA

predominates with small amounts of IgM and IgG. The amount of immunoglobulin in oral fluid is mic: 1:3:20 IgM:IgG:IgA, respectively. IgA is one of the main and predominant immunoglobulins of the oral fluid involved in local oral immunity [6], which prevents the formation of IgM and IgG by combining with antigens and protecting tissues from damage. sIgA is a complex consisting of two IgA molecules combined with the SC component. There are two subclasses of IgA1: IgA1(90%) and IgA2(10%). The highest concentration of IgA is in the secretion of parotid salivary glands. sIgA activates the function of the complement system in an alternative way and is characterized by antiviral, antitoxic, and bactericidal effects. It enhances phagocytosis and plays a leading role in 23 implementation of antiviral activity of the oral mucosa. IgG plays an important role in immunity against infection. This class of immunoglobulins includes about 90% of antiviral and antibacterial antibodies, antitoxins. The protective function of IgG is based on the property of stimulating the complement system and reactions that contribute to intracellular autolysis and phagocytosis of microorganisms, as well as detoxification of toxins. It should be noted that an increase in the level of IgG in the oral fluid signals an excessive antigenic load.

The amount of IgM in saliva is very small. IgM is the main characteristic of the local immune system in conditions of increased severity of the inflammatory process. When the host first comes into contact with HSV, specific antibodies of classes m, G, and are produced sequentially. An increase in the level of IgG, IgM, which reflects the polyclonal activation of the B-immune response system and is the result of an acute or chronic process, is characteristic. The study of the amount of IgM in the oral fluid is of the greatest diagnostic value because it is evidence of an acute course of the disease, superinfection, reactivation or reinfection. However, many patients are characterized by immunodeficiency and a severe course of herpes infection,

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However, many patients are characterized by immunodeficiency and a severe course of herpes infection, which reduces the rate of antibody formation, which is manifested by the absence of positive dynamics of antibody formation or their low concentration. The most important diagnostic criterion is the detection of IgA antibodies and "early" HSV antigens. In the presence of clinical manifestations, the appearance of IgA in Hrhs in the blood serum indicates the activation of the virus and justifies the implementation of therapeutic measures using 24 immunomodulating drugs from plant and animal sources. IgM is detected about 10 days after infection, but after 30–60 days, it is not detected. After 2-3 weeks from the moment of infection, a sufficient number of IgG antibodies are developed, which have a direction of action against most protein viral structures.

#### **References:**

1. In the countries of Western CHD, it occurs in 19-55.3% of the population (Reznik D., O'Daniels S.M., 2001), and as an isolated lesion of the oral mucosa, for example, herpes labialis, manifests itself in 27.4% of cases (Stock C., Guillen-Grima F. et al., 2001) In the presence of secondary immunodeficiency conditions, the prevalence of herpes infection is 2% (Patton LL, McKaig R. et al., 2000).
2. According to V. Knaup, S. Schunemann, MN WolfF (2000), when examining 83 seropositive patients, asymptomatic reactivation was observed in 68% of cases, and a relapse of herpes infection occurred in 32%.
3. The prevalence of CHD among homosexual men reaches 60% (Pauk J., Huang ML, Brodie SJ. et al., 2000).
4. Dolgikh, T.I. Clinical and immunological evaluation of the effectiveness of Kagocel in the treatment of patients with recurrent herpetic infection / T.I. Dolgikh, E.Yu. Minakova, N.S. Zapariy // Russian Journal of Skin and Venereal Diseases. - 2010. - No. 1. - P. 15-18.
5. Lukinykh, L.M. Chronic recurrent herpetic stomatitis as a disease of the immune system / L.M. Lukinykh, SM. Tolmacheva, S.A. Spiridonova // Modern technologies in medicine. - 2012. - No. 3. - S. 121-125.