INDICATIONS FOR TESTING
Patient with anemia and evidence of hemolysis

ORDER
- CBC with Platelet Count and Automated Differential
- Reticulocytes
- Lactate Dehydrogenase
- Haptoglobin
- Bilirubin

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

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

Proceed based on above findings

DIC
- Increased
- Normal Clinical presentation consistent with TMA

ADAMTS13 Activity
- Consider DIC, TTP, HELLP, HUS, aHUS, DIC, TTP, HELLP

Adjuvant Hemolysis
- Consider HUS

TTP
- Consider D-Dimer

Pregnant
- Consider HELLP

ADAMTS13 activity <10%
- Consider Shiga toxin (oroy fever), babesia

TTP
- Consider HUS

If infection suspected, consider malaria, bartonella (oroy fever), babesia

Unusual red cell inclusions
- Consider PNH

ORDER
- PNH, High Sensitivity, RBC and WBC testing

Polychromasia only with or without platelet decrease
- Consider cold agglutinins disease

ORDER
- Direct Coombs (Anti-Human Globulin)

Agglutination
- Consider cold agglutinins disease

ORDER
- Direct Coombs (Anti-Human Globulin)

Positive for complement
- Consider one or more of the following tests
  - Pyruvate kinase deficiency
  - Hexokinase deficiency
  - Other enzyme defects

Cold agglutinins disease
- Consider one or more of the following tests
  - Glucose-6-Phosphate dehydrogenase deficiency
  - Unstable hemoglobin defects
  - Glutathione metabolism defects
  - Hemoglobin H disease

For hemoglobin disorders, consider HPLC, genetic testing

Warm autoimmune hemolytic anemia
- Consider +C3

Cold agglutinins disease
- Consider +C3

Cold hemoglobinuria (PCH)
- Confirm PCH with Donath Landsteiner testing

For hemoglobin disorders, consider HPLC, genetic testing

Click here for topics associated with this algorithm