

中文題目：以開洞性肺炎為表現之肺弓漿蟲病

英文題目：Pulmonary Toxoplasmosis Presenting as Cavitating Pneumonia

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## **Introduction**

Pulmonary toxoplasmosis is a rare but life-threatening opportunistic infection that occurs in highly immunosuppressed patients. It was responsible for less than 1% of the pulmonary complications of human immunodeficiency virus (HIV) infection. The radiological findings were mainly diffuse interstitial infiltrates. Herein, we presented a case of pulmonary toxoplasmosis presenting as cavitating pneumonia.

## **Case Presentation**

A 32-year-old patient was referred to our hospital because of a one-month history of fever, dry cough, and progressive dyspnea. In addition, he complained about weight loss of 6 kg during the past one month. His medical history was unremarkable. Despite negative result in previous acid-fast bacteria smear, he was been treated as a victim of pulmonary tuberculosis.

On examination, his temperature was 39°C, blood pressure 119/74 mmHg, pulse 123 min<sup>-1</sup>, and the respirations were 20 breaths per minute. Oral candidiasis was found. Chest examination revealed bibasilar crackles, and the remainder of the examination was normal. Chest radiograph showed a cavitated opacity over left upper lung. Significant laboratory values were mild normocytic anemia with a hemoglobin level of 11.2 g/dl, lymphocytopenia with 295 cells/uL, and elevated aspartate aminotransferase of 69 IU/L. Amoxicillin-clavulanate was given for lung abscess was of suspicion.

Fever persisted for 7 days despite antibiotherapy and both blood and sputum cultures were sterile. Fiber-optic bronchoscopy was unremarkable, and bronchoalveolar lavage (BAL) was performed in the left upper lobe. There was negative finding in microscopic examination, cultures, cytology with cell block techniques, and polymerase chain reaction of *Mycobacterium tuberculosis* of BAL fluid. Latex agglutination (LA) test for *Cryptococcus neoformans* and chemiluminescent microparticle immunoassay (CMIA) of cytomegalovirus immunoglobulin M (IgM) were also negative. HIV serology turned out to be positive. The CD4 cell count was 53 cells/uL and HIV-1 viral load was 1,390,744 copies/mL. Serological testing for toxoplasmosis showed immunoglobulin G (IgG) positive (not quantified) and negative for IgM. Computerized tomography (CT) of thorax revealed soft tissue density mass with central cavitation at left upper lung, accompanied with centrilobular micronodules.

CT-guided lung biopsy was done. In Giemsa and PAS stains, tachyzoites-like micro-organisms was identified in the histiocytes. There was no evidence of *Pneumocystis jirovecii* and acid-fast bacilli. Pulmonary toxoplasmosis in a patient with advanced HIV infection was diagnosed. Therapy was changed to pyrimethamine plus folinic acid, and the patient's condition improved rapidly.

## **Discussion**

With the exception of the central nervous system, toxoplasmosis rarely affects isolated organs in highly immunosuppressed patients. Patients with toxoplasmic pneumonia typically present with fever, nonproductive cough, and dyspnea. The most common radiographic findings are bilateral interstitial infiltrates or coarse nodular infiltrates. Although cavitation has been described in a patient without underlying diseases, to date, cavitated lesions have not been described in HIV-infected patients with pulmonary toxoplasmosis.