Disease	Cause	Notes	Treatment
Immune thrombocytop-nic Purpura	IgG Antibodies against platelet antigens (GP IIb/IIIa)	- Most common in children and adults - Large platelets on blood smear - low platelets count - Increased megakaryo-cytes number - Normal PT & PTT - Enlarged B-cells follicles and increased plasma cells	1- Self-limiting in children 2- Corticosteroids may help in children but adults will recover then have a relapse* 3. Splenectomy
Heparin-Induced Thrombocytop-enia	Heparin-induced IgG antibodies against platelet's cell membrane protein → platelet factor 4	- More common with unfractionated Heparin (high molecular weight) - Paradoxical thrombocytopenia and thrombosis	
Thrombotic Microangiopat-hies [mainly in TTP and HUS]	TTP→ a defect in ***ADAMTS3*** that cleaves vWF precursor to the smaller form (the large precursor binds alarge numberof platelets forming thrombi) HUS → *infection* by ***enterchemoregic E.coli*** (O157:H7) which produce shiga toxin that reaches the kidneys and causes vessels damage and microthrambi	Symptoms → fever, thrombocytopenia microangiopatlies hemolytic anemia, renal failure [more prominent in HUS], CNS damage [only in TTP]. - HUS → more common in children - Normal PTT/ PT - Low platelets - On blood swear → schistocytes	plasmapheresis and corticosteroids
von Willebrand Disease	-Mainly ***autosomal dominant detect causes reduction in vWF**** - Type I →	- vWE causes platelets' adhesion so when deficient we will have superficial bleeding - vWF carries factor VIII in the plasma so in severe cases we will	Desmopressin (ADH analog)

	decreased vWF - Type IIa → *decreased vWF precursor* (high molecular weight) - Type IIb → *normal vWF precursors number but decreased half-life* (similar to TTP without microthrombi)	have factor VIII deficiency - high PTT in cases of VIII absence - abnormal ristocetin test	
Hemophilia A	***x-linked deficiency in factor VIII*** (more common in males)	- 30% of cases have no family instory - Mild deficiency causes excessive bleeding after trauma - Symptoms appear after marked decrease in factor levels → deep tissue bleeding but *no petechiae* - Severe deficiency may cause death - High PTT corrected by mixing study *.	Recombinant factor VIII
Hemophilia B [christmas disease]	***x-linked deficiency in factor Ix***	- similar to hemophilia A but less common - decreased factor IX levels	
Disseminated Intravascular Coagulation	***Increased release of tissue factor***	- Secondary to: 1. complicated labour 2. Cancer → Acute Promyelotic leukemia T epithelial tumours that secrete mucin [activate coagulation] 3. Snake venom 4. Sepsis and Viremia 5. Inflammation 6. Trauma - high PT/PTT - Blood smear→ schistocutes, thrombocytopenia	- D-dimer is the best screening test *

*Information from pathoma in red

* vWF → when the subendothelium is exposed due to injury, vWF binds gplb (CD42b) on platelets and promotes their adhesion

* Mixing Study → to determine whether we have autoantibodies or true deficiency by adding the supposedly missing factors → corrected?deficiency, not corrected? autoantibodies

* D-dimer → results from ***fibrin*** splitting