Hydatid disease with Aspergilloma: A unique case report

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Abstract

The coexisting presence of hydatid disease with aspergillus colonization is a rare finding. The 20-year-old presented with symptoms of hemoptysis with past history of tuberculosis. On further evaluation patient was diagnosed as a case of aspergilloma and managed conservatively. After one year on presenting with similar complaints patient was turned out to be hydatid disease with aspergillus colonization on the basis of clinic-radiological and bronchoscopic evaluation. Till now only few case reports have been reported. We report a unique case report of similar presentation.

Case Report

A 20-year-old male, non-addict, immunocompetent presented in out-patient department with chief complaints of episodic cough with mucoid expectoration which was associated with streaky hemoptysis with episodic breathlessness for 2 years, with past history of empirical anti tuberculosis therapy intake for 6 months one and half year ago. On clinical examination his vitals were stable. The chest examination was within normal limits with bilateral equal breath sounds.

The previous investigations of the patient were suggestive of patient having right upper zone opacity with air crescent suggestive of aspergilloma which has been managed with cough suppressant and tranexamic acid along with tablet Itraconazole (200mg) twice a day for one month duration. Later on, patient had 12 months of asymptomatic period following treatment. Subsequently patient again developed cough with streaky hemoptysis and evaluated with sputum for acid-fast bacilli AFB under fluorescent microscopy, which was negative, elevated serum Ig E levels- 1398 IU/ml and negative serum antibody IgG against Echinococcus granulosus - 3.41 IU/ml. The radiological imaging like chest X-ray (Figure 1) was showing right upper zone cavity with air crescent sign and dual energy computed tomography DECT Thorax (Figures 2 and Figure 3) with comparative assessment of previous CT scans was suggestive of complex lesion of 3.8×2.9cm in size in right upper lobe with eccentric air crescent; which was unchanged from last study with better appreciation of the lamellated appearance with multiple air foci likely to be a hydatid cyst or a complex fungal ball.

Then patient underwent bronchoscopy and bronchial washing were taken for parasitology, fungal smear and fungal culture which were negative. The patient was planned for CT guided biopsy of right upper lobe lesion for diagnostic evaluation and biopsy sample was sent for Acid fast Bacilli (AFB) smear and AFB cul-
ture and fungal culture. The histopathology report (Figure 4) was suggestive of tiny fragments of laminated, hyaline, acellular cyst wall showing colonization by septate, narrow angle, branching fungal filaments, highlighted by Gomori Methamine Silver stain (GMS stain) consistent with diagnosis of hydatid cyst with aspergillus colonization. The final diagnosis of the patient was right upper lobe soft tissue lesion due to hydatid cyst with aspergillus colonization.

The patient was started on tablet albendazole 10 mg/kg/day with liver function test monitoring for total duration of 12 months and first follow up visit after one month showed clinic-radiological improvement.

Discussion

Aspergillus is the most common pathogen causing pulmonary fungal disease worldwide. Aspergillus infection-related pulmonary disease can have different presentations like allergic bronchopulmonary aspergillosis, acute invasive pulmonary aspergillosis (IPA) and chronic pulmonary aspergillosis (CPA) [1-3].

Chronic pulmonary aspergillosis is a complex syndrome which ranges from simple aspergilloma to other progressive cavitatory diseases like chronic cavitary pulmonary aspergillosis (CCPA), chronic necrotising pulmonary aspergillosis (CNPA), and chronic fibrosing pulmonary aspergillosis (CFPA). Patients with CPA are generally non-immune compromised with underlying lung conditions as cavities, chronic obstructive pulmonary disease, bullous lung disease, past history of pulmonary tuberculosis, bronchiecta-
Table 1. Cases of Aspergilloma colonization reported in literature.

<table>
<thead>
<tr>
<th>Age</th>
<th>Clinical presentation</th>
<th>Radiological presentation</th>
<th>Diagnosis</th>
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<tbody>
<tr>
<td>45-year Male</td>
<td>Breathlessness, Recurrent hemoptysis, Non resolving pneumonia, Intermittent fever.</td>
<td>Well defined, peripherally enhancing, thick-walled cystic lesion in middle lobe of right lung</td>
<td>Dual infection of <em>Echinococcus</em> and <em>Aspergillus</em> [13] diagnosed on histopathology of VATS (Video Assisted Thoracic Surgery) middle lobectomy</td>
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<tr>
<td>24-year Male</td>
<td>Epigastric pain, Vomiting, Fever.</td>
<td>Well-defined cavitory lesion with wall calcification and air fluid level in lingular segment of left lung</td>
<td>Hydatoptysis [18] on sputum cytology showing multiple hooklets and scolices with thin slender hyfhal elements of aspergillus on potassium mount examination</td>
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References