Photo Quiz

(For answer and discussion, see page 3447 in this issue [doi:10.1128/JCM.r00875-11])

A 30-Year-Old Male with a 4-Week History of Shortness of Breath, Productive Cough, and Weight Loss

FIG. 1. *Pneumocystis jirovecii* (formerly *carinii*) DFA (MeriFluor Pneumocystis; Meridian Bioscience, Cincinnati, OH) bronchoalveolar lavage specimen. Total magnification, $\times 600$.

During the period of heightened severe acute respiratory syndrome (SARS) coronavirus vigilance in early 2005, a 30-year-old male with an 8-year history of human immunodeficiency virus (HIV) infection presented to the emergency department with complaints of shortness of breath, productive cough, night sweats, and poor oral intake. He also reported a 10- to 20-pound weight loss. His travel history was noncontributory. Examination of his social history revealed tobacco, alcohol, and illicit drug consumption. The patient had shown a negative purified-protein-derivative (PPD) skin test result during a recent incarceration. The man was employed as a security guard and indicated that individuals from China and India passed his post on a regular basis.

Physical examination produced vital signs indicating pyrexia (maximum temperature [$T_{\max}$], 101°F), tachypnea (respiratory rate, 22), and slight tachycardia (heart rate, 95). His blood pressure was 103/63. The patient demonstrated bilateral breath sounds and showed normal cardiac examination results. Laboratory studies indicated hypoxia (partial O_2 pressure [pO_2], 87% on room air), compromised nutritional status (serum albumin concentration, 2.9 g/dl), and advanced HIV disease (leukocyte count, 3,700 cells/ μ l;

$CD4^+$ T-lymphocyte count, 17 cells/ mm^3). A chest X-ray revealed bilateral diffuse infiltrates.

Direct examination of expectorated sputum via Gram, acid-fast fluorochrome, calcofluor white, and respiratory virus direct fluorescent-antibody assay (DFA) staining techniques yielded no significant findings. DFA staining of this specimen for *Pneumocystis jirovecii* (formerly *carinii*) was negative. The patient underwent a bronchoalveolar lavage (BAL) the following day, and a diagnosis was made on the basis of the results of the DFA (slide illustrated in Fig. 1).

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