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Opinion Article

Role of Prothrombin G20210a Factor in Clotting Disorder

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DESCRIPTION

Prothrombin 20210 Mutation, also known as Factor II Mutation, is a genetic disorder that increases your risk of developing life-threatening blood clots. Prothrombin, also known as factor two, is a protein that is produced by every person and aids in blood clotting. However, some people have a Genetic mutation in the prothrombin-producing gene, also known as the factor II (two) mutation or prothrombin G20210A. They are alleged to have prothrombin G20210A, a genetic form of thrombophilia (clotting disorder). They produce an excessive amount of the prothrombin protein when this happens.

The G20210A mutation in the Prothrombin Gene (PGM) is a recently identified risk factor for clotting disorders. As of yet, a direct link between PGM and vascular stroke has not been established. In a series of young stroke patients, the frequency of PGM is examined in this article. Between December 1, 1997 and August 31, 1998, all patients who were 55 years of age or younger who were admitted to the Oregon Health Sciences University for an arterial stroke were tested for the PGM. The Medical Genetics Center at Oregon Health Sciences University examined plasma. With a mean age of 43 (and a range of 19 to 55), the 42 young stroke patients we found were 48% female. Plasma samples from 38 patients were examined for PGM. Six patients (14%) had strokes that were thought to be secondary to atherosclerosis, four (10%) had strokes thought to be caused by cardio embolism, nine (21%) had lacunar strokes, five (12%) had strokes thought to be caused by dissection, and twelve (28%) had idiopathic strokes. The defined frequency of PGM in the healthy population is 2.05%. And there was no connection between PGM and stroke. In this high-risk cohort, PGM does not seem to be a risk factor for arterial stroke. Nonetheless, given the small sample size, more research is necessary.

Prothrombin G20210a factor II mutation

In populations of African and Asian descent, the prevalence of the heterozygous prothrombin G20210A factor II mutation is 1%, compared to 6% in Caucasians. According to reports, the mutation might increase pregnancy loss and even lead to maternal death. Furthermore, it is still debatable whether it is safer for carriers of this mutation to choose progestin-only contraceptives over estrogen-containing contraceptives. Contraceptives that contain solely progestin have been demonstrated to have a lower risk of venous thromboembolism than those that contain oestrogen. Venous thrombosis normally cannot be brought on by a prothrombin mutation alone, especially in heterozygotes. Yet, because most patients do not experience thrombotic episodes during their lives, the majority of patients are ignorant of their prothrombin gene variant status.

Patients with the mutation have a lifetime risk of thrombophlebitis, pulmonary emboli, and portal vein thrombosis brought on by immobility, trauma, and surgery in addition to the impact on pregnancy and maternal health decisions. This may be explained by the patients' higher-than-normal prothrombin levels, which raise their thrombotic risk. Inheritable thrombophilia in the United States is still most frequently caused by the prothrombin G20210A factor II mutation.

CONCLUSION

Young individuals with recently developed severe headaches should be evaluated for the possibility of CVST, and appropriate investigations, including primary thrombophilia testing, should be conducted to determine the etiology. The prothrombin gene mutation appears to be a factor that must always be taken into account for accurate diagnosis and treatment.

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