Dilemma in a Patient with Paratracheal Enlargement: Tuberculosis, Malignancy or Else?

Kranti Garg[1*], Varinder Saini[2], Deepali[3]

Received: 04 September 2019; *Accepted:* 06 February 2023

A 24-year-old female presented to the Department of Pulmonary Medicine, Government Medical College and Hospital, Chandigarh, India, with shortness of breath, cough with expectoration, and scanty hemoptysis for 12 weeks. There was no previous history of any respiratory disease. Chest radiograph done outside showed a mass-like opacity leading to left lower paratracheal and hilar enlargement (Fig. 1). Contrast enhanced computed tomography (CECT) of the chest revealed a mass-like lesion with minimal heterogeneous enhancement in the left upper lobe abutting the mediastinal pleura adjacent to the arch of the aorta and its branches with surrounding ground glass opacities (Figs 2 to 4). Central and segmental varicose and cystic bronchiectasis changes involving central bronchi, mainly in the upper and middle lobes and superior segment of lower lobes were also seen along with scattered surrounding nodular and ground glass opacities in the involved segment (Figs 3 and 4). The patient was referred to us with a suspicion of malignancy/tuberculosis.

A general physical examination revealed tachypnoea and tachycardia. On respiratory system examination, bilateral rhonchi were present. Hemogram revealed peripheral blood eosinophilia. Mantoux test, sputum for acid fast bacilli, and malignant cytology were negative. Spirometry showed an obstructive ventilatory defect with positive bronchodilator reversibility suggestive of bronchial asthma. Considering the possibility of allergic bronchopulmonary aspergillosis (ABPA),[1,2] the patient underwent an *Aspergillus* skin test, which showed immediate cutaneous hyperreactivity. Total immunoglobulin E (IgE), specific IgE, and specific immunoglobulin G levels for *Aspergillus fumigatus* were raised (9232 IU/mL, 7.91 kUA/L, and 67 mgA/L, respectively). CECT chest findings were reviewed, and it was also noticed that some of the bronchiectasis showed mucus plugging with hyperdense components and peribronchial thickening. The mass-like opacity due to bronchocele/mucoid impaction was strongly considered. Further invasive investigations

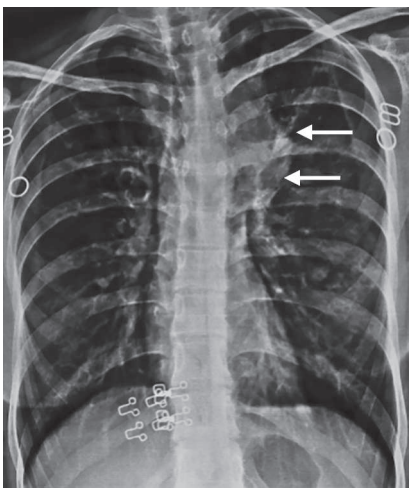

Fig. 1: Chest radiograph (posteroanterior view) showing left lower paratracheal and hilar enlargement (white arrow)

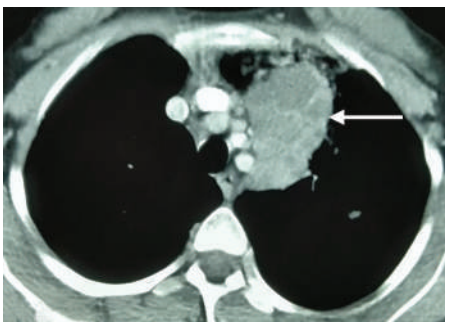

Fig. 2: Contrast enhanced chest tomography showing a mass-like lesion in the left upper lobe abutting the mediastinal pleura (white arrow)

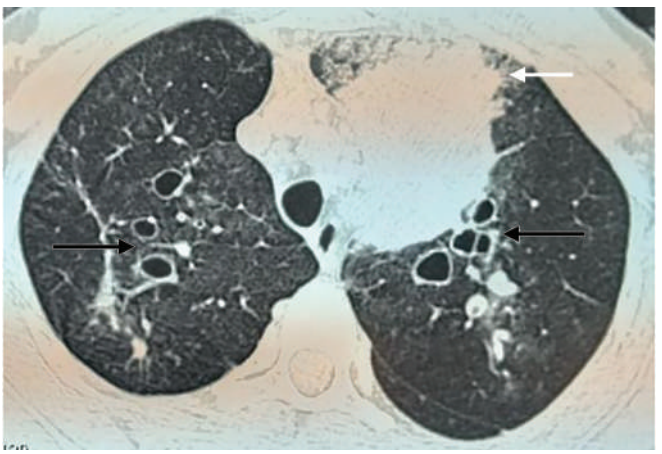

Fig. 3: Contrast enhanced chest tomography showing a mass-like lesion in the left upper lobe abutting the mediastinal pleura (white arrow) with surrounding ground glass opacities and cystic bronchiectasis changes in bilateral upper lobes (black arrows)

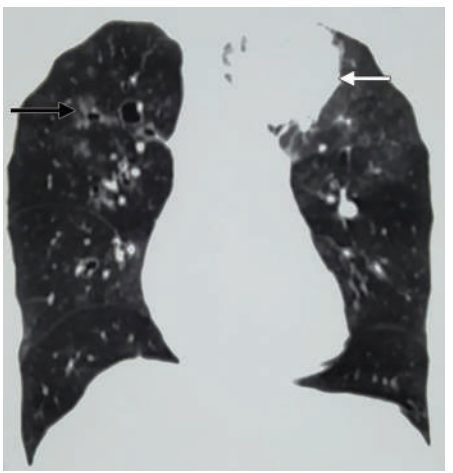

Fig. 4: Contrast enhanced chest tomography coronal section showing mass-like lesion in the left upper lobe (white arrow) and bronchiectasis in the right lung with surrounding ground glass opacities (black arrow)

[1]Associate Professor, Department of Pulmonary Medicine, Government Medical College, Patiala, Punjab; [2]Professor and Head; [3]Intern, Department of Pulmonary Medicine, Government Medical College and Hospital, Chandigarh, India; *Corresponding Author

How to cite this article: Garg K, Saini V, Deepali. Dilemma in a Patient with Paratracheal Enlargement: Tuberculosis, Malignancy or Else? J Assoc Physicians India 2023;71(5):93–94.

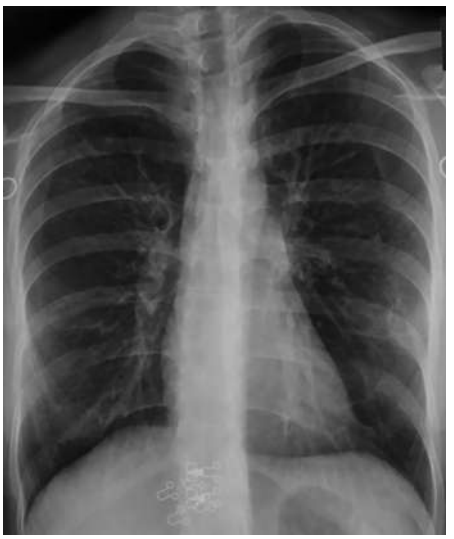

Fig. 5: Chest radiograph (posteroanterior view) after 6 weeks of treatment revealed complete resolution of the left lower paratracheal and hilar shadow

like fiberoptic bronchoscopy and computed tomography-guided fine needle aspiration cytology were not done in view of the above clinic-radiological picture and suggestive laboratory results, the risks associated with the procedure, and the reluctance of the patient for the same.

Reaching the diagnosis of bronchial asthma with ABPA as per diagnostic criteria,[3,4] the patient was started on inhalational bronchodilators and corticosteroids, oral corticosteroids, and itraconazole.

The patient improved clinically, and only after 6 weeks, there was a complete clearing of the opacity on chest radiography (Fig. 5).

The radiological picture of ABPA sometimes is a diagnostic challenge. ABPA is commonly misdiagnosed as tuberculosis, and patients are even advised antitubercular treatment for the same.[5] However, radiological presentation as a paratracheal/hilar opacity/mass-like lesion mimicking tubercular lymphadenopathy/malignancy is rarely seen.[1,2] If the clinician is unaware of such a presentation, the patients may be subjected to unnecessary investigations, remaining undiagnosed, and subsequently mistreated for long periods of time, leading to further complications. In young patients, especially with bronchial asthma, ABPA should be kept in the differential diagnosis, and the patient should be investigated thoroughly and accordingly. Rapid resolution of the mass like radiographic opacities, following treatment in itself, confirms the correct diagnosis and signals timely management in the right direction.

References

1. Agarwal R, Srinivas R, Agarwal AN, et al. Pulmonary masses in allergic bronchopulmonary aspergillosis: mechanistic explanations. Respir Care 2008;53(12):1744–1748.
2. Madan K, Guleria R. Vanishing lung mass in a patient with asthma. J Thorac Dis 2013;5(2):E45–E49.
3. Shah A, Panjabi C. Allergic bronchopulmonary aspergillosis: a perplexing clinical entity. Allergy Asthma Immunol Res 2016;8(4):282–297.
4. Agarwal R, Chakrabarti A, Shah A, et al. Allergic bronchopulmonary aspergillosis: a review of literature and proposal of new diagnostic and classification criteria. Clin Exp Allergy 2013;43(8):850–873.
5. Agarwal R, Gupta D, Aggarwal AN, et al. Allergic bronchopulmonary aspergillosis: lessons from 126 patients attending a chest clinic in north India. Chest 2006;130(2):442–448.