Hemolytic Anemias Testing

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INDICATIONS FOR TESTING
Anemia and evidence of hemolysis

ORDER
- CBC with Platelet Count and Automated Differential
- Reticulocytes, Percent and Number
- Lactate Dehydrogenase, Serum or Plasma
- Haptoglobin
- Bilirubin, Total, Serum or Plasma

Presence of the following may provide clues to the etiology of the anemia:
- Increased reticulocyte count, LDH, bilirubin
- Decreased haptoglobin
- Abnormal peripheral smear
- Polychromasia, spherocytes, schistocytes, sickle cells, stomatocytes, Heinz bodies, basophilic stippling, unusual RBC inclusions, and agglutination

Note: Lack of any of the above does not rule out hemolytic anemia

Abbraviations
aHUS: Atypical hemolytic uremic syndrome
DIC: Disseminated intravascular coagulation
LDH: Lactate dehydrogenase
HELLP: Hemolysis, elevated liver enzymes, low platelet count
HPLC: High-performance liquid chromatography
HUS: Hemolytic uremic syndrome
PCH: Paroxysmal cold hemoglobinuria
PNH: Paroxysmal nocturnal hemoglobinuria
RBC: Red blood cell
TMA: Thrombotic microangiopathy
TTP: Thrombotic thrombocytopenic purpura
WBC: White blood cell

ORDER
- ADAMTS13 Reflex Panel or ADAMTS13 Activity
- E. coli Stx-like Toxin by EIA (depending on presentation)
- RBC Band 3 Protein Reduction in Hereditary Spherocytosis
- Direct Coombs (Anti-Human Globulin)

HPLC: Activity

DIC: TTP, HELLP, HUS, aHUS, mechanical cardiac valve, vasculitis, malignant hypertension

Microangiopathic RBC destruction
- Schistocytes, thrombocytopenia
- Polychromasia only with or without platelet decrease
- Polychromasia without other reproducible morphologic abnormality

Consider one or more of the following tests:
- Pyruvate kinase deficiency
- Hexokinase deficiency
- Glucose phosphate isomerase

Consider sickle cell disease (diverse genotypes): SS, SC, SE, Sβ thalassemia, S Lepton