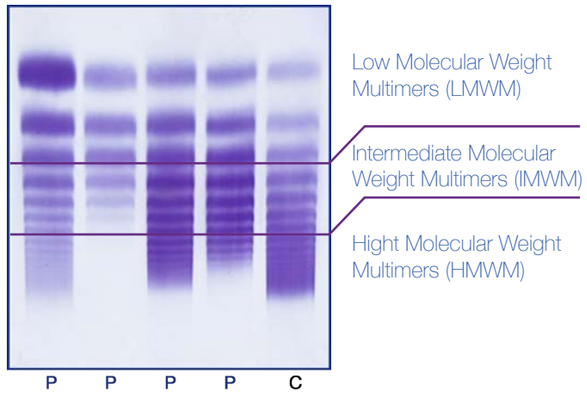
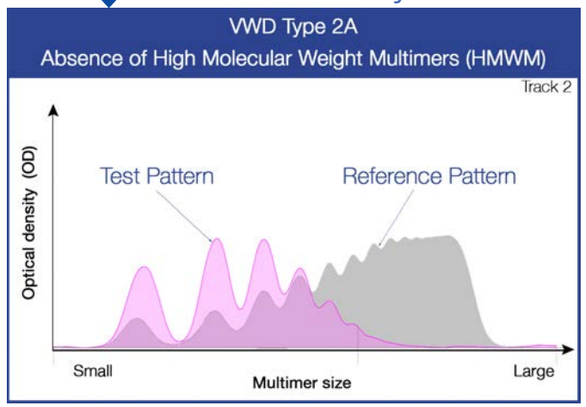
Sebia HYDRAGEL von Willebrand within-day assay

Multimers



Densitometry



Check availability with your laboratory

Sebia is the #1 worldwide provider of specialty diagnostic tests by electrophoresis

Acknowledgements

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sebia

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New within-day von Willebrand Multimers results

von Willebrand Disease Laboratory tests

von Willebrand disease

- Congenital von Willebrand disease (VWD) is a mucocutaneous bleeding disorder caused by a reduction or dysfunction of von Willebrand factor (VWF)
- The symptoms of VWD include soft tissue bruising, epistaxis (nose bleeding), gingival (gum) bleeding, gastrointestinal or genitourinary bleeding and menorrhagia. The degree of bleeding experienced is linked to the severity of the VWD in the individual.
- Acquired von Willebrand syndrome (AVWS) may rarely develop in elderly individuals with no prior history of a bleeding disorder.

Laboratory diagnosis

- Laboratory diagnosis of VWD involves an initial comparison of the VWF concentration, known as VWF antigen (VWF:Ag) and a measure of its activity (VWF Act), often followed by more specialized tests such as **multimer analysis**.

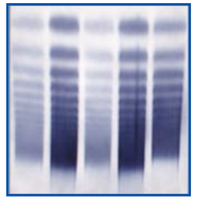
Sebia HYDRAGEL von Willebrand Multimers assay

- Gel densitometry depicts the overall VWF multimers distribution
- Easy to interpret, reproducible, standardized
- Allows laboratories to provide one-day results
- Sebia HYDRAGEL von Willebrand Multimers assay is a premium triage test allowing classification of patients in most cases
- Confirmation by traditional multimer test might be required in some patients (to enable triplet and others sub-banding patterns visualisation)

von Willebrand Disease Type 1

Patient A
Male
25 years old

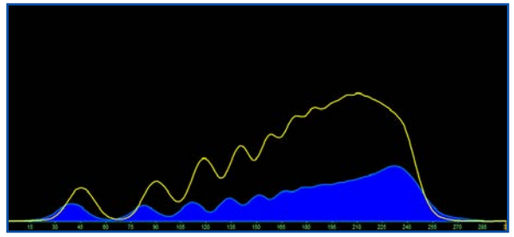
- History of bleeding post dental extraction



1 2 NC*

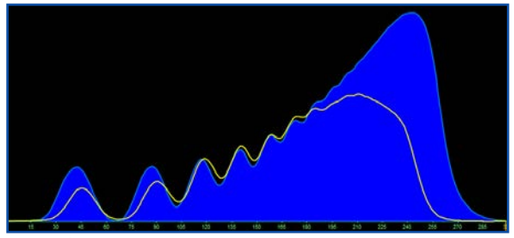
Lane 1: Pre DDAVP®*

VWF:Ag	38 IU/dl
VWF Act	35 IU/dl
Ratio VWF Act/VWF:Ag	0.90
Multimer Analysis	Qualitatively Normal Distribution



Lane 2: Post DDAVP®*

VWF:Ag	195 IU/dl
VWF Act	180 IU/dl
Ratio VWF Act/VWF:Ag	0.92
Multimer Analysis	Qualitatively Normal Distribution

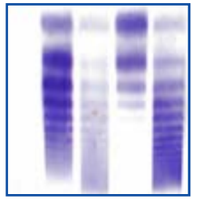


* Desmopressin
** Normal Control

von Willebrand Disease Type 2A

Patient B
Male
38 years old

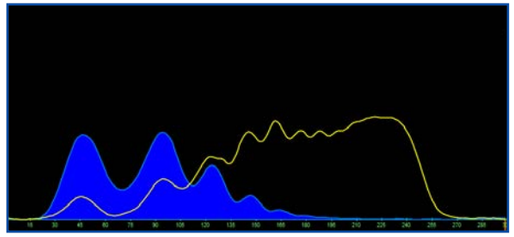
- History of epistaxis
- p.Thr1578Asn mutation in exon 28



4 NC*

Lane 4: Type 2A

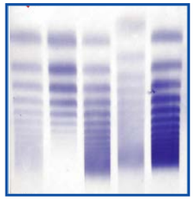
VWF:Ag	40 IU/dl
VWF Act	9 IU/dl
Ratio VWF Act/VWF:Ag	0.23
Multimer Analysis	Gross reduction of HMWM



von Willebrand Disease Type 2B

Patient C
Male
27 years old

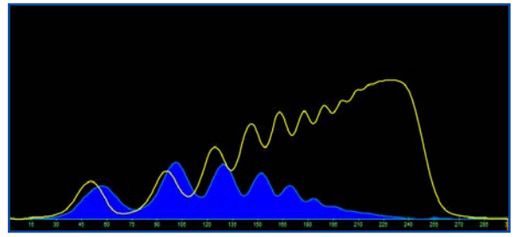
- History of epistaxis
- p.Arg1306Trp mutation in exon 28



2 NC*

Lane 2: Type 2B

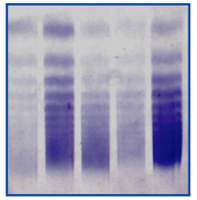
VWF:Ag	36 IU/dl
VWF Act	10 IU/dl
Ratio VWF Act/VWF:Ag	0.26
Multimer Analysis	Gross reduction of HMWM



Acquired von Willebrand Syndrome

Patient D
Female
57 years old

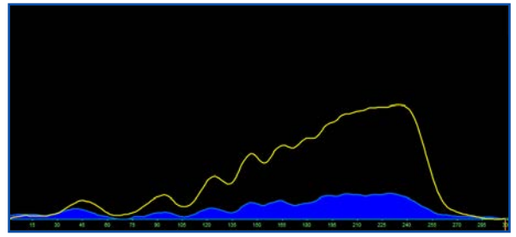
- Cardiovascular disease (Mitral insufficiency and aortic valvulopathy); slight increase IgM



4 NC*

Lane 4: AVWS

VWF:Ag	30 IU/dl
VWF Act	30 IU/dl
Ratio VWF Act/VWF:Ag	1.00
Multimer Analysis	Qualitatively Normal Distribution



von Willebrand disease classification

- There are three types of VWD.
  - Type 1 is the commonest form and clinically has the mildest bleeding phenotype. This is characterized by a concordant reduction in VWF:Ag and VWF Act. The ratio of VWF Act and VWF:Ag is approximately 1.0.
  - Type 2 is less common, causing more severe bleeding problems than type 1 and is further classified by specialized tests into 4 subtypes, 2A, 2B, 2M and 2N. Types 2A, 2B and 2M cause difficulties in platelet binding and are diagnosed by a discordant reduction in VWF:Ag and VWF Act. The ratio of VWF Act and VWF:Ag is 0.6 or less. In individuals with Type 2N VWD, VWF cannot competently bind to clotting factor VIII.
  - Sub-classification of VWF type 2 includes visualisation of the VWF protein and it's component parts, the multimers. Historically, this is a laborious and non-standardized assay but essential for diagnosis of 2A and 2M VWD.
  - Type 3 VWD is rare and caused by an absence of VWF which results in a clinically significant bleeding.