Pathophysiology, clinical, diagnosis and therapeutic aspects of acquired von Willebrand syndrome (AVWS)

Clinical features

- Bleeding diathesis usually occurrs rather late in the life of persons with no past and family history of bleeding
- Main symptoms are mild to moderately severe mucocutaneous bleeding
  - ecchymosis
  - epistaxis
  - menorrhagia
  - gastrointestinal tract bleeding*

  **usually associated with the detection of angiodysplasia*
- Or excessive bleeding following trauma or surgical procedures particularly when FVIII:C is low

Diagnosis

- Usually based on the laboratory measurements used to diagnose inherited VWD (In the absence of a family history of bleeding)
- A defect in primary haemostasis is demonstrated by a prolonged skin bleeding time or prolonged closure time with PFA-100
- VWF multimer electrophoresis is warranted to demonstrate the defect of HMW multimers that helps to distinguish AVWS from type 1 VWD

Pathophysiology

- Most cases are due to an increased plasma clearance of VWF caused by such mechanisms as
  - antibodies
  - cell adsorption
  - shear stress
  - increased proteolysis
- Almost always in association with an underlying disorder

Therapy

Three main treatment goals for patients with AVWS

- control of acute bleeding
- its prevention in high-risk situations
- achievement of a stable remission or cure

Hemostatic therapies in the AVWS associated with different underlying diseases

Cardiovascular		VWF/FVIII concentrates, antifibrinolytics
Lymphoproliferative	IgG MGUS	HDIVIg
Lymphoproliferative	IgM MGUS	Plasmapheresis, DDAVP, VWF/FVIII concentrates, antifibrinolytics, rFVIIa
Lymphoproliferative	Lymphoma, myeloma	DDAVP, VWF/FVIII concentrates, antifibrinolytics, rFVIIa, HDIVIg
Myeloproliferative		DDAVP, VWF/FVIII concentrates, antifibrinolytics
Autoimmune		HDIVIg, DDAVP, VWF/FVIII concentrates

Franchini *et al.*, Haematologica, 2020