A 26-year-old bisexual man tested positive for HIV antibody 2 months earlier; he had no opportunistic infection and was not receiving any medications. He was not an intravenous drug user. The patient presented with acute shortness of breath and bilateral intermittent pleuritic pain. He was not in respiratory distress. On physical examination, bilateral hyperresonance and diminished breath sounds were noted. A chest radiograph showed large simultaneous bilateral spontaneous pneumothoraces (SBSP [Fig 1]). The CD4 cell count was 6/mm³ (normal range, 400 to 1,770 mm³). After bilateral chest tubes were placed, the expanded lungs revealed multiple cysts without an infiltrate. The patient was treated with intravenous trimethoprim-sulfamethoxazole. Left, then right, thoracotomies and blebectomies with pleurodesis were performed due to persistent bilateral air leaks. Intraoperatively, multiple cysts in the lungs were noted. He improved clinically with fully expanded lungs, and has not had recurrent pneumothorax in the ensuing 18 months.

What is the diagnosis?

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Diagnosis: Pneumocystis carinii pneumonia (PCP).

The microscopic examination of the surgical specimens revealed only PCP without acid-fast bacilli, granulomas, or a malignant tumor. All cultures were negative for organisms.

PCP is the most common pulmonary infection in patients with AIDS. Atypical radiologic manifestations of PCP include nodules, hilar mass, pneumatoceles, and spontaneous pneumothorax.1-6

Patients with AIDS who had previous PCP or received prophylaxis with aerosolized pentamidine isethionate were found to have a higher incidence of cavitary lesions and spontaneous pneumothorax.7-12 Two cases of SBSP in AIDS patients with previous PCP have been reported,13,14 and one or more cases were found in patients receiving aerosolized pentamidine.12 Chest radiographs showed mainly diffuse bilateral interstitial infiltrates and the patients were in severe respiratory distress.

In this case, the patient did not have previous PCP and was not receiving aerosolized pentamidine prophylaxis. SBSP was the first manifestation of his opportunistic infection. Unusual for the magnitude of his SBSP, he was not in respiratory distress and was hemodynamically stable. His chest x-ray film showed cystic changes without an infiltrate, while in the reported cases interstitial infiltrates were the dominant findings.12-14 SBSP may be the presenting feature of an opportunistic infection with PCP in an HIV-infected patient.

REFERENCES
10 Joe L, Gordin F, Parker R. Spontaneous pneumothorax with Pneumocystis carinii infection. Arch Intern Med 1986; 146: 1816-17