

Provincial Laboratory Services



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Health PEI
One Island Health System

Discontinuation of Qualitative Urine Myoglobin Test

May 28, 2020

This information applies to: ED and Internal Medicine

Effective June 2, 2020 the qualitative “Urine Myoglobin” test will no longer be offered on PEI. While excess filtered myoglobin load is implicated in the pathophysiology of rhabdomyolysis, qualitative myoglobin testing has poor specificity, and there is expected to be more false positive urine myoglobin tests than true positives. The poor performance of these tests has led to low clinical demand and non-existent interlaboratory support. Indeed, there are no available quality control materials or external proficiency testing programs available around the world, both of which are minimal accreditation requirements of any clinical laboratory test.

Serum creatine kinase (CK) activity is more specific and sensitive for rhabdomyolysis versus myoglobinuria, which is supported by systematic reviews, meta-analyses, and a rhabdomyolysis guidelines. Serum CK levels gradually rise during the first 12 hours of rhabdomyolysis, peak within 3-5 days, and return to baseline during the following 6-10 days, whereas myoglobin clearance is rapid and myoglobin is unstable in urine. Suspected myoglobinuria is supported by urinalysis that is positive for blood on dipstick with negative, or relatively few intact red blood cells observed by microscopic analysis. Because urinalysis dipsticks for blood detect hemoglobin and myoglobin, this strategy must be consider possible hemoglobinuria. Microscopic urinalysis can only be performed within 4 hours of sample collection.

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