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Symptomless Pulmonary Cryptococcosis in a Psoriatic Arthritis Patient during Infliximab Therapy

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Dear Editor:

Pulmonary cryptococcosis is a common opportunistic infection in immunosuppressed patients[1]. To our knowledge, this is the first reported case of pulmonary cryptococcosis in a psoriasis patient undergoing treatment with biologics.

A 55-year-old man presented with an itching eruption on his head for 2 years. His skin condition got progressively worse and he reported polyarticular pain. At the initial visit, he had a systemic psoriatic eruption (Psoriasis Area and Severity Index [PASI] 14.8) and swollen joints of the shoulders, left wrist, left digitus minimus, and left knee (Disease Activity Score 28 including C-reactive protein [DAS 28-CRP]). Although he had been treated with topical steroids and vitamin D3 ointment, the treatment was not effective. Infliximab therapy (5 mg/kg) was started for both the psoriatic skin lesions and arthritis in December 2012. The screening examination for infliximab therapy revealed normal laboratory data and chest computed tomography (CT), as well as a serum Krebs von den Lungen (KL)-6 level of 266 U/ml (normal is less than 401 U/ml). A raised serum level of KL-6 is known to exist in interstitial pneumonia[2]. He was then treated with 5 mg/kg of intravenous infliximab that was administered at weeks 2 and 6, and then every 8 weeks thereafter. At 7 months after initiation of the infliximab therapy, although the patient denied cough or sputum or fever, and his β-D glucan, cryptococcal antigen and QuantiFERON-TB Test (Cellestis Ltd., Carnegie, Victoria, Australia) were all within the normal range, his serum KL-6 level was elevated at 585 U/ml. The patient's chest CT showed ground glass opacities bilaterally in the lower lobes and multiple small nodules in the right middle lobe (Fig. 1A). The cytology of the bronchoalveolar lavage fluid revealed encapsulated yeast, indicating the presence of cryptococcus (Fig. 1B). Thus, the patient was diagnosed with pulmonary cryptococcosis. The infliximab therapy was discontinued and oral fluconazole (200 mg/day) treatment was initiated. After 3 months, the abnormal chest CT shadow and the serum KL-6 level improved.

Infliximab is a tumor necrosis factor-α (TNF-α) inhibitor for the treatment of psoriasis and other inflammatory diseases. The main, severe adverse events related to anti TNF-α therapy are infectious diseases. Cryptococcosis species infections have been reported at a rate of 5.08 per 100,000 in infliximab-treated patients[3]. Although there are several case reports of pulmonary cryptococcosis in patients treated with infliximab, one of them is a case of pulmonary cryptococcosis in a Crohn's disease patient who was receiving infliximab monotherapy without other immunosuppressive drugs[4]. There are no reports of pulmonary cryptococcal infection in psoriasis patients treated with biologics.

It is generally accepted that cryptococcosis usually occurs as an opportunistic infection in a compromised host. We speculated that the immunosuppression caused by infliximab treatment must have resulted in pulmonary cryptococcosis in the previously reported *in vivo* cases[5].

Dermatologists recognize that continual careful monitoring of unexpected side effects is necessary in psoriasis pa-

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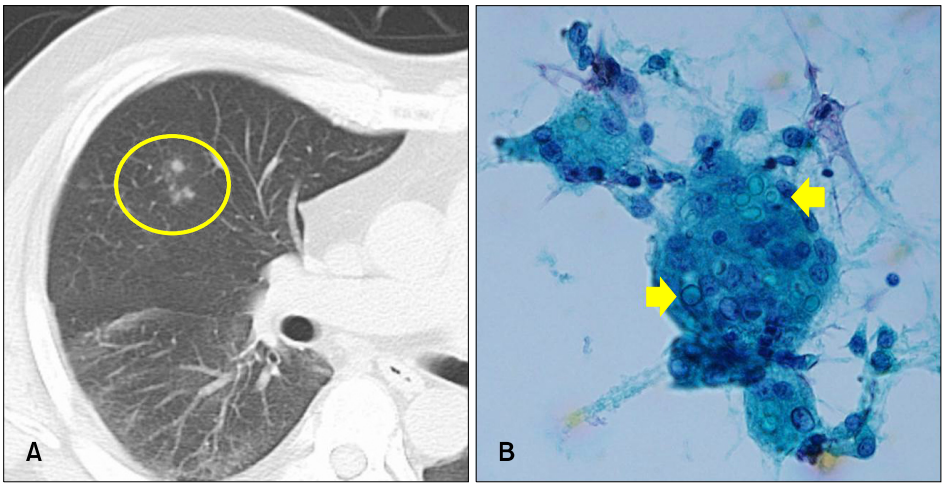

Fig. 1. (A) Chest computed tomography showed multiple small nodules at the right middle lobe (circle). (B) Cytology of bronchoalveolar lavage fluid showed encapsulated yeasts (arrows), which is consistent with cryptococcosis species (Papanicolaou stain, ×400).

tients treated with biological drugs. Pulmonary cryptococcosis must now be recognized as a potential severe complication of treatment with biologics in psoriasis patients.

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