

Levels of influence of parasites on the human immune system

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Abstract: Immunity is a protective reaction of the body. Currently, the study of the immune process is of great importance in medicine. Because the body is fighting against disease processes in the body through immune response reactions. This depends on the self-recovery and protection of the body. These are special protective cells (T and B lymphocytes, antibodies and antigens, through immunocomponents).

Key Words: Immunity, Antigens, Antibodies, lymphocytes, humoral immunity, cellular immunity, immunocomponent system,

Introduction: Immunity is the ability of the body to protect itself from all genetically foreign particles and substances, i.e. antigens. T and B lymphocytes are the main cells that carry out the immune process. In addition, neutrophils, eosinophils, basophilic leukocytes, tissue basophils (fat cells) and leukocytes are very important in the protective reactions of the body. In this article, we will try to explain in detail the cells that protect the body.

Main Part: Antigens are microbes, viruses, various parasites, foreign cells and tissues, and sometimes genetically changed (mutated) cells of the organism have antigenic properties. In other words, Antigens are proteins that cannot be recognized by T and B lymphocytes in the body. . Unique glycoprotein molecules on the surface of the plasmolemma play an important role in recognizing antigens, which ensure the genetic differentiation of one organism's cells from another. The synthesis of this molecule is controlled by the major histocompatibility complex (MBK, MNS) genes located on chromosome 6. Two classes of BGK molecules are 1-2. class BGK molecules are present. The main function of class 1 representative enables T-lymphocytes to recognize "own and foreign" cells together with the T-receptor of these cells. 2nd class BGK molecules present antigens to T lymphocytes, mutual cooperation between T and B lymphocytes plays an important role. Antibodies are complex proteins that are a type of immunoglobulins. It is synthesized by the plasma cell in the body and forms the antibody-antigen complex. The antibody-antigen complex has the ability to neutralize foreign substances. There are 5 classes of immunoglobulins.

IgG - This class of representatives actively protects the body against microbial viruses and infectious substances produced by them.

IgM - Antibodies belonging to this class play an important role in neutralizing harmful substances, destroying foreign cells and precipitating various antigens.

IgA - This antibody is found in saliva, tears, and intestinal fluid in addition to blood. That is why they are called secretory antibodies.

IgE participates in allergic reactions. Their complex with special antigens (allergens) causes degranulation of tissue basophils and release of histamine and heparin substances from cells.

IgD-is very rare. It occurs mainly in embryos and newborns. B is involved in the differentiation of lymphocytes. It cannot pass through the placental barrier.

Immunocomponent cells: these cells can be divided into two main types: 1; lymphocytes, 2; auxiliary cells. 1; lymphocytes - these mainly include two types of T and B lymphocytes, in addition to "natural killers" belonging to T and B lymphocytes (NK-lymphocytes). 2; helper cells - these include macrophages, interdigitating and dendritic cells. These cells receive information about the antigen and process it and deliver it to the lymphocyte. Therefore, they are called "antigen-presenting" cells

Conclusion: In short, when a foreign substance enters the human body, all immunoglobulins participate in neutralizing it and expelling it from the body. That is, IgG ensures that an allergic reaction does not occur. IgG fights against the substances they secrete. IgM leads them to a protective reaction against itself. It is no exaggeration to say that these are a high-level protective shell of the human body.

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