中文題目：透過胸腔 X 光片與胸部電腦斷層來診斷可能的隱球菌肺炎，個案報告

英文題目：Uncommon CXR and chest CT image finding of pulmonary cryptococcosis, a case report

作　　者：張凱超[1] 蔡英明[1,2] 洪仁宇[1,2]

服務單位：高雄醫學大學附設中和紀念醫院 [1]內科部 [2]胸腔內科

Introduction

Cryptococcus neoformans is basidiomycetous and encapsulated yeasts. People are infected through inhaling the spore form or small, poorly encapsulated yeasts. After inhalation, *C. neoformans* might cause pneumonitis that may be symptomatic or asymptomatic. The immune status of host determine the chance of infection. The majority of patients with cryptococcal infection are immunocompromised. Diagnosis of cryptococcosis depends on serum cryptococcal antigen titer, radiologic findings, histological stain, and culture. However, pulmonary cryptococcosis within immunocompetent group is underdiagnosed because mostly are asymptomatic and a typical X-ray finding. Here we present a case of immunocompetent status suffering from pulmonary cryptococcosis.

Case Presentation

A 77-year-old man with diabetes mellitus without medical control regularly was admitted to our hospital due to chest wall muscle strain pain for 2-3 weeks. He also mentioned cough with whitish sputum, dyspnea, dyspnea on exertion, fever episode 1 week ago. He ever visited local clinic for help, however, chest wall pain persisted. So he visited our chest clinic for help where physical examination showed rib pain over left costochondral area. Lab study showed no leukocytosis but neutrophil predominant (81.1%), elevated CRP (24.83), impaired renal function (BUN/Cr: 29.6/1.99). Chest X-ray showed bilateral multiple pneumonia patches. Chest computed tomography showed consolidated patches in the both lungs. The following serum titer of cryptococcal antigen (Ag) study revealed 1:64. Open lung biopsy performed. The pathological findings showed granulomatous inflammation with pleomorphic, round / oval yeast. He then was treated as pulmonary cryptococcosis. Fluconazole was given. For no significant neurological signs, lumbar puncture was not performed. Serum HIV 1+2 showed negative finding. With the aid of fluconazole, his clinical condition got much improved. He then received regular follow up at clinic.

Discussion

The typical CT presentation of pulmonary cryprococcosis in immunocompetent group are single pulmonary nodule to widespread nodules, air space consolidation without poorly defined margin, peripheral and subpleural distribution and usually in the lower or middle lung field. Immune status determines the image presentations. Rarely, cavitation, pleural effusion, disseminated pattern, mediastinal lymphoadenopathy, and tree-in-bud appearance are presented. In immunocompromised group, the image findings would be more likely to cavitation and halo appearance.

Dissemination is rare in immunocompetent patients, and routine lumbar puncture is not necessary. The lumbar puncture is indicated for immunocompetent patients if serum cryptococcal Ag titer is very high (>1:512)[1]. In our case, lumbar puncture was not performed because of lack of neurologic signs and low cryptococcal Ag titer. The management of pulmonary cryptococcosis depends on disease severity such as diffuse pulmonary infiltrates, disseminated disease or cryptococcal antigen titer ≥1:512. In mild case, fluconazole 400mg QD for 6-12 months duration is suggested for immunocompetent patients with mild-to-moderate symptoms. As in our case, he recovered from pulmonary cryptococcosis without sequela under fluconazole and receives regular checkup in our chest clinic.

1. Pulmonary cryptococcosis in patients without HIV infection: factors associated with disseminated disease. Baddley JW et al Eur J Clin Microbiol Infect Dis. 2008;27(10):937