**Clinical Quiz**

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**Notice:** Authors are encouraged to submit quizzes for possible publication in the Journal. These may be in any specialty, and should approximately follow the format used here (maximum of 2 figures). Please address any submissions to: Editor, Saudi Medical Journal, Armed Forces Hospital, PO Box 7897, Riyadh 11159, *Kingdom of Saudi Arabia.* Tel. +966 (1) 4777114 Ext. 6570. Fax. +966 (1) 4761810 or 4777194.

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**Fungal ball in a cavity**

**Clinical Presentation**

A 50-year-old man presented with a history of hemoptysis. He has a history of pulmonary tuberculosis. Chest radiographs are available.

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**Questions**

1. Describe the images.

2. Mention a differential diagnosis?

3. What is the likely diagnosis?
Aspergilloma refers to the disease caused by a “ball” of fungal mycelia, which can occur within a cavity, usually within the parenchyma of the lung or another organ such as the kidney or brain. An aspergilloma usually arises in a preexisting cavity in the lungs. Some infections and other conditions can produce these cavities including tuberculosis, sarcoidosis, neoplasms, other fungal infections such as, histoplasmosis or coccidioidomycosis, cystic fibrosis, or invasive aspergillosis.

Less commonly, an aspergilloma can arise de novo. Chest radiography (CXR) is useful in demonstrating the presence of a mass within a cavity. Typically, there is a solid mass surrounded by a radiolucent crescent (crescent sign, Monad’s sign). If the fungus ball is mobile, repeating the x-ray with the patient in the decubitus position will show that the mass has moved. Where CXR does not clearly delineate a cavity, computed tomographic (CT) scanning of the lungs can be used to demonstrate a cavity and any intra-cavitary structures. Careful evaluation of the cavity and surrounding lung will help to define whether there is more parenchymal invasion. Magnetic resonance imaging findings are particularly informative and can be used in cases in which more effective resolution of the pathology is required.

Diagnosis based on a CXR, is confirmed by CT and by culture or histologic identification of Aspergillus hyphae in sputum, lavage fluid, or transthoracic needle aspirates, or by serologic demonstration of Aspergillus precipitins. Therapeutic options are controversial. Approximately 10% resolve spontaneously. When treatment is required, surgery has generally been considered to be the mainstay of therapy for aspergilloma. The main indication for medical therapy has been that the patient is not fit for surgical intervention or there is concern of concomitant tissue invasion by the fungus. The main indication for surgery is recurrent hemoptysis.

References