the future, the development and introduction of modern effective algorithmic therapy approaches for older and younger HIV positive patients with gastrointestinal damage is recommended.

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Key words: biomarkers of Helicobacter pylori infection, HIV-positive patients, peptic gastroduodenal ulcers

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FEATURES OF FREQUENCY DISTRIBUTION OF IMMUNOGENETIC MARKERS OF CLASS 1 HLA IN CHILDREN WITH TYPE 1 DIABETES IN COMBINATION WITH THYROID PATHOLOGY INTRODUCTION

Yeromenko R.F., Kovalova V. I. National University of Pharmacy, Ukraine

It has been established [1] that the genetic base of diabetes mellitus (DM) type 1 is on 70% determined by the HLA (Human Leukocyte Antigens) genes. No other genetic area alone determines the risk of developing a disease compared to the HLA system. According to the available data [2], autoimmune diseases of the thyroid gland and type 1 DM represent autoimmune syndromes of the unknown etiology with common immunological defects (target cells, thyrocytes and cells of the islets of Langerhans, excessively produce some proteins encoded by the HLA system – HLA of class 1, HLA of class 2 and transporter associated with antigen processing protein (TAP-1)). At this time, enough data have been accumulated that in carriers of mutations, the manifestation of diabetes is triggered by factors that cause a decrease in insulin sensitivity. These include environmental factors and such conditions as the period of active growth and puberty, excess body weight, infectious process and others [3]. According to the available data [4], adolescents with autoimmune thyroiditis have a combination of genetic and socioecological factors of predisposition, among which burdened heredity, smoking, sources of chronic infections, environmental situations are predominant. Thus, the study of frequency of occurrence of autoimmune pathology of the thyroid gland and diabetes is relevant today, as the frequency of their detection is increasing every year.

Materials and Methods. The frequency of distribution of antigens of HLA system of class 1 has been studied in 20 children suffering from type 1 DM in combination with thyroid pathology living in the northeastern region of Ukraine.

HLA antigens were determined using the microlymphocytotoxic test [14]. 20 specificities of locus A and 37 specificities of locus B were studied. Lymphocytes for typing were isolated on a gradient of ficoll-verographin.

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The control was represented by the data on the frequency distribution of antigens of class 1 of the HLA system in 731 healthy donors, residents of Kharkiv, Ukrainians and Russians, examined by the Kharkiv Regional Blood Transfusion Station in 1992-1995 [5].

To evaluate the strength of association between antigens and disease, a relative risk (RR) criterion was calculated using the following formula:

$$R = \frac{(a+0,5)(d+0,5)}{(b+0,5)(c+0,5)}$$

where a, b, c, d are the values obtained from the 2×2 paring table. The etiological fraction or attributive risk (δ) was calculated by the following formula:

$$\delta = \frac{\boldsymbol{R} - 1}{\boldsymbol{R}} \boldsymbol{F}$$

where F is the frequency of the antigen in children with type 1 DM.

The criterion χ^2 adjusted by Yates for continuous sampling, was also used to determine the statistical significance between the antigens in the comparison groups.

Results. Studies of the frequency distribution of antigens of class 1 of the HLA system in the group of children with type 1 diabetes in combination with thyroid pathology revealed that B27 antigen was detected in 30% of patients, and the following antigens were detected quite frequently – A2 (25%), A3 (25%), A9 (25) 25%), A24 (20%), A25 (20%), B8 (25%), B14 (25%), B15 (20%), B18 (20%). Comparing the results of histotyping in patients with type 1 diabetes and in the control group showed a significant increase in the frequency of A24 antigens (20,0% vs 0,82% in control; χ^2 = 27,3; p<0,001), A25 antigens (20,0% vs 2,6% in control; χ^2 = 9,9; p<0,01), B14 antigens (25,0% vs 5,1% in control; χ^2 = 7,3; p<0,01). The most significant positive relationship in terms of relative (RR) and attributive (δ) risk was determined for A24 antigens (RR=30,4; δ =0,19), A25 (RR=10,0; δ =0,17) and B14 (RR=6,6; δ =0,21). Thus, as a result of the study, the obtained data indicate significant differences in the distribution of specificities of the HLA system of class 1 in children with type 1 DM in combination with thyroid pathology. We believe that carriers of A24, A25 and B14 antigens are more inclined to the formation of endocrine pathology, which is being studied.

Prospects for further scientific research. The obtained results substantiate the possibility of early prognosis of the probable development of the disease and the possibility of timely planning of therapeutic tactics of disease management.

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Key words: HLA, diabetes mellitus type 1, thyroid pathology, children.