Acquired hemolytic anemia	Features	Etiology	Presentation	Lab tests	Treatment
Warm antibody autoimmune hemolytic anemia	Ig-G, extravascular	LPD (CLL, NHL), lupus, immune deficiency disorders, drugs	Jaundice, splenomeg, pallor, tachycardia, asymp, underlying autoimmune disorder	DAT+ for Ig-G	*Steroids*, splenectomy, IVIg, folic acid, danazol, vinca alkaloids Treat underlying disease
Cold agglutinin disease	Ig-M, complement, intravascular	Chronic (older): B-lymphocyte neoplasm Acute (younger): mycoplasma pneum (anti-I), mono	Cold-induced acrocyanosis, jaundice, splenomeg	DAT+ for C3	Avoid cold Treat underlying disease
Paroxysmal cold hemoglobinuria (PCH)	Ig-G, complement, donath-landsteiner antibody	Viral infection in children, tertiary or congenital syphilis	Cold-induced paroxysms of fever, back & leg pain, ab cramps, rigors, hemoglobinuria & renal failure	DAT -	Avoid cold, supportive (self-limited disease)
Paroxysmal nocturnal hemoglobinuria (PNH)	Non-immune, *intrinsic*, intravascular	Acquired clonal disorder of stem cell (somatic mutation of pig-a) that results in defective RBC	Pancytopenia, iron deficiency, venous thrombosis Assoc w/ aplastic anemia, MDS, AML	LAP low, sucrose lysis (sensitive), Ham's tests	Correct anemia, avoid thrombosis, allo bone marrow transplant, stim hematopoiesis

Drug-induced immune hemolytic anemia	Triggering agent	Hemolysis	DAT	Drugs
Hapten mechanism	Drug on RBC surface	Extravascular	Ig-G	Penicillin
Immune complex mechanism	Drug + plasma protein + antibody	Intravascular	C3	Quinidine Phenacetin
Autoantibody mechanism	Autoantibody vs Rh ag	Extravascular	Ig-G	Ibuprofen Alpha-methyldopa

Neutrophil disorder	Defect	Result	Presentation	Notes
Leukocyte adhesion deficiency (LAD)	LAD-1: defect in B2 integrin expression (*rolling occurs, but no adhesion*)	Impaired adhesion Neutrophilia	No pus formation, recurrent bact (staph aureus, e coli) & fungal infec: delayed separation of umbilical cord, skin infections, chronic leg ulcers, gingivitis	Flow cytometry to diagnose Use abx, marrow transplant (severe)
	LAD-2: no sialyl-lewis X carb, so *unable to roll* along endoth wall	Impaired adhesion Neutrophilia	Neurological defects, craniofacial defects, bombay (hh) erythrocyte phenotype	
Chronic granulomatous disease (CGD)	Defective NADPH oxidase	Impaired phagocytosis	Microabscesses and granulomas (Staph, salmonella, candida, aspergillus)	
Specific granule deficiency	Deficiency of specific granules	Impaired migration	Recurrent infections of skin, sinuses, and lungs	Autosomal recessive
Chediak-higashi syndrome (CHS)	Defective granule formation, resulting in cathepsin G deficiency	Impaired chemotaxi, NK activity Neutropenia	Oculocutaneous albinism, peripheral neuropathy, tendancy to develop LPD, infections, bleeding	Autosomal recessive
Hereditary myeloperoxidase syndrome	MPO deficiency (HOCl production defect)	Impaired ability to kill fungi	Recurrent visceral fungal infections	