coronary artery disease. Am J Cardiol 1987; 60:1399-1401
5 Homma S, Gilliland Y, Guiney TE, Strauss HW, Boucher A. Safety of intravenous dipyridamole for stress testing with thallium imaging. Am J Cardiol 1987; 59:152-54
7 Gerson M, Moore EN, Ellis K. Systemic effects and safety of intravenous dipyridamole in elderly patients with suspected coronary artery disease. Am J Cardiol 1987; 60:1399-1401
9 Blumenthal MS, McCauley CS. Cardiac arrest during dipyridamole imaging. Chest 1988; 93:1103-04
10 Heikela A, Haavisto M, Granas R. Pulmonary uptake of PGE2 is inhibited by dipyridamole in rat isolated lungs. Prostaglandins 1982; 23:147-56

Chronic Cavitary Pneumocystis carinii Pneumonia in a Patient with AIDS

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A 39-year-old man with AIDS presented with cough, chest pain, dyspnea on exertion, fever, and a cavitary lesion in the upper lobe of the left lung. The cavity increased in size over the next five months with disease involvement limited to the left upper lobe. Pneumocystis carinii infection was then diagnosed. Symptoms and cavity resolved with trimethoprim/sulfamethoxazole therapy.

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Pneumocystis carinii pneumonia occurs frequently in patients with AIDS. Although a diffuse bilateral interstitial infiltrate is most common, associated atypical roentgenographic manifestations including cysts and rarely cavitation have also been reported. 1,2 Cavitation in an area of consolidation without diffuse lung infiltrate in a patient with PCP was reported in the pre-AIDS era; however, Candida organisms were also isolated from the cavity. 3 We report here a case of chronic cavitary lesion with progressive enlargement over five months caused by Pneumocystis carinii which resolved with trimethoprim/sulfamethoxazole therapy. The persistence of a cavity due to PCP without diffuse lung infiltration in patients with AIDS is unusual and has not been reported.

CASE REPORT

A 39-year-old white man was hospitalized with a four-week history of fever, chills, night sweats, 13.6 kg (30 pound) weight loss, dysphagia, and a three-week history of dyspnea on exertion, cough with mucoid sputum, and chest pain. Two days prior to admission, he had a bout of cough leading to the expectoration of two cups of greenish yellow sputum. He was found to have esophageal candidiasis one month earlier in another hospital. His only risk for AIDS was intravenous drug abuse. He was a 12 pack-year cigarette smoker and consumed a moderate amount of alcohol. His temperature was 37.8°C; blood pressure, 110/70; pulse, 92/min; respiratory rate, 18/min. Physical examination revealed oral thrush, bilateral axillary and inguinal lymphadenopathy, and hepatosplenomegaly. Chest examination was normal. Leukocyte count was 1,700/μm with 13 percent lymphocytes. Electrolytes and liver function test results were normal. Arterial blood gas on room air showed: pH, 7.48; Pco2, 29 mm Hg; PaO2, 110 mm Hg. Chest roentgenogram revealed a 3 cm thick-walled cavitary lesion in the posterior segment of the left upper lobe (Fig 1, left). Skin reaction to 5 units of PPD was positive. Bronchoscopy revealed normal endobronchial anatomy. Tr ansbronchial lung biopsy showed nonspecific inflammation in bronchial and alveolar tissues. Special stains for mycobacteria, fungi, and PCP were negative. A bone marrow biopsy was negative for mycobacterial and fungal infection and showed myeloid hyperplasia. He developed high spiking temperature up to 40°C and antituberculosis therapy consisting of isoniazid, rifampin and ethambutol was started empirically. Computed tomography of the chest showed a thick walled cavity in the posterior segment of the left upper lobe (Fig 1, right). Cultures of bronchial washing and biopsy for mycobacteria and fungi were negative after six weeks of

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FIGURE 1A (left). Chest roentgenogram showing a thick walled cavity in the left upper lobe and B (right). computed tomography demonstrating the cavity.
incubation. The patient was lost to follow-up. Five months later, a chest roentgenogram revealed an increase in size of the previously noted cavity with an additional cavity in the left upper lobe (Fig 2, left). He still had cough, chest pain, and dyspnea on exertion. His temperature was 38.5°C; result of physical exam was unchanged. The patient left the hospital against medical advice and was readmitted one week later with the additional complaint of flecks of blood in the sputum. Arterial blood gas levels revealed the following values: pH, 7.47; Pco2, 29 mm Hg; Po2, 65 mm Hg; A-a gradient, 49. Bronchoscopy revealed narrowing of the posterior segmental bronchus of the left upper lobe. Transbronchial lung biopsy showed pulmonary parenchyma with thickened alveolar septae and alveolar spaces greatly distended by eosinophilic foamy exudate positive for *Pneumocystis carinii* on methenamine silver stain. There was marked proliferation of *P carinii* cysts which were lined up along the septal wall. Stain for acid-fast bacilli was negative. Cultures of bronchial washings were negative for mycobacteria and fungi after six weeks of incubation. Therapy with TMP/SMX was started intravenously. The patient became afebrile on the fourth day of therapy. The antituberculosis drugs were stopped and the patient was discharged to complete a three-week course of oral TMP/SMX. Follow-up after three weeks showed complete resolution of symptoms and of the cavity on chest roentgenogram (Fig 2, right).

**DISCUSSION**

*Pneumocystis carinii* pneumonia is the predominant pulmonary infection in patients with AIDS and occurs in up to two-thirds of cases. Common presenting symptoms are fever, shortness of breath, and cough. Hemoptysis has rarely been seen with PCP. The mean duration of symptoms in one study was 28 days. The roentgenographic picture is usually bilateral interstitial/alveolar infiltrates, although associated cysts and cavities have been described. In a recent study, seven of 104 patients with PCP and diffuse lung infiltrate had cystic lesions. In another study one of 59 patients with PCP and diffuse lung infiltrate had cavitation. Barrio et al described two patients with PCP presenting as nodular infiltrates with cavitation developing on therapy in one of them. Our patient was unique in that he presented with isolated cavitory disease due to PCP and even after five months, without specific therapy, did not develop diffuse lung infiltrates. A diagnosis of PCP could not be made on initial presentation, as a bronchoalveolar lavage was not performed in this patient with isolated cavitary disease and transbronchial biopsy was nondiagnostic.

Antituberculosis therapy was started because of a positive PPD and upper lobe cavitary lesion. The patient did not improve and disease remained localized to the left upper lobe over the next five months.

Cavitation is an uncommon roentgenographic finding in patients with pulmonary tuberculosis and AIDS. A presumptive diagnosis of pulmonary tuberculosis may be wrong in patients with AIDS even with chronic cavitation and hemoptysis. These can be a rare presentation of PCP.

**REFERENCES**

1. DeLorenzo LJ, Huang CT, Maguire GP, Store DJ. Roentgenographic patterns of *Pneumocystis carinii* pneumonia in 103 patients with AIDS. Chest 1987; 91:312-17
6. Pitchenik AE, Rubinson HA. The radiographic appearance of tuberculosis in patients with the acquired immune deficiency syndrome (AIDS) and preAIDS. Am Rev Respir Dis 1985; 131:393-96