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Short Communication

Pregnancy Complications and Management of Factor V Leiden Thrombophilia

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DESCRIPTION

A poor anticoagulant response to activated Protein C and an elevated risk for venous thromboembolism are two features of the genetic disease factor V Leiden. The most frequent symptoms are deep vein thrombosis and pulmonary embolism; however thrombosis can also occur in unexpected places [1]. According to the available data, the mutation may only have a minor impact on the likelihood of recurrent venous thromboembolism following initial treatment. Despite the high likelihood of a healthy pregnancy, factor V Leiden is also linked to a 2to3 fold greater relative risk for miscarriage and perhaps other obstetric problems. The number of Factor V Leiden alleles, co-occurring hereditary and acquired thrombophilic diseases, and external risk factors all affect how Factor V Leiden manifests clinically [2]. A DNA examination of the *F5* gene, which codes for the Factor V protein, or the activated Protein C resistance assay (a coagulation screening test) are both necessary for diagnosis. Standard treatment recommendations are followed for the first acute thrombosis. Individual assessments of the risks for recurrent venous thromboembolism and anticoagulant-related bleeding are used to determine the best duration of anticoagulation [3,4]. Long-term anticoagulation is not typically advised for asymptomatic Factor V Leiden heterozygotes in the absence of a history of thrombosis, while prophylactic anticoagulation may be taken into account in high-risk clinical situations. The choice to test at-risk family members should be taken individually if there is no proof that early detection lowers morbidity or mortality [5].

Pregnancy complications

The relative risk of miscarriage and other issues such preeclampsia, intrauterine growth restriction, and placental abruption is two to three times higher in those with Factor V Leiden. A Factor V Leiden mutation, however, is only one of many predisposing factors that contribute to these negative consequences. Factor V Leiden is likely only one of many genetic and environmental factors that contribute to pregnancy problems. Overall, even in homozygous women, the likelihood of a healthy pregnancy outcome is high [5-8].

Women with unexplained recurrent pregnancy loss had a significant prevalence of Factor V Leiden heterozygosity (up to 30%), which suggests a 2 to 5 fold increase in risk. In a prospective research, women who were Factor V Leiden heterozygotes and had a history of recurrent early miscarriage had a lower live birth rate (38%) than those who had a similar history of failed pregnancies but did not have the mutation (69%) [9]. A second pregnancy following a first foetal loss would not be affected by the gene, according to other research that revealed no relationship between pregnancy loss and the mutation. Strong associations with foetal loss were discovered by several meta-analyses. According to some data, women with Factor V Leiden are more likely to experience pregnancy losses in the second or third trimester than in the first [10]. According to a meta-analysis, a heterozygous mutation raised the chance of late unexplained foetal loss by twofold and the risk of loss in the second trimester by fourfold when compared to the first trimester. A 4-fold increased risk of unexplained stillbirth and an 11-fold greater risk of stillbirth connected to placental infarction were both linked to factor V Leiden heterozygosity [11-13]. According to a recent study, heterozygous women had a 5-fold higher risk of a late foetal loss (after 12 weeks of gestation) than homozygous women did, and those lacking the mutation had an 11-fold higher risk [14]. The frequency of early (first trimester) pregnancy losses, however, varied little among the three groups, showing that the mutation is more strongly associated with late pregnancy loss. One theory is that, in contrast to first-trimester losses, which are more frequently attributed to other causes, late pregnancy losses are due to thrombosis of the placental veins [14,15]. Some data, however, point to a possible link between Factor V Leiden and an elevated risk of first-trimester loss.

CONCLUSION

An approximate 7-fold greater chance of getting a DVT during pregnancy is associated with factor V Leiden. If a woman with factor V Leiden intends to become pregnant, she should talk to her obstetrician and/or hematologist about her options. Most factor V Leiden patients have healthy pregnancies and just need attentive monitoring during pregnancy. Treatment with an

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anticoagulant during a future pregnancy can stop recurrence issues for people with a history of DVT or PE.

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