Disseminated Cryptococcosis Presenting with a Pleural Effusion in a Kidney Transplant Recipient: Early Diagnosis by Pleural Biopsy and Successful Treatment with Oral Fluconazole

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Dear Sir,

Disseminated cryptococcosis is a well-recognised opportunistic infection in transplant recipients. We report the first case of a renal transplant recipient with disseminated cryptococcosis presenting with an asymptomatic pleural effusion, diagnosed early by a closed pleural biopsy.

A 59-year-old woman who had a cadaveric kidney transplant presented with right chest pain after a fall at home. Her posttransplant course was complicated by two episodes of rejection which required treatment with high-dose steroids and OKT3. Her baseline immunosuppression consisted of prednisolone 10 mg/day, azathioprine 5.0 mg/day and cyclosporine A 4 mg/kg/day. Physical examination revealed a temperature of 38.5 °C. There were bruises over her right lower chest and findings consistent with a right pleural effusion. Her chest X-ray showed a right pleural effusion. A right thoracocentesis and a closed core pleural biopsy was performed. The pleural fluid was serous with an LDH of 368 U/l, protein of 28 g/l and glucose of 4.8 mmol/l. No fungal organisms were seen. Pleural biopsy revealed granulomatous inflammation of the pleura and infiltration with encapsulated yeast forms, compatible with Cryptococcus neoformans. Culture of the pleural fluid and sputum were negative.

In view of the impaired renal function, amphotericin B was avoided and she was treated with fluconazole 400 mg orally on the first day followed by 200 mg/day. Immunosuppression was unchanged. Three days later, she complained of headaches and had developed tender, erythematous nodular lesions on her right leg. Computerized tomographic scanning of the brain was normal. A lumbar puncture and biopsy of the nodules were performed. Serum and CSF cryptococcal antigen titer were positive at titers of 1:256 which subsequently yielded C. neoformans. It was sensitive to amphotericin B and fluconazole. Biopsy of the nodules demonstrated cryptococcosis confirming the diagnosis of disseminated infection. Fluconazole therapy was continued for 6 months. At the end of treatment, her pleural effusion had resolved, blood and CSF cultures and cryptococcal antigen titers were negative. Her serum creatinine was stable at 216 µmol/l.
C. neoformans is a ubiquitous mucicarmi-nophilic yeast which usually infects immunosuppressed patients. Recently, cases of disseminated cryptococcosis involving the central nervous system, skin and chest have been reported in transplant recipients [1, 2]. Chest X-ray findings in cryptococcal disease are diverse and include nodular lesions, interstitial or alveolar infiltrates, a miliary pattern or even normal [3]. Pleural involvement is unusual and disseminated cryptococcosis presenting with an asymptomatic pleural effusion has not been reported in a transplant recipient. Disseminated cryptococcosis is usually diagnosed base on cultures from CSF and blood. Pleural cryptococcosis is usually diagnosed by culture of the pleural fluid, bronchoalveolar washings or extrapulmonary means. In our patient, rapid diagnosis was made by a closed pleural biopsy before clinical evidence of dissemination occurred and culture and serology results were available. This prevented a delay in diagnosis and treatment which will be detrimental to the patient. Although amphotericin B is the treatment of choice, it is associated with a high risk of nephrotoxicity especially in renal transplant patients with an elevated serum creatinine [4]. Oral fluconazole was convenient for outpatient use and effective in eradication of the infection in our patient.

References