

ANSWER TO THE PHOTO QUIZ

Philip A. Mackowiak, Section Editor

A 36-Year-Old Chinese Man with High Fever, Abdominal Pain, Watery Diarrhea, and Myalgia

(See pages 1256–1257 for the Photo Quiz.)

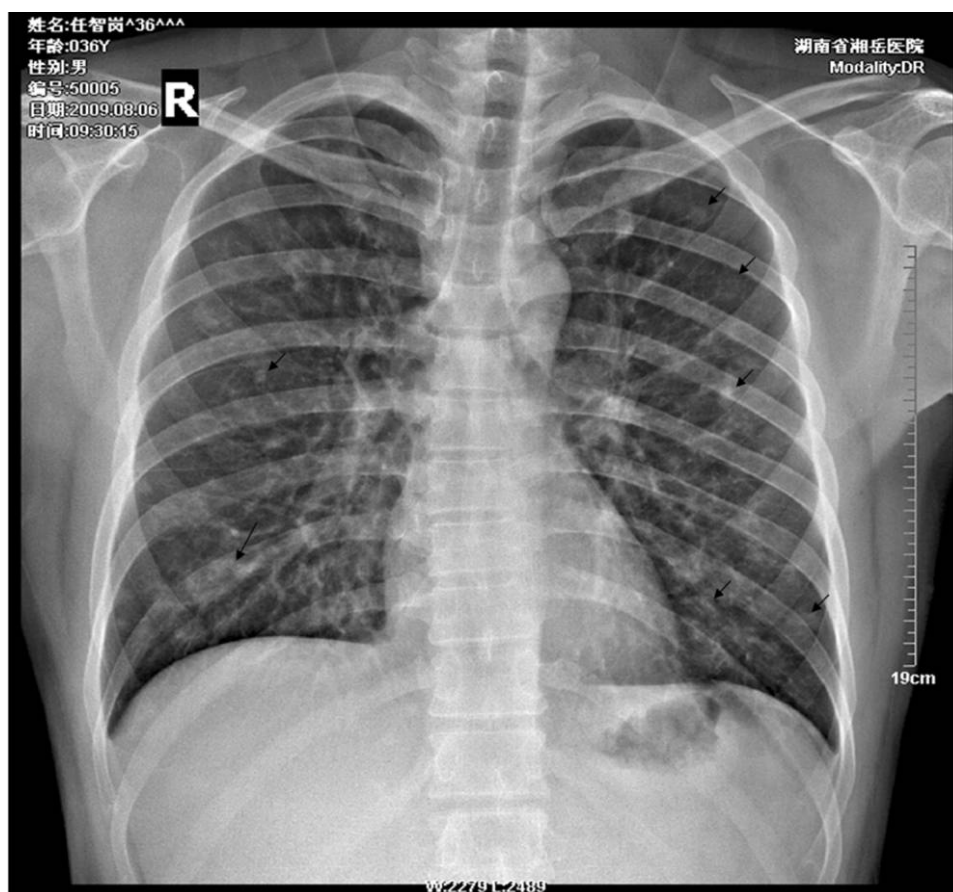


Figure 1. Chest radiograph showing widespread micronodules 1–10 mm in length (arrows) in both right and left lung fields.

Diagnosis: acute schistosomiasis japonica caused by the human blood fluke *Schistosoma japonicum*.

The patient presented to Xiang-Yue hospital in Hunan, China, with a history of freshwater exposure ~35 days before hospital admission. Moreover, he reported experiencing cercarial dermatitis on his arms and legs after swimming in Dongting Lake, but the “rash” disappeared the next day. This lake is China’s second largest, is located in northeastern Hunan Province, and is recognized as an area in which schistosomiasis is highly endemic. These features were consistent with the patient having *S.*

japonicum infection. The patient had no medical history of hepatitis B or C, tuberculosis, or any history of drug allergy. A chest radiograph (Figure 1) revealed widespread micronodular infiltrates, 1–10 mm in length, in both the left and right lung fields, suggestive of acute schistosomiasis. Hematological analysis revealed evidence of parasitic infection. Serological test results were immunoglobulin G antibody–positive for *S. japonicum* both by indirect hemagglutination assay and enzyme-linked immunosorbent assays using soluble *S. japonicum* egg antigen. Examination of a stool specimen obtained using the Kato-Katz thick-



Figure 2. Examination of a stool specimen with Kato-Katz thick-smear technique demonstrating ovoid eggs of *Schistosoma japonicum*, with a yellow/brown translucent shell and small lateral spine (arrows).

smear technique and microscopy revealed the presence of ovoid eggs (90 μm in length; 60 μm in width) with yellow/brown translucent shells and small lateral spines, typical of *S. japonicum*, and confirmed the diagnosis of schistosomiasis japonica (Figure 2).

The patient was treated with praziquantel (60 mg/kg administered orally, divided into 3 doses over 1 day) [1]. In addition, he received prednisone (1 mg/kg per day administered orally over a 5-day period), which resulted in rapid improvement of his clinical condition. Low-grade fever ($<38.0^{\circ}\text{C}$) was noted 10 days after treatment. The patient was discharged from the hospital 12 days after treatment.

Schistosomiasis is a common intravascular infection caused by parasitic trematode worms and is 1 of 10 tropical diseases targeted for control by the United Nations Children's Fund–United Nations Development Programme–World Bank–World Health Organization Special Programme for Research and Training in Tropical Diseases [1–4]. Five schistosome species are known to infect humans: *Schistosoma mansoni*, *S. japonicum* (also known as the oriental schistosome), *S. mekongi*, *S. haematobium*, and *S. intercalatum*. Infections due to *S. mansoni*, *S. japonicum*, *S. mekongi*, and *S. intercalatum* are associated with chronic liver and intestinal fibrosis, whereas chronic *S. haematobium* infections can lead to fibrosis, stricturing, and calcification of the urinary tract. The first clinical manifestation is cercarial dermatitis, which can be observed with all human schistosome species and is a very common sequella of nonhuman (avian) schistosome species [5].

The drug praziquantel is prescribed for the treatment of these

infections and is effective against the adult worms of all *Schistosoma* species [1, 6–10]. Patients who present with acute schistosomiasis may receive additional treatment with corticosteroids to reduce the severity of the immunological reaction [11]. Treatment with 40 mg/kg of praziquantel for 3 days for acute *S. mansoni* or *S. haematobium* infection has been reported to work well [12]. Administration of praziquantel at a dosage of 60 mg/kg (3 doses of 20 mg/kg administered over 1 day at 4–5-h intervals) appears to be as effective as administration at a dosage of 120 mg/kg (20 mg/kg per day for 6 days, administered in 3 doses per day at 4–5-h intervals), which is currently used for treating acute schistosomiasis in China [1].

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