Schistosomiasis Serology Is Valuable and Reliable

TO THE EDITOR—We read the photo quiz authored by Bagdure and Khasawneh with interest [1]. The authors described a case of schistosomiasis colitis caused by Schistosoma mansoni, which was diagnosed after review of hematoxylin-eosin–stained colonic biopsy sections. This case emphasizes the challenges associated with obtaining a laboratory diagnosis of schistosomiasis based on examination of ova and parasites in stool specimens.

The authors suggested that serology for schistosomiasis is neither sensitive nor specific. In fact, although serologic tests vary widely in their sensitivity and specificity, based on the antigen and test used, reliable antibody detection assays for schistosomiasis are available that are both sensitive and specific [2]. The Centers for Disease Control and Prevention employs a combination of tests that are based on detection of antibodies to species-specific proteins produced by the adult worms of S. mansoni, Schistosoma haematobium, and Schistosoma japonicum. This serologic testing algorithm for schistosomiasis begins with screening using the S. mansoni Falcon assay screening test (FAST)–enzyme-linked immunosorbent assay (ELISA) [3]; a positive result indicates infection with Schistosoma species. The specificity of the FAST-ELISA is 99%, and its sensitivity is 99% for S. mansoni, 95% for S. haematobium, and approximately 50% for S. japonicum infection. Because the sensitivity of the FAST-ELISA is lower for schistosome infections other than those caused by S. mansoni, species-specific immunoblot tests are also used that can identify the causal schistosome species of the infection if results are positive. Immunoblot tests for S. mansoni, S. haematobium, and S. japonicum are assigned based on travel history.

Bagdure and Khasawneh correctly identified a limitation of serology; antibody tests in general cannot be used to differentiate past from present infection. We agree that polymerase chain reaction may indeed be a useful method to diagnose schistosomiasis, although the results may be affected by the worm burden [4]. Serology for schistosomiasis–specific antibodies is still a valuable method to establish a diagnosis of schistosomiasis, particularly in immigrants and travelers.

Note

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