



DATE: November 16, 2015
TO: All Physicians, Clinical Managers, and Clinical Educators at WLMH
FROM: Dr. Tony Chetty, Discipline Director Clinical Chemistry and Immunology
RE: **ESR Utilization Testing**

Please be informed that effective December 01, 2015, ESR testing will not be performed on site.

What is the Erythrocyte sedimentation rate (ESR)?

- A nonspecific test that goes up in a variety of inflammatory and non-inflammatory disorders.
 - Increases with age, pregnancy, certain drug therapies.
 - Causes variable results at the onset and at the end of an inflammatory process.
- **Every year, we perform over 20,000 ESRs in Hamilton.**

When is it appropriate to order an ESR?

- Diagnosis or monitoring of temporal arteritis or polymyalgia rheumatica. **But a normal ESR cannot exclude these conditions!**
- Monitoring rheumatoid arthritis, other connective tissue disorders, Hodgkin's Disease, tuberculosis and osteomyelitis.

When is it NOT appropriate to order an ESR?

- ESR should not be ordered in asymptomatic individuals.
- ESR should not be used as a screen for infection, inflammation or malignancy. They are better detected using the clinical history, physical examination, and more specific diagnostic tests.
- ESR should not be used to "clear" a patient for discharge from the ward or emergency room.
 - The test is not sensitive or specific enough for disease.
 - The test takes over an hour to perform! This delay makes it harder to safely and efficiently discharge your patient.

What about the C-reactive protein (CRP)?

- A specific test that directly measures the extent and severity of inflammation.
- The CRP goes up more rapidly than the ESR in the setting of inflammation.
- Since the CRP is an automated test, the lab can give you results more quickly.
- Like the ESR, it should not be ordered in asymptomatic individuals and should not be used as a "screen" for infection, inflammation or malignancy.

Our Recommendations:

Choose the CRP in most situations where you want to measure inflammation.

Do not request the CRP and ESR simultaneously - this will require biochemist approval!

References

Ontario Association of Medical Laboratories. Guideline for the ordering of erythrocyte Sedimentation Rate (ESR). Revised 2001. [Guidelines for clinical laboratory practice]. Retrieved November 19, 2010 from OAML web site at <http://www.oaml.com/PDF/CLP023.pdf>

Olshaker JS, Jerrard DA. The erythrocyte sedimentation rate. J Emerg Med 1997;15(6):869-874.

Lane SK, Gravel JW Jr. Clinical utility of common serum rheumatologic tests. Am Fam Physician 2002;65(6):1073-1080.

An HS, Seldomridge JA. Spinal Infections. Diagnostic tests and imaging studies. Clin Orthop Relat Res 2006;444:27-33.

Colombet I, Pouchot J, Kronz V, et al. Agreement between erythrocyte sedimentation rate and C-reactive protein in hospital practice. Am J Med. 2010 Sep;123(9):863.e7-13.

For further information please contact:

Dr Tony Chetty

Discipline Director Clinical Chemistry and Immunology

905-522-1155, ext 34366

chetty@hhsc.ca