GECKO
Genetics Education Canada: Knowledge Organization
Centre d'éducation en génétique canadien: Connaissances organisées
POINT OF CARE TOOL

FACTOR V LEIDEN

FVL is a very common inherited thrombophilia associated with a moderate increased lifetime risk for venous thromboembolism (VTE). Genetic testing for carrier status of can be controversial and is only indicated in a few circumstances where changes to clinical management would be affected. Genetic testing is not recommended the general population nor for the indication of early pregnancy loss. Treatment of VTE in FVL carriers should follow standard guidelines.

Abbreviations Factor V Leiden - FVL; Venous thromboembolism - VTE; Activated protein C - APC

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When should genetic testing be considered?

FVL carrier testing may be considered in the following scenarios when the results of testing would affect clinical management:

1. Persons with a first, unprovoked VTE who are planning to stop anticoagulation
2. Females with a family history of VTE or a known inherited thrombophilia who are considering:
   - estrogen contraception or hormone replacement
   - prophylactic anticoagulation during pregnancy

How is VTE managed in FVL carriers?

VTE management depends on the clinical circumstances.

The first acute thrombosis should be treated according to standard guidelines. (see CHEST, Thrombosis Canada).

The decision about long term anticoagulation therapy should be made based on an assessment of the risks for VTE recurrence and anticoagulant-related bleeding. FVL carrier status is not associated with increased recurrence risk

What should carriers of the FVL know?

Carriers of FVL should be informed about circumstances that increase VTE risk, VTE signs and symptoms, and the need for potential prophylactic anticoagulation in high risk situations.

Kearon C, Akl EA, Ornelas J, et al. Antithrombotic Therapy for VTE Disease: CHEST Guideline and Expert Panel Report. Chest. 2016;149(2):315-352.

Thrombosis Canada. Thrombophilia: Factor V Leiden and Prothrombin Gene Mutation. Sept 2021. [Accessed Nov 2022]