

Effect of Genetic Factors on the Etiopathogenesis of Thrombosed Hemorrhoidal Disease

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Abstract

Objective: The aim of this study is to investigate whether genetic factors known to increase thrombosis risk play a role in the etiopathogenesis of thrombosed hemorrhoidal disease.

Methods: Genomic DNA from patients with thrombosed hemorrhoidal disease was analyzed for the presence of factor V Leiden, prothrombin G20210A, methylenetetrahydrofolate reductase C677T, and methylenetetrahydrofolate reductase A1298C mutations.

Results: No significant differences were found in the allele frequencies of factor V Leiden, prothrombin G20210A, methylenetetrahydrofolate reductase C677T, and methylenetetrahydrofolate reductase A1298C mutations between patients with thrombosed hemorrhoidal disease and controls ($p>0.05$). Moreover, there were no significant differences in the genotype (heterozygous and homozygous mutations) of factor V Leiden, prothrombin G20210A, methylenetetrahydrofolate reductase C677T and A1298C mutations between patients with thrombosed hemorrhoidal disease and controls ($p>0.05$).

Conclusions: Our findings indicate that mutations associated with venous thromboembolism do not play a role in the etiopathogenesis of thrombosed hemorrhoidal disease; however, several environmental, mechanical, and hemodynamic factors may contribute to the etiopathogenesis of hemorrhoidal disease.

Key words: hemorrhoids, human genetics, factor V Leiden, prothrombin, MTHFR protein, human, mutation