

# An incidental finding of a vegetative foreign body in left main bronchus in a child presented as wheeze associated respiratory tract infection

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## Abstract

Foreign body aspiration is an important cause of pediatric morbidity and mortality, particularly in children between the age of 6 months and five years. It is potentially life threatening event and may also cause chronic lung injury, if not properly managed. Foreign bodies may cause chronic pulmonary infections, bronchiectasis and lung abscess. An early diagnosis and management of the patient with an inhaled foreign body offers a diagnostic challenge to the treating pediatrician. We report a case of incidental foreign body in a 3 year old child presented with recurrent episodes of wheeze associated respiratory tract infections. Wheeze was associated with persistent cough and dyspnea with nocturnal awakening.

**Key words:** Foreign body, Rigid bronchoscopy, peanuts

## Introduction

Foreign body aspiration in children is most common especially those below the age of 3 years [1]. Foreign body causes significant airway occlusion it may lead to asphyxia and it is unfortunately a leading cause of death in childhood [2]. However, aspiration of foreign body more often presents with a history of an initial episode of

choking and coughing with subsequent respiratory symptoms [1,3]. These include cough, wheeze, stridor, or pneumonia. The most common lung sign is decreased breath sounds or abnormal breath sounds [1,4]. In children food items are the most commonly inhaled foreign bodies and peanuts being the most common [4].

## Case Report

A 3 year old boy brought with complaints of cough since 3 weeks with occasional noisy breathing at nights, with no other complaints. There is no history suggestive of choking, shortness of breath. On examination there is bilateral air entry with markedly reduced breath sounds on left side of chest with hyper resonance on percussion, and X-ray revealed emphysematous lung with hyper inflated lung fields on left side.

Patient was hospitalized and advised for computed tomography of chest which revealed “abrupt cut off of left main bronchus with emphysematous changes involving whole left lung parenchyma causing mediastinal shift to the right”. On further evaluation, was advised for bronchoscopy by an otolaryngologist expert in paediatric bronchoscopy.

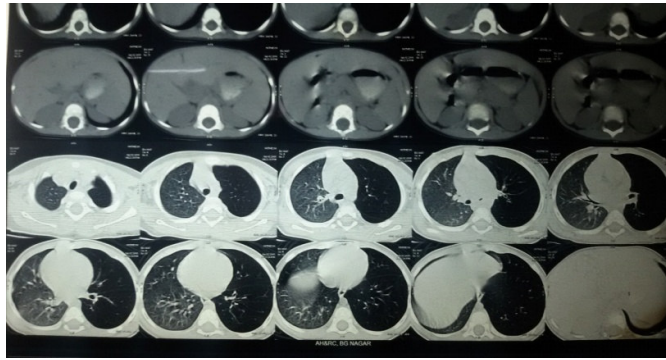
After pre-operative work up patient taken up for bronchoscopy under general anesthesia and vegetative foreign body (pea nut of 0.8\*0.6cm) was retrieved and procedure was uneventful. Patient recovered well in post-operative stay and stabilized with supportive care.

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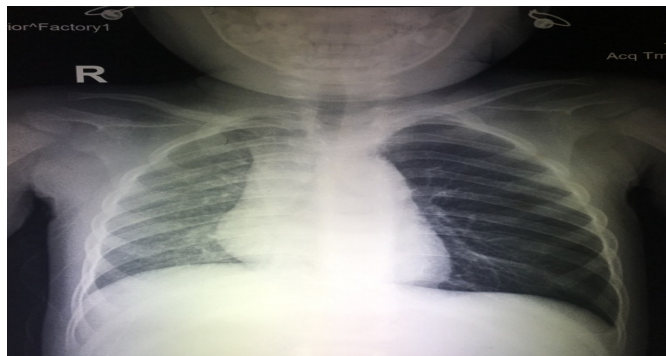
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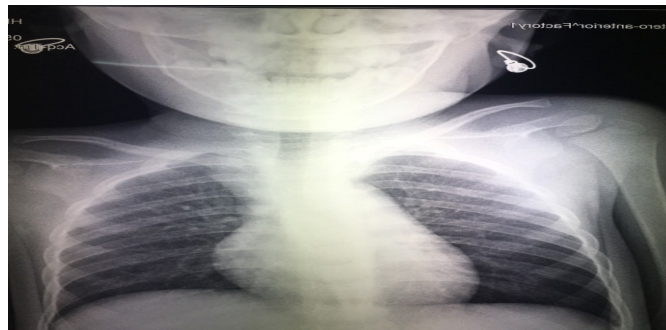
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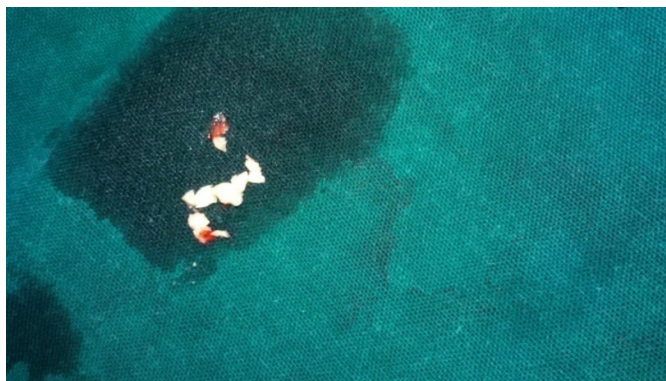
**Fig 1:** Abrupt cut off of left main bronchus with emphysematous changes involving whole left lung parenchyma causing mediastinal shift to the right



**Fig 2:** X-RAY showing left emphysematous lung with hyper inflated lung fields



**Fig 3:** 2 weeks after post retrieval of foreign body showing normal lung fields



**Fig 4:** Retrieved pea nut from left bronchus

## Discussion

The majority of Foreign body aspiration occur in children younger than 3 years of age and boys being most common among them [5,6]. The tendency to introduce objects into the mouth, smaller diameter of their airway, activity while eating, immature dentition and having older siblings (who may place food or objects into the mouths of infants or toddlers) are the most common predisposing factors for Foreign body aspiration in children [1,7]. In older children, anatomic abnormalities and neurologic disorders predispose to Foreign body aspiration [8].

Food items such as peanuts, seeds, nuts, popcorn, beans, and corn are the most common item aspirated by infants and toddlers. Nonfood items such as coins, balloons, paper clips, pins, toy parts, needles, and pen caps more commonly are aspirated by older children [9]. Most of the objects aspirated by children are radiolucent, whereas only 18% to 20% of aspirated foreign bodies are radiopaque in nature [7,9].

Younger children especially under 3 years, have considerable risk of foreign body aspiration as they have tendency of using their mouth to explore their surroundings and at this stage of development, the main objects aspirated are vegetable seeds, peanuts and toy parts. The type of the foreign body also depends on social, cultural and economic status and eating habits of the family [9,10,11].

Foreign body aspiration can be easily diagnosed with a typical history of aspiration (such as acute onset of choking and coughing) and atelectasis or hyperlucency on chest radiography. Unusual and misleading cases especially without aspiration history present with asthma like symptoms such as wheeze, chronic cough and recurrent or persistent pulmonary infiltrations, bronchiectasis and atelectasis [10,11,12] his is an example of misleading case, without aspiration history, presented with chronic cough and noisy breathing at night. Decreased air entry and hyper resonance on percussion is the predominant physical findings in our study.

## Conclusion

The clinical presentation of unwitnessed foreign body aspiration may be subtle, and diagnosis

requires careful review of the history, clinical assessment. Hence, children who presents with prolonged respiratory symptoms, especially at the age of 1-3 require a high index of suspicion, and should consider foreign body aspiration as one of the differential diagnosis.

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