

Development of diagnostic algorithm for von Willebrand disease within WFH the Twinning Tallinn-Helsinki program

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Introduction and Objectives

It was not possible to make a definite diagnosis of von Willebrand disease (VWD) subtypes or severe forms of haemophilia A in Estonia until 2016. To close these diagnostic gaps, a specific goal of the World Federation of Hemophilia (WFH) centre twinning link between Tallinn (Estonia) and Helsinki (Finland) Haemophilia Treatment Centre (HTC) was to update the protocols for laboratory diagnosis of bleeding disorders in Estonia.

Materials and Methods

Adult and paediatric ISTH-BAT (International Society on Thrombosis and Haemostasis - Bleeding Assessment Tool) were translated into Estonian and

incorporated into routine practice to identify individuals with clinically relevant bleeding tendency/symptoms. New fully automated assay protocols were implemented in STA-R Evolution analyzer (Stago, France) and their analytical performance was evaluated:

- Von Willebrand factor (VWF) activity assay (INNOVANCE® VWF Ac, Siemens, Germany) – part of the VWD screening panel;
- FVIII low-range assay – for the correct classification of severe haemophilia A and of type 3 VWD (available 24/7).

A new VWF multimer electrophoresis assay (Sebia, France) was evaluated preclinically, including the main VWD types and 2B, 2A and 2N subtypes.

Regular meetings and discussions focusing on clinical cases were established between clinicians and laboratory.

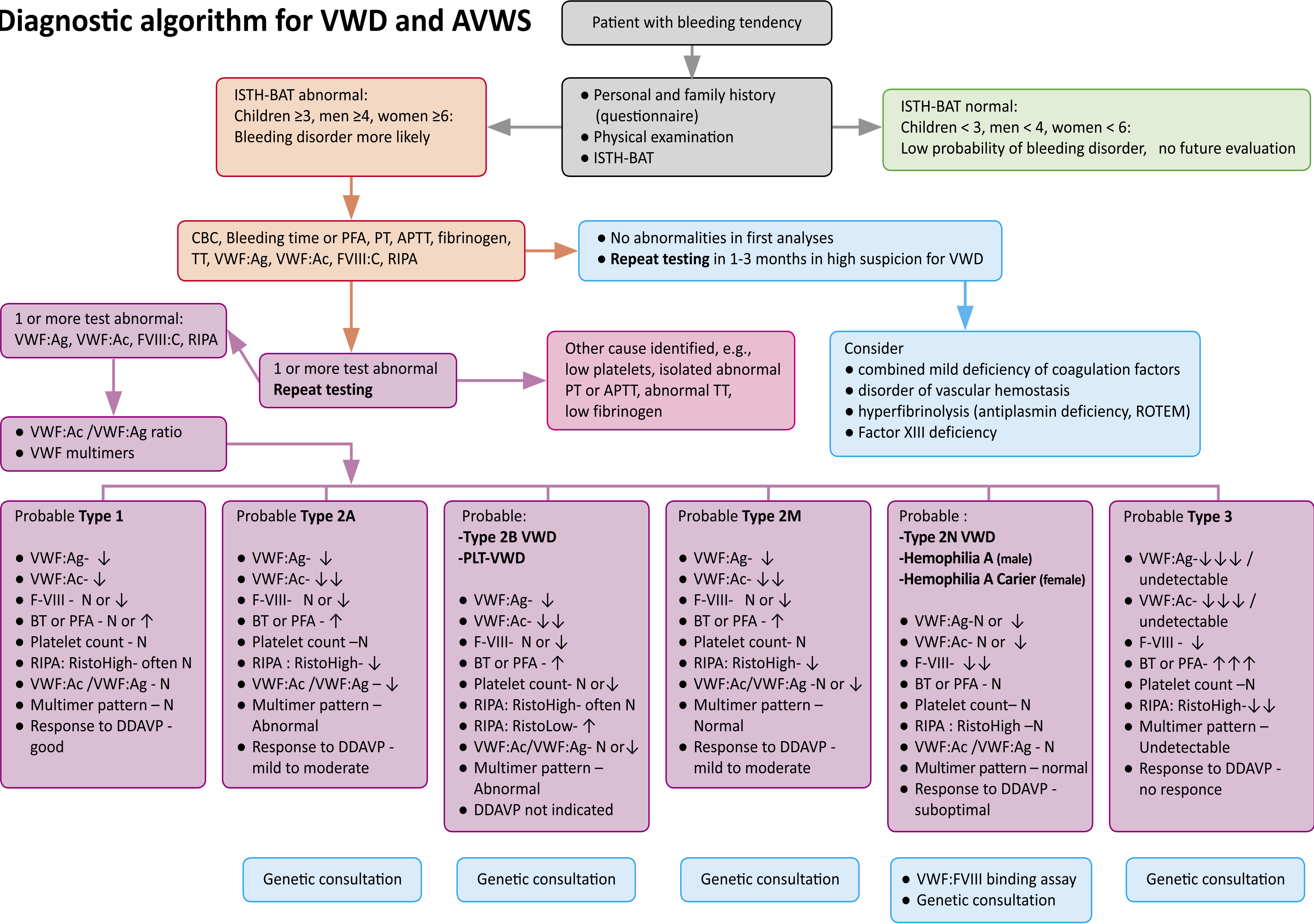
Results

Coagulation tests were verified and accredited according to ISO 15189:2012. Based on available laboratory assays in Estonia, diagnostic algorithms for VWD and acquired von Willebrand syndrome were created. The response to desmopressin was evaluated in Tallinn Children`s Hospital. The assessment of desmopressin response will also be addressed among adults.

Conclusion

The Tallinn-Helsinki WFH Twinning Program has played a pivotal role in developing coagulation test methods in the North Estonia Medical Centre laboratory and in promoting interdisciplinary meetings and international cooperation in the Baltic region.

Diagnostic algorithm for VWD and AVWS



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