Polymorphism of thrombophilia genes of the blood coagulation system in women of the Kazakh ethnic group with a habitual miscarriage

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The aim of current work was to study the polymorphism of clotting thrombophilia genes, the F2 gene (rs1799963), the F5 gene (Leiden, rs6025), the F7 gene (rs561241), the F13 gene (rs5985), the FGB gene (rs4220), the ITGA2 gene (rs1126643), the ITGB3 gene (rs5918) and the PAI-1 gene (rs1799889). These genes were surveyed among women of the Kazakh ethnic group with Habitual miscarriage of pregnancy. DNA was isolated from the venous blood of the examined women. Gene polymorphism was studied by PCR using allele-specific primers ("SNPexpress" Lytech, Russia) on the RealTime CFX96 amplifier (BioRad, USA). The criterion for selecting women at risk was the presence of spontaneous miscarriages in the first two pregnancies without previous records of normal pregnancy. The control group consisted of women with two normal delivery and had no obstetric complications in the current pregnancy. 198 pregnant women participated this experiment, which were divided into a risk group (79) and control group (119). In calculating OR (95%CI) the frequencies of the polymorphic alleles and determining the frequency of distribution of genotypes of all the genes under study and their compliance to a Hardy-Weinberg equation, the SNPstats online program was used. Calculation of OR indicators was carried out according to five models of inheritance of characteristics - dominant, codominant, overdominant, recessive and log-additive. Statistically significant differences in the incidence of genotypes from investigated thrombophilia genes in women with habitual miscarriage and control group for all five models of inheritance were not revealed. There is a lack of homozygous genotypes according to the mutant alleles of F2 and F5 genes in both groups of the examined women. Also, the absence of a homozygous genotype for the mutant allele of the C/C gene of the ITGB3 gene was detected in both examined groups of women.

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