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Case Report

Pulmonary aspergilloma: An evasive disease

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ABSTRACT

Aspergillomas are often misdiagnosed as tuberculosis (TB) in developing countries where the prevalence of TB is high, hemoptysis is often equated with TB, and most patients are diagnosed clinically. This report describes the case of a patient being treated for smear-negative TB who presented with hemoptysis and was found to have an aspergilloma.

Introduction

Aspergillomas are mass-like fungus balls that are typically composed of *Aspergillus fumigatus*, and represent a non-invasive form of pulmonary aspergillosis. Aspergillomas occur in patients with structurally abnormal lungs, with pre-existing cavities. This case report highlights an evasive clinical condition with profound diagnostic and treatment challenges particularly in developing countries.

Case report

In July 2013, a 38-year-old Ghanaian male on his 3rd week of treatment for smear-negative tuberculosis (TB) was referred to our hospital for further management of massive hemoptysis. He had noticed a small amount of hemoptysis about 1 month prior to his current visit along with weight loss, low-grade fevers, and night sweats. At that time, he reported to a district clinic and was started empirically on rifampicin, isoniazid, pyrazinamide, and ethambutol. He also reported a 5-year history of unproductive cough. Although he had only minimal exposure to cigarettes (<1 pack in his lifetime), he had been exposed to second-hand smoke for 17 years. The patient was originally from Salaga, Ghana, had been living in Niger for nearly 20 years, and traveled frequently through the desert and to Mali and Ghana.

The patient stated that his first experience of pulmonary symptoms occurred 7 years earlier. In April 2006, the patient

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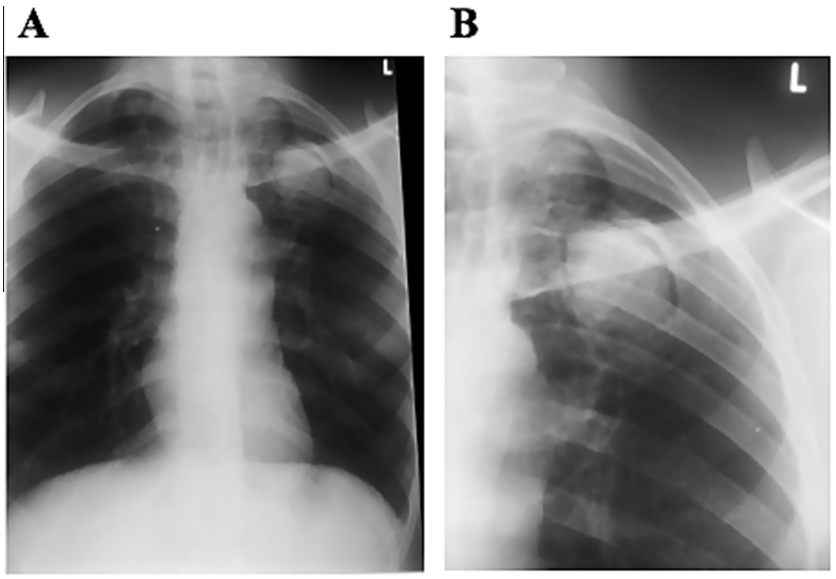

Fig. 1 – (A) Chest radiograph showing fungal ball in the left apical lung taken at initial diagnosis; (B) 5 months into treatment with 200 mg of daily itraconazole showing the aspergilloma.

presented with a 2-month history of a low-grade fever, night sweats, weight loss, and a cough productive of mucoid sputum without hemoptysis. At presentation, the patient weighed 40 kg. He had attempted unsuccessfully to treat his symptoms at home with antitussives, antimalarials, and multivitamins. Human immunodeficiency virus (HIV) screening test result was negative and sputum for acid-fast bacilli (AFB) was negative on three occasions. Chest radiographs were performed, and based on those results he was given a clinical diagnosis of TB. He completed a 2-month course of streptomycin, isoniazid, rifampicin, and pyrazinamide followed by 6 months of isoniazid and thiacetazone. At his follow-up appointment in November 2006, he had a 29-kg weight gain and resolution of his signs and symptoms.

The patient remained well until March 2008 when he presented with a mucopurulent cough, low-grade fever, night sweats, and left-sided chest pain. Radiological findings were suggestive of TB; however, further testing did not support this diagnosis. His sputum smears were negative for AFB and bacterial growth; erythrocyte sedimentation rate and full blood count were both within normal limits. Physical examination was unremarkable and demonstrated a well-appearing middle-aged man with a clinically clear chest. He was ultimately diagnosed with resolving atypical pneumonia, prescribed analgesics for left-sided chest pain, and sent home.

His constitutional symptoms ultimately resolved, but he continued to suffer from a nonproductive cough. In August 2009, he presented for evaluation of persistent cough. Sputum AFB smears were negative, and the patient was reassured that he did not have TB. As the underlying cause for his cough could not be determined, the patient was prescribed 1 week of empiric amoxicillin/clavulanate. Despite the antibiotics, his cough never resolved.

In June 2013, he noticed worsening of his usual cough along with weight loss, low-grade fever, night sweats, and minimal hemoptysis. He reported to a district hospital where he was started on a second course of first-line anti-TB medication (rifampicin, isoniazid, pyrazinamide, and ethambutol).

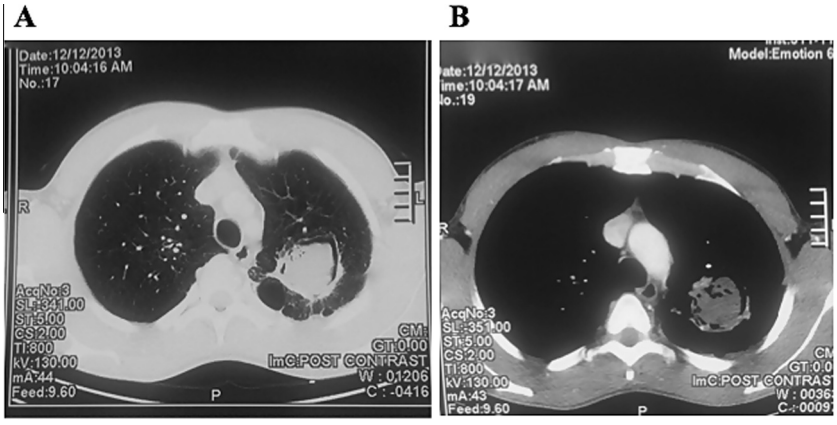

Fig. 2 – Chest computed tomography scan showing bilateral apical post-tuberculosis lung fibrosis and a left apical 5.5 × 5.4-cm^2 thick-walled cavity with a solid intracavity mass with air crescent sign. (A) Lung; (B) mediastinal window.