



# Von Willebrand disease (VWD) in Parturients

- VWD is the most common inherited (Autosomal dominant) bleeding disorder that affects men and women equally
- There are various forms of VWD; the most common and mildest form of the disease is Type I, a quantitative deficiency with reduced levels of VWF and Factor VIII
- Patients may be asymptomatic until minor surgeries, trauma, menses etc
- Type IIa and IIb are qualitative issues where the VWF is abnormally functioning
- Type III is the most clinically severe and symptomatic, associated with very low levels of VWF and factor VIII, and patients may bleed spontaneously into joints/muscles.
- VWF levels typically rise 2-3 times over baseline during the 2nd and 3rd trimesters. Many parturients with VWD reach normal levels of both VWF and factor VIII at term. However, the increase may not be as significant in individuals with more severe VWD and thrombocytopenia may worsen in type 2B VWD

# The Case

- 26 years, G1 P0 at 39+2 weeks, diagnosed with Type I VWD 14 years ago when she had menorrhagia for 6 months
- Patient had been treated with nasal DDAVP for menorrhagia. History significant for asthma, surgical history of mole removal requiring IV DDAVP in the ED, 2 nose bleeds during pregnancy and frequent easy bruising
- She has been followed by hematology who recommended IV DDAVP infusion prior to delivery
- Presented for an Anesthesiology consult early in the third trimester



# Management of von Willebrand disease

- Anesthesia consultation should be obtained prior to the onset of labor to discuss options for labor analgesia
- Multi-Disciplinary meeting was held and care plan was formulated
- Obtain VW Factor (VWF) level and Factor VIII activity level, prior to epidural placement.
- A VWF activity level of 50 international units/dL or higher is considered adequate for regional anesthesia (The 2021 VWD guidelines include a target range of 50 to 150 IU/dL for neuraxial anesthesia)
- Some experts recommend that patients with type 2 VWD and type 3 VWD should avoid neuraxial anesthesia.
- Admission labs were as follows: VW activity 95.6 ( 40.3-163.4%), VW Antigen 129.8 (42.0-176.3%), Factor VIII 125 ( 50-150%), Factor Levels >50%
- Patient should be given DDAVP 0.3 mcg/kg when she enters active labor phase
- Tranexamic acid (TXA) 1000 mg IV x1 immediately after delivery, Methergine in the room to ensure availability for immediate administration as needed.
- Plan for anticipated C-section: DDAVP prior to skin incision if not already given within the past 12 hours, TXA 1 gram immediately after delivery and methergine as needed.

