**Pneumocystis carinii** Pneumonia in an HIV-infected Patient*

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*Pneumocystis carinii* is a ubiquitous opportunistic pathogen; whether it is a protozoan or a fungus remains controversial(1). There are two morphological forms: trophozoites (2-5 mc), thin walled, irregularly shaped, unicellular organisms), and thick-walled cysts (6-8 mc), containing eight sporozoites. It has been shown that asymptomatic infection occurs frequently in childhood as well as in adulthood(2); formerly, infection used to be particularly prevalent in developed countries, with fatal outcome in premature infants(3). Pathologically, *P. carinii* causes pneumonitis. Following the pandemic dispersion of the acquired immunodeficiency syndrome (AIDS) since the time of its first recognition in 1981, *Pneumocystis carinii* pneumonia (PCP) has become a leading opportunistic infection among this group of patients(1). Also malnutrition is probably an important host determinant, even in these immunocompromised patients (4).

In Thailand, the first reported case of *Pneumocystis carinii* pneumonia was in 1985. Since then, cases have been reported sporadically. This report describes a case of PCP in a 43-year-old male patient with a history of HIV infection and AIDS. The patient presented with fever, cough, dyspnea, and weight loss. Chest X-ray showed diffuse bilateral infiltrates. Bronchoalveolar lavage revealed the presence of *Pneumocystis carinii* trophozoites and cysts. The patient was treated with intravenous trimethoprim-sulfamethoxazole, and responded well to therapy. This case highlights the importance of recognizing PCP in HIV-infected patients in Thailand.
tis carinii pneumonia was in 1961(5) and the first case in patients with AIDS was reported in 1987(6).

This communication is aimed at providing an illustration of a typical radiographic picture of a case of Pneumocystis carinii pneumonia, which is now commonly encountered in AIDS patients.

**Fig. 1** A chest radiograph taken on admission showing bilateral diffused interstitial infiltration, more densely packed in the lower lung fields and hilar areas.

**THE PATIENT**

A 34-year-old man (HN.9692-29; AN. 5631-36) was admitted to Nonthavej Hospital on June 7, 1992, because of marked prostration, severe palpitation and a fainting spell on the day of admission. He gave a history of anorexia, back pain and 10 kg weight loss over the previous six weeks. Until a few weeks previously, he had been a heavy drinker and smoker for many years.

On examination, the patient appeared bloated, especially in the facial area with erythematous rashes (seborrhoeic dermatitis). His vital signs were: body temperature 37.6°C, pulse rate 80/minute, respiration rate 24/minute and blood pressure 110/80 mmHg. There were a few occasional crepitations over both lung bases. Other findings were normal.

**Fig. 2** Computed tomographic scans showing bilateral pulmonary infiltrates.

**Fig. 3**

(a) Microscopic picture of lung tissue showing chronic inflammatory cell infiltration in the alveolar septa associated with the presence of non-cellular exudate in the alveolar spaces.
(b) Staining with Gomori-methenamine silver shows the presence of Pneumocystis carinii.
Routine laboratory investigations showed haemoglobin concentration to be 14.5 g/dl, haematocrit 41 per cent, white blood cell count 5,500 cells/mm³, with 76 per cent neutrophils and 24 per cent lymphocytes; platelets were adequate in number and normal in appearance. Data on blood chemistry and electrolytes were: serum albumin 2.7 g/dl (normal 3.5-5.0), globulin 3.1 (2.4-3.5), total protein 5.8 (6.0-8.0), total bilirubin 0.7 mg/dl (<1.0), SGOT 158 U/L (0-40), SGPT 137 U/L (0-40).

A routine chest radiograph taken on June 7, 1993 revealed diffused interstitial infiltration in both lungs radiating from the hila towards the lung periphery which was denser in the lower lung fields (Figure 1). Computed tomographic scanning confirmed the heavy impact of interstitial infiltration in both lungs (Figure 2).

Owing to the fact that the patient tested positive for infection with human immunodeficiency virus (HIV), a needle lung biopsy (S36-13373) was contemplated (June 9, 1993) instead of the previously planned thoracotomy lung biopsy. The biopsy revealed a distinctive microscopic picture of *Pneumocystis carinii* infection in the chronically inflamed lung tissue (Figure 3). The patient tolerated the procedure well and the postoperative period was uneventful. A 14-day regimen of co-trimoxazole was started one day before the biopsy.

**REMARKS**

It is now a general policy that any AIDS patient with a lung complication must undergo investigations specifically aimed at detection of opportunistic infections including PCP. Among the techniques of investigation, commonly and effectively used ones are bronchoalveolar lavage and sputum induction. Thoracotomy lung biopsy may be advocated in certain difficult cases, but needle biopsy is seldom ever initiated. In our case, because we were desperate to obtain a
diagnosis even though we lacked the facility for implementing more conventional measures, needle biopsy was reluctantly attempted.

REFERENCES


