Foreign Body in Left Main Bronchus

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Abstract

Tracheobronchial foreign body (TFB) aspiration is rare in adults, although incidence rates increase with advancing age. We report a case of foreign body in left main bronchus in an adult female who had no risk factor. She was successfully treated with removal of betel nuts by bronchoscopy. Unusual presentation and high index of suspicion can help in proper management.

Introduction

Symptoms associated with tracheobronchial foreign body (TFB) aspiration may range from acute asphyxiation with or without complete airway obstruction, to cough, dyspnoea, choking or fever. In adults, many other medical conditions mimic breathing abnormalities similar to those associated with TFB aspiration. If the history is not suggestive, then only a high index of suspicion can ensure proper diagnosis and timely removal of the foreign body. Bronchoscopic removal of the foreign body is necessary to avoid long-term sequel. Flexible bronchoscopy is effective in both the diagnosis and foreign body removal.

Case Report

A 45 year old female presented with complaints of breathlessness and cough since 2 months, fever since 5 days. She started developing breathlessness which was progressive and more in lying down position associated with dry cough. She also gave history of 4-5 episodes of fever along with above symptoms. She took treatment in form of oral antibiotics from local practitioners. She was admitted in private hospital for the same complaints 15 days back, where she was diagnosed as interstitial lung disease and started on bosentan, azathioprine and sildenafil. She didn’t get relief. She was known case diabetes mellitus on metformin 500 mg BD taking regularly. At the time of admission, she was tachypneic, and febrile. On respiratory examination, coarse crepitations were present in right interscapular and infrascapular area and wheeze in left infrascapular area. Other systemic examination was normal. Her chest X-ray on admission was normal (Figure 1). Routine investigations including WBC count, BSL, KFT and LFT were normal. We started her on intravenous antibiotics and bronchodilators, insulin therapy and nebulisations. On 3rd day, patient underwent HRCT thorax which revealed tree in bud appearance in right mid and lower zone suggestive of endobronchial tuberculosis (Figure 2). Her sputum for AFB was negative. Patient was started on anti-tubercular (DOTS CAT I) treatment. She didn’t improve. So we planned flexible bronchoscopy. On bronchoscopy it revealed 1 cm brownish mass, 4 cm distal to carina in left main bronchus suggestive of granulation tissue, foreign body. Two days later, 2 small pieces of betel-nuts were removed by rigid bronchoscopy (Figure 3). Next day, she had shown improvements in form of relief of dyspnoea and disappearance of rhonchi. After 10 days of symptom-free interval, we repeated HRCT thorax it was within normal limits (Figure 4) and we stopped anti-tubercular treatment and discharged her on oral antibiotics and anti-diabetics.
Discussion

Unlike foreign-body aspiration in young children and in the elderly, this occurrence is uncommon in adults. In the adult population, such aspiration is most commonly secondary to unconscious accidental ingestion during general anaesthesia, sedation, intoxication, seizures or neurologic disorders affecting the oropharynx. The foreign bodies can be dietary or non-dietary but are associated with similar sequelae. The symptoms of foreign-body aspiration range from coughing, wheezing and dyspnoea to haemoptysis and choking. Computed tomography of the chest may be valuable in identifying small aspirated objects or when associated chest disease is suspected. Bronchoscopy is frequently both diagnostic and therapeutic. The availability of both rigid and flexible bronchoscopy should be emphasized since larger endoscopic instruments are unable to gain a firm and wide grasp of solid objects such as a knife blade, and the attempt is more locally traumatic than therapeutic. Hence, early involvement of a thoracic surgeon is of paramount importance in the management of large aspirated foreign bodies because expertise in both rigid and flexible bronchoscopy, as well as in airway surgery, is necessary.

What makes this case unusual is the rather delayed and innocuous presentation after aspiration of such a large foreign object. It emphasizes the fact that healthy adults may tolerate aspiration of foreign bodies for a long time without acute life-threatening consequences. As seen in this case, betel nuts were found in left bronchus though anatomical factor favours it in right side. However, the incidence of foreign bodies were found almost equal for both right and left bronchi. Bronchoscopic removal of large aspirated objects in general is an arduous task because most foreign bodies are not retrievable with a flexible bronchoscope. Surgery constitutes the final, definitive option and is generally well tolerated, particularly when the lung parenchyma is spared.

References