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Sadaf Sheikh
Aga Khan University

Saulat H. Fatimi
Aga Khan University, saulat.fatimi@aku.edu

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CASE REPORT

ASPERGILLOMA IN A PATIENT WITH NO PREVIOUS HISTORY OF CHRONIC LUNG DISEASE

Sadaf Sheikh, Saulat Hasnain Fatimi
Division of Cardiothoracic surgery, Department of Surgery, The Aga Khan University Hospital

Patients with aspergilloma should undergo surgical treatment, because there is a risk of sudden life threatening hemoptysis and because there is no effective alternate medical therapy. We report a case of aspergilloma in a 47 year old man with no past history of tuberculosis presented with the complaint of hemoptysis for two weeks. It was diagnosed radiologically and treated with left upper lobectomy. Post operative course was complicated by cardiorhythmic disorder.

Keywords: Aspergilloma, Surgical resection, Cystic lesion

INTRODUCTION

Since the original pathologic description of human aspergillosis, by Virchow in 1856, the most unusual form of Aspergillus infection recognized is aspergilloma. Although more than 1,000 species of Aspergillus organisms have been identified, very few species may cause human disease, Aspergillus fumigatus being the most common type.1 Usually, the spores are of low virulence in an immunocompetent host but can produce aspergilloma that results from saprophytic colonization of an existing lung or pleural cavity producing a fungus ball. The spore can also be a source of necrotizing bronchopneumonia in immunocompromised patients, leading to an invasive form with dissemination.2 As demonstrated by many studies,3 the diagnostics is based on various signs. Among those, the presence of radiological opacity with air crescent sign is of specific importance. This air crescent sign reflects the presence of a fungus ball in a parenchymal cavity. The presence of Aspergilli on cultures must be interpreted by the physician, who may decide whether they are of pathological significance, knowing that spores of Aspergilli are easily inhaled and then identified in sputum and secretions. The serodiagnosis may be negative or doubtful. Histological examination identified hyphae of Aspergillus in the resected specimen. Saprophytic colonization of pre-existing pulmonary cavities predominantly in the upper lobes leads to the formation of a fungus ball, aspergilloma. The cavity disease results from previous chronic lung diseases such as tuberculosis, sarcoidosis, histoplasmosis, bronchiectasis, bronchogenic cyst, chronic lung abscess, or cavitating carcinoma. We report the case of a patient with no previous history of any chronic lung disease. The presenting picture mimics other common conditions and as a result crucial intervention is likely to be delayed. Surgical resection offers the only realistic chance of a permanent cure for aspergilloma.1 Early surgical resection of symptomatic aspergilloma and even asymptomatic cases with reasonable complication is recommended. Post operative complications include hemorrhage, prolonged air leak, incomplete re-expansion, empyema, bronchial fistula and severe cardiac disorder.1

CASE REPORT

A 47 year old tall lean executive male presented to the Cardiothoracic Surgery Clinic at The Aga Khan University Hospital with a history of hemoptysis for two weeks. He neither had a past history of tuberculosis or any chronic lung disease nor any family history of it. He had a history of cervical spondylitis not restricting him to perform his daily chores. On physical examination, chest auscultation revealed decreased air entry on left upper lung field. Chest radiographs and computed tomographic scan showed a cavitary lesion in left upper lobe, right at the apex. Aspergilloma was diagnosed radiologically, however in view of no past history of tuberculosis, malignancy could not be ruled out. His preoperative laboratory investigations showed negative AFB smear and culture and the pulmonary function test showed FEV1 55% of predicted. Bronchoscopy showed no intrabronchial mass with evidence of bleeding from the posterior segment of left upper lobe lung. We performed left posterolateral thoracotomy and left upper lobe was resected along with the aspergilloma (Fig.1). The mass comprised of brownish manure like fungal ball very suggestive of aspergilloma (Fig.2). Rest of the post operative course was unremarkable except that he developed supraventricular tachycardia which was treated by Beta-blockers and digoxin. Histopathology showed cystic lesion containing aspergillus like fungal organism confined to the cavity not invading the surrounding structures. There was no evidence of malignancy. This case is unusual because of the aspergilloma occurred in a patient who was neither immunocompromised nor had any history of tuberculosis. In endemic areas such as South East Asia, aspergilloma should be suspected even in the...
patients who have no history of Tuberculosis and in those patients presented with hemoptysis.

Fig-1: Resected left upper lobe with aspergilloma

Fig-2: The mass comprised of brownish manure like fungal ball very suggestive of aspergilloma

DISCUSSION

Pulmonary aspergilloma is a potentially life-threatening disease resulting from the colonization of lung cavities by the ubiquitous fungus Aspergillus fumigatus. The most frequent symptom indicating surgery is hemoptysis, because of the risk of massive and fatal hemoptysis. If delayed, cause torrential bleeding as it can erode the bronchus. In the series of Karas and associates, of 10 patients with hemoptysis who were not treated surgically, mainly because they were poor operative risks, 4 died. Surgical resection of aspergilloma is effective in preventing recurrence of hemoptysis. It has low risk in asymptomatic patients and in the absence of underlying pulmonary disease. Long term prognosis is mainly dependent on the general condition of patients. Patients with poor general condition and those with pulmonary insufficiency related to extended underlying lung disease are especially at risk for post operative complications.

REFERENCES


Address for correspondence:
Dr. Sadaf Sheikh, Juma Research Building, The Aga Khan University Hospital, Stadium Road, Karachi 74800, Pakistan. Telephone: (92 21) 48594708
Email: sheikh.sadaf@gmail.com