

Hematologic Disorders of the Newborn/Child

	Pathogenesis	Clinical	Diagnosis	Treatment
Neonatal polycythemia	Erythropoiesis from intrauterine hypoxia <u>Risks</u> : IGUR, maternal DM/HTN, smoking, delayed cord clamping, twin-twin transfusion	Ruddy skin, hypoglycemia, resp distress, cyanosis, apnea	Hct >65% in FT	If asymp → hydration/feeding If symp → partial exchange trans.

Anti-platelet, Anticoagulant Medications

	MOA	Monitor/Reversal	Side Effects
Aspirin	Irrev. Inhibits COX → blocks production of Thromboxane A2 → blocks plt aggr.	GI bleed, Hyperventilation (resp alkalosis), Tinnitus, Reye Syndrome	
Clopidogrel	Inhib. Platelet ADP receptors → blocks GPIIb/IIIa expression → blocks plt aggr.	GI bleed	
Abciximab, Eptifatide (GP IIb/IIIa inhibitors)	Binds platelet GP IIb/IIIa → blocks platelet aggr.	GI bleed, N/V, back pain	
Aggrenox	Inhib. Adenosine deaminase _ phosphodiesterase → inc adenosine/cAMP → vasodilation +dec. Plt aggr.	Dizziness, headache, nausea	
Heparin (continuous infusion)	Binds/activates antithrombin → inactivates thrombin/FXa → inhibits coagulation	PTT, anti-Xa (goal 0.3-0.7) Protamine sulfate (100%)	HIT, hypersensitivity, narrow therapeutic window
Enoxaparin, Dalteparin (LMWH) (SQ injection)	Binds antithrombin → inactivates FXa → inhib. coagulation	Not routine/anti-Xa (0.5-1) Protamine sulfate (60%)	HIT (rare)
Fondaparinux (direct Factor Xa inhib) (SQ injection)	Binds antithrombin → inactivates FXa → inhibits coagulation	Not routine, antiXa Not antidote	No risk of HIT (b/c does not bind PF4)
Rivaroxaban, Apixaban, and Edoxaban (direct Factor Xa inhib) (Oral)	Binds FXa → inhib. activation of FII (prothrombin→ thrombin)	Not routine /Andexanet alfa (severe/life-threatening bleeding)	Bleeding
Dabigatran (direct thrombin inhib) (Oral)	Direct thrombin (factor II) inhibitor	Not routine/Idarucizumab (severe/life-threatening bleeding)	Bleeding
Argatroban, Bivalirudin (Direct thrombin inhib) (continuous infusion)	Binds thrombin → inhibits coagulation	PTT (q2), PTT (1.5-3x baseline), check LFTs prior	Hemorrhage, hypotension
Warfarin (Oral)	Inhib. Epoxide reductase → inhib Vit. K dep. clotting factors: 2,7,9,10, protein C/S	INR Start IV Vit K, FFP q4, Kcentra (if severe)	Bleeding, Tetratogen, drug-induced interactions (cyt p450), skin necrosis