Evaluation of Thrombophilic Genes in Recurrent Pregnancy Loss: A Case-control Study in Iranian Women

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ABSTRACT Although thrombophilia is associated with the etiology of recurrent miscarriage, the evaluation of specific inherited thrombophilic genes in women experiencing recurrent pregnancy loss remains controversial. This study compared the prevalence of four thrombophilic gene mutations among recurrent miscarriage and fertile control women. PCR–RFLP was performed to genotype four single nucleotide polymorphisms, MTHFR C677T, MTHFR A1298C, FV G1691A, and FII G20210A (causes of inherited thrombophilias) in both, case and control groups. About genotypes, there were statistically significant differences for mutant homozygote MTHFR A1298C genotype (P=0.01) between two cases and control groups, but other genotypes did not show any difference. About total allelic mutations, women experiencing recurrent pregnancy loss did not demonstrate more total mutations than control women (P=0.644). In conclusion, no association was observed between homozygous or heterozygous MTHFR C677T, FV G1691A, and FII G20210A mutants and pregnancy loss in Iranian women. However, the role of the homozygous MTHFR A1298C polymorphism should be investigated further.