HEMATOLOGY
Clinical Communications

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INTRODUCTION of AUTOMATED RISTOCETIN COFACTOR ASSAY for EVALUATION of VON WILLEBRAND FACTOR ACTIVITY

Date Effective: May 1, 2018

Background Information:

Since 2013, the automated VWF activity assay has been used as the initial evaluation of VWF function. It is an immuno-turbidimetric assay that identifies the platelet glycoprotein Ib binding site on the VWF molecule, a surrogate marker for VWF activity. Although it has been accurate in more than 95% of samples, there have been some rare von Willebrand Disease Type 2B patients who were not identified using this assay.

Change in or New Test Procedure: The Haemostasis Laboratory at the Health Sciences Centre will be changing the assay being used to evaluate the function of von Willebrand factor (VWF). VWF activity assay will be replaced by an automated ristocetin cofactor assay that uses latex particles coated with a recombinant fragment of the platelet glycoprotein receptor for VWF (rGPIbα). The assay measures the agglutination of these particles by VWF in the patient sample, in the presence of ristocetin.

The automated VWF ristocetin cofactor will be included in the initial screening of patient samples for quantitative and qualitative abnormalities of VWF. This screen also includes VWF antigen level, Factor VIII coagulant activity level, and if requested, PFA-100 closure times.

Reference Range: Unchanged (50 – 200%)

More information:

Presently, the manual ristocetin cofactor assay will remain available for on-going validation of the automated assay. If both assays are performed on a patient sample, they will be differentiated in the report as:

- VWF RCoF (automated)
- VWF RCoF (manual)

The VWF activity to antigen ratio will be calculated using the automated VWF ristocetin co-factor as the activity value.

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