

Hemolytic Anemia Work-up

Laboratory Value	Findings	Intravascular Hemolysis Features	Extravascular Hemolysis Features
Bilirubin	Marker of RBC breakdown. Need Total and Direct to calculate indirect (unconjugated) bilirubin level. Elevated but typically <4.0 unless massive.	↑	↑↑
LDH	Nonspecific marker of cellular breakdown. Can trend as marker of response to treatment.	↑↑↑	↑
Haptoglobin	Slow to be processed. Low level is very sensitive and specific. Cannot define extent of hemolysis.	Cannot distinguish between intravascular or extravascular.	In both types, there will be similar, very low levels of haptoglobin.
Hemoglobinuria	Presence of free hemoglobin in the urine is common in intravascular hemolysis	↑↑	—
Urobilinogen	A water soluble breakdown product of bilirubin. Greater in extravascular hemolysis; because more indirect bilirubin.	—	↑↑
Blood Smear	Detects abnormal RBC forms, intracellular microorganisms, and inclusion bodies.	Increased Reticulocytes Heinz Bodies = G6PD Def. Schistocytes = MAHA (microangiopathic hemolytic anemia) Intracellular organisms = Malaria, babesiosis	Increased Reticulocytes Spherocytes = autoimmune hemolysis, hereditary spherocytosis RBC Agglutination = cold agglutination disease Target cells = thalassemia and SCD Sickle Cells = SCD