IMMUNOGENETIC MARKERS OF DIABETES COMPLICATIONS IN CHILDREN AND ADOLESCTNTS

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Introdution. In recent years, the increasing interest of researchers is a major histocompatibility complex genes (HLA), localized on the short arm of chromosome 6, and is closely associated with the functioning of the human immune system, in particular, with the activation of autoimmune processes in the body. A significant relationship between the presence of certain genotype human HLA and a number of diseases, including systemic connective tissue diseases, chronic kidney disease and insulin-dependent diabetes mellitus, in which the pathogenesis of autoimmune processes play a significant role. There are also data indicating an increased risk of developing diabetes in DR4 antigen.

Aims. To study the frequency occurrence of class II antigens HLA complex in children and adolescents, patients with diabetes mellitus, subject to their available materials and methods of disease complications. Immunogenetic study was performed in 56 children admitted for hospital treatment in the State Institution "Institute of the health of children and adolescents of NAMS of Ukraine" typing antigens of HLA DR locus was performed using prolonged version mikrolimphotoxic samples of B-lymphocyte populations using the sera test panels (class DR).

Results and discusion. In the study of the distribution system in the HLA-antigens in children and adolescents with type I diabetes has been found that the presence of haplotypes DR2DR3, especially DR3DR4, determine the severity of the disease with frequent episodes of hyperglycemia and ketosis, microangiopathy LL - III century., Disorders of lipid metabolism. Combinations DR3DR4 DR2DR3 antigens occurs with high frequency in patients with severe hepatopathy, hyperlipidemia - 37.5% and 25% of cases, respectively, in patients with growth retardation - 40% and 50% of cases, respectively.

Conclusions:

1. Severe diabetes trends among children and adolescents is associated with HLA phenotype, including some options DR2DR3, DR3DR4, DR5DR7.
2. Conducting research immunogenetic patient with diabetes in the early stages of the disease allows to predict type I diabetes at the beginning of the disease allows to predict the subsequent development of diabetic complications and to carry out preventive therapy in a timely manner.