



# Laboratory *News*

VOL. 39, NO. 2 - APRIL 6, 2016

## Inside This Issue

**LOW VOLUME TESTS  
DISCONTINUED** ..... 1

### **LOW VOLUME TESTS DISCONTINUED**

*Gene R. Shaw, MD, Clinical Pathology;*

*Tom Schulta, Assistant Manager, Clinical Manual Lab Services*

Effective immediately, **ADAMTS 13** testing will no longer be performed at Marshfield Labs. Effective April 11, 2016, tests for **erythrocyte osmotic fragility**, and **free hemoglobin (plasma or urine)** will also be discontinued. The rationale behind discontinuing these low volume tests along with recommendations for alternative testing and laboratory evaluation are provided below.

#### **1. ADAMTS 13.**

Testing will be forwarded to The Blood Center of Wisconsin (BCW) with turn-around-time (TAT) of about 2-3 days.

In immune-mediated thrombotic thrombocytopenia purpura (TTP), ADAMTS 13 levels are consistently below 10% activity. The utility of the test for initial diagnosis is much enhanced if available same day, before decisions on central line placement and need for plasma exchange are made. However, test volumes have been too low in Marshfield to maintain proficiency and test availability. During FY 2015 (FY15) there wasn't a single ADAMTS 13 test performed in-house; a few (deemed low probability or low priority by a hematopathologist) were sent to BCW.

From a diagnostic standpoint, the three key elements of TTP are: (1) microangiopathic hemolytic anemia with at least a modest number of schistocytes (> 3 per 100X field) on the peripheral blood smear, anemia may initially be mild; (2) thrombocytopenia; (3) elevated LDH. Other features (e.g., renal failure, CNS symptoms, or fever) are variable. Consultation with a hematopathologist (either Dr. Shaw or Dr. Sitwala) is recommended for patients in whom an initial diagnosis of TTP is



being considered.

## **2. Erythrocyte Osmotic Fragility (OF).**

Testing will go to Mayo Laboratories performing only the incubated OF test (Mayo Test ID: FRAG) with TAT of 3-5 days.

Generally used to diagnose hereditary spherocytosis, this test does not have urgent TAT requirements. Performing OF on both fresh and incubated in-house samples offers no advantage over just the incubated test on referred samples. Patients with autoimmune hemolytic anemia, as evidenced by a positive direct antibody test (DAT) , may also have increased spherocytes, but OF testing is rarely indicated.

## **3. Free Hemoglobin (both plasma and urine).**

Plasma hemoglobin will be sent to Mayo Laboratories (Test ID: PLHBB); TAT of 2-4 days. Urine hemoglobin is available through Marshfield Labs as a qualitative colorimetric (dipstick) test read as: negative, trace, small, moderate, or large.

In the setting of a suspected hemolytic anemia, these tests add little, if any, value to other more commonly used tests, e.g., haptoglobin, LDH, indirect bilirubin, reticulocyte count, DAT, cold agglutinin titer. Free hemoglobin values do not have specificity for the underlying cause, are unreliable as an indicator of disease severity, and do not guide therapy.

## **QUESTIONS**

If questions regarding these changes, please contact:

- Gene R. Shaw, MD, Clinical Pathology or Tom Schulta, MT(ASCP), Assistant Manager
- Phone number: 800-222-5835. 📞