

is low at 30-40%. Tuberculosis may also be in your differential diagnosis, but unfortunately the acid-fast stains used for diagnosing tuberculosis will destroy *Paragonimus* eggs so the pathologist should be notified if you have a suspicion for Paragonimiasis. Ova in the stool (from eggs that are coughed up and then swallowed) are also specific but are found even less frequently, with a sensitivity of 11-15%.

Eggs, adult organisms and/or eosinophilia can be seen in needle core and other types of tissue biopsies; this diagnostic method also has the potential advantage of looking for malignancy or other conditions on your differential diagnosis at the same time. If a less invasive approach is needed, a blood sample from the patient can be sent to the CDC for an immunoblot assay against a crude extract from *Paragonimus westermani*, a related lung fluke found in Asia. The immunoblot test is highly sensitive for diagnosing *P. westermani*, but cross-reactivity also occurs in some patients with *P. kellicotti* infection. In patients with no history of travel to areas endemic for *P. westermani*, a positive immunoblot test can be used to confirm the diagnosis of *P. kellicotti* infection. An IgG Western blot test using specific *P. kellicotti* antigen has been developed and has been found to be both sensitive and specific for *P. kellicotti* infection, but this test is not yet commercially available.

REFERENCES:

1. Fischer PU, Curtis KC, Folk SM, Wilkins PP, Marcos LA, Weil GJ. Serological Diagnosis of North American Paragonimiasis by Western Blot Using *Paragonimus kellicotti* Adult Worm Antigen. *The American Journal of Tropical Medicine and Hygiene*. Published online April 15, 2013.
2. Lane MA, Marcos LA, Onen NF, Demertzis LM, Hayes EV, Davila SZ, Nurutdinova DR, Bailey TC, Weil GJ. *Paragonimus kellicotti* Flukes in Missouri, USA. *Emerging Infectious Diseases*. 18(8) August 2012.
3. Centers for Disease Control and Prevention. January 10, 2013. http://www.cdc.gov/parasites/paragonimus/health_professionals/index.html#dx

Send your questions to coberlye@health.missouri.edu to be published in future editions of the Missouri Hospitalist.

ID Corner

William Salzer, MD

Professor, Division of Infectious Diseases, University of Missouri Health Care

Endocarditis

A recent basic clinical review of Infective Endocarditis in NEJM-Clinical practice:

Hoehn B, X Duval. Infective endocarditis. *N Engl J Med* 2013;368:1425-33.

<http://www.nejm.org/doi/pdf/10.1056/NEJMcpl206782>