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GENETIC PREDICTORS OF UTERINE BLEEDING DEVELOPMENT IN ADOLESCENT GIRLS

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Juvenile uterine bleeding is one of the leading disorders of menstrual function during the menstrual cycle in girls of puberty. Genetic studies of this pathology in adolescent girls, in combination with the determination of hormonal and immunological status are not only medical but also of great social importance.

Our perpose was to determine the frequency of alleles and genotypes of GPIIIa polymorphism in the structure of puberty menorrhagia among girls with concomitant thyroid pathology.70 adolescent girls with puberty menorrhagia who were treated in the gynecological department of the city clinical maternity hospital №1 in Chernivtsi were examined and were divided into two groups: Group I (main) - 30 adolescent girls diagnosed with pubertal menorrhagia on the background of concomitant thyroid pathology glands, group II (comparison) - 40 adolescent girls diagnosed with pubertal menorrhagia and 26 practically healthy adolescent girls (control group).

Polymorphism of the GP IIIa gene (PLA1 / PLA2) was studied by isolation of genomic DNA from peripheral blood leukocytes followed by amplification of the polymorphic site by PCR on an Amply-4l thermocycler (Biokom, Moscow). Statistical processing was performed using MS® 2003™, Statistica® 7.0 applications.

The distribution of genotypes indicated that the A1A1 genotype was more likely to be detected more frequently in adolescents in the study group than in the control 1.25 times ($p = 0.001$). Instead, the relative frequency of the A1A2 genotype was in the control group 1.45 times higher ($p < 0.001$). The A2A2 homozygous mutation was recorded only in adolescent girls with menorrhagia - 8.6% ($n = 6$ individuals). The relative frequency of the "wild" A1 allele probably outweighed the A2A2 genotype 7.5 times ($p < 0.001$).

We observed a probable prevalence of incidence of individuals with a "favorable" A1 allele over those with A2A2 genotype both without thyroid pathology (thyroid) and 12.3 and 9 times, respectively ($p < 0.001$). In adolescents without pathology, the thyroid A1A1 genotype was observed 11.7% more frequently than in those with thyroid disease ($p = 0.041$) and 15.0% more frequently than in the control group ($p = 0.033$). On the other hand, girls with menorrhagia and thyroid pathology were marginally dominated by the relative frequency of the A1A2 genotype by 9.2% ($p = 0.052$) and the A2A2 genotype by 2.5% ($p > 0.05$) such in adolescents of the experimental group without problems with thyroid. A similar tendency was observed when comparing the experimental and control groups as a whole: girls with pubertal menorrhagia were 10.0% more likely to detect A1A1 genotype carriers than controls ($p = 0.002$), whereas in controls with 18.6% more were heterozygous carriers of the A1A2 genotype than in the experimental groups as a whole ($p < 0.001$). There were no significant differences in the frequency of A2A2 among the subjects of the study groups.

Among adolescents with menorrhagia, the mutation in the 17 chromosomes of the GPIIIa gene occurs in 8.6% of cases, unlike the control group, where it was not observed at all. According to the allelic distribution of the A1 / A2 polymorphism of the GPIIIa gene, the "wild" A1 allele predominates, both in the experimental and control groups by 2.4 and 2.3 times, respectively (70.7% and 70.0%, respectively, against 29, 3% and 30.0% of carriers of the "mutant" A2 allele, = $p = 0.003$), but does not violate the overall normal population distribution ($p > 0.05$).