

Neglected Foreign Body Bronchus: A Case Report

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ABSTRACT

Foreign body aspiration is a life threatening and one of the most common causes of mortality in infants. Complications associated with trachea-bronchial foreign bodies depend on the nature, size, shape and duration of impaction of the foreign body. A long standing foreign body elicits inflammation around it leading to oedema and formation of granulation tissue in the surrounding mucosa making the foreign body removal difficult. Rigid bronchoscopy is the intervention of choice in trachea-bronchial foreign bodies. In this case report, a case of long standing trachea-bronchial foreign body was referred to our institute which was missed by the paediatrician. Diagnostic bronchoscopy was done to rule out the cause of chronic cough and fever. Vegetative foreign body was identified and retrieved successfully without any post op complication. In conclusion, delay in the diagnosis of foreign body bronchus increases morbidity and mortality.

Keywords: tracheobronchial foreign body, rigid bronchoscopy, vegetative foreign body.

INTRODUCTION

Foreign body aspiration is a life threatening condition. It is one of the most common causes of mortality in infants. [1] Patients can present with symptoms ranging from cough, wheeze after a choking episode to severe stridor and acute respiratory failure. [2] A careful history taking and clinical examination are necessary for proper diagnosis. Since its symptoms mimic other conditions, making a diagnosis is difficult in the absence of any witness history. [3] Complications associated with tracheobronchial foreign bodies depend on the nature, size, shape and duration of impaction of the foreign body. [4] Vegetative foreign bodies cause more complications as they swell up in size and have organic reactions with bronchial secretions. A long standing foreign body elicits inflammation around it leading to oedema and formation

of granulation tissue in the surrounding mucosa making the foreign body removal difficult. [5] Rigid bronchoscopy is the intervention of choice in tracheobronchial foreign bodies. In this case report, we present a case of long standing tracheobronchial foreign body which was missed by the paediatrician.

CASE REPORT

A 2 year old female child was referred to paediatrics department of PGIMS Rohtak for cough since 5 months and fever on & off since 2 months. Patient was admitted in PGIMS Rohtak and was diagnosed with pneumonitis and treated with intravenous antibiotics. Patient was relieved of symptoms and was discharged after 5 days. Patient came to emergency again after a week with difficulty in breathing and cough. Respiratory distress

aggravated on lying down in supine position and during night hours and relieved on switching to lateral position and on sitting. Immunisation history was complete till date. There was no history of tuberculosis or foreign body inhalation. There was no history of haemoptysis. On examination, general condition was normal. All vitals were within normal limits. There was no stridor. Oxygen saturation at room air was found to be 99%. On auscultation, reduced air entry was present on left side. All blood investigations were normal. On chest X-ray, there was hyperlucency in left lung with shifting of trachea to the opposite side [fig.1]. Broncho-vascular markings were not visible. CT thorax was advised for it. On CT

thorax, marked narrowing of left main bronchus was seen with hyperinflation of left lung with contralateral mediastinal shift [fig 2&3]. No area of increased enhancement or mass lesion was seen in this area. Chronic airway stenosis was suspected & patient advised for bronchoscopic correlation. Diagnostic rigid bronchoscopy was done under general anaesthesia. Walls of left main bronchus were found to be oedematous. Thick whitish solid mass was visualised and removed [fig. 4]. The foreign body was found to be vegetative in nature most likely peanut. During the postoperative period patient was normal and the air entry improved on left side.

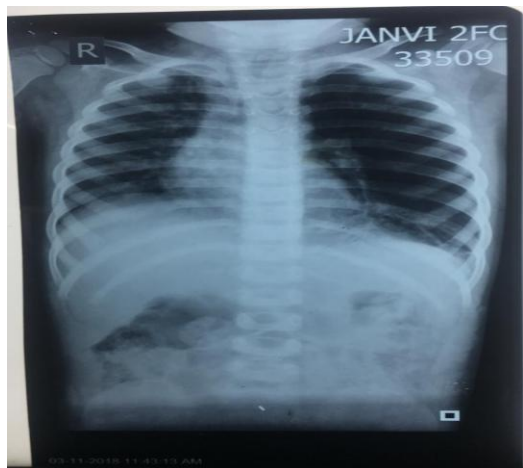


Fig. 1 Chest X Ray Showing Hyperlucency on Left

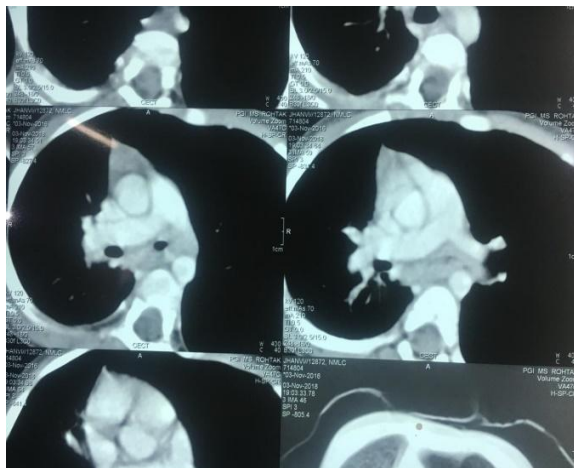


Fig. 2 CECT Chest Showing Thickening Of Left Main Bronchus

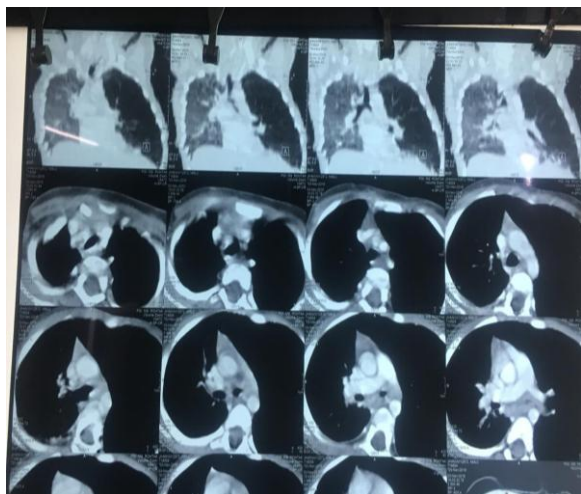


Fig. 3 CECT chest



Fig. 4 Retrieved Foreign Body

DISCUSSION

Foreign body aspiration in children is common especially in children below 3 years of age. [6] It often presents with

episode of choking followed by cough, wheeze, stridor or pneumonia. It may cause asphyxia leading to death. [2] Most common physical sign is reduced air entry on either

one side or both sides. Inhaled foreign bodies are most commonly of vegetative nature especially peanuts. A long standing foreign body in tracheobronchial tree may lead to oedema of surrounding mucosa leading to total obstruction even if foreign body is small. In a study, Wiseman compared patients with early and late diagnosis found that in the early group half had evidence of air trapping and one sixth had atelectasis and consolidation. [7] Atelectasis and consolidation were related to the long standing tracheobronchial foreign body. Hoeve et al found choking and coughing to be very sensitive features (81% & 71% respectively) while studying diagnostic value of foreign body aspiration. [8] Vegetative foreign bodies have more complications as compared to metallic because they increase in size due to osmosis and organic reactions with bronchial secretions, making these foreign bodies difficult to extract. Sometimes the foreign bodies may present as calcifications radiologically, making the diagnosis difficult in absence of positive history. Sometimes foreign body causes intense inflammation and granuloma formation and mimics malignancy. Most foreign bodies lodge in bronchi (80%-90%) because their size and shape allow them to pass through larynx and trachea. Intense inflammation and granuloma formation causes cough and fever which subsides with medications, as in our case. The greater the duration of foreign body, the greater are the chance of granuloma formation resulting in reduction of the lumen and increased severity of symptoms. This airway oedema, infection and granuloma formation can make foreign body extraction very difficult during bronchoscopic removal. [9]

CONCLUSION

Foreign body aspiration is a fatal condition. Early diagnosis and treatment are mandatory in these conditions. A detailed history and clinical examination is must. A long standing foreign body is rare and can be overlooked for longer period as seen in this case. Delay in the diagnosis of foreign body bronchus increases morbidity and mortality. Sometimes the initial choking incidents are missed and this may mimic other conditions like bronchial asthma and pneumonitis, thus confusing the experienced physicians. There must be awareness of public, primary care physicians and paediatricians for high index of suspicion and early referral to reduce morbidity and mortality.

REFERENCES

1. Mofenson HC, Greensher J. Management of the choking child. *Pediatr Clin North Am.* 1985;32:183–192.
2. Aydogan LB, Turncer U, Soyly LV et al. Rigid bronchoscopy for the suspicion of foreign body in the airway. *Int J Pediatr Otorhi.* 2006;70:823–828.
3. McGuirt WF, Holmes KD, Feehs R et al. Tracheobronchial foreign bodies. *Laryngoscope* 98:615–618
4. Mohammad MS. The clinical spectrum of foreign body aspiration in children. *Inter Paediatric.* 2004;19:14–19.
5. Bhavana B, Lakhkar, Pushpa K, Vijaya S and Nalini B. Foreign body aspiration: Manipal experience. *Indian Pediatr.* 2000 Feb;37(2):193–5.
6. Aytac A, Yurdakul Y, Ikizler C et al. Inhalation of foreign bodies in children. *J Thorac Cardiovasc Surg.* 1977;74:145–151.
7. Wiseman NE. The diagnosis of foreign body aspiration in childhood. *J Pediatr Surg* 1984;19: 531-35.
8. Hoeve LJ, Rombout J, Pot DJ. Foreign body aspiration in children. The diagnostic value of signs and symptom and preoperative examination. *Clin Otolaryngol* 1993; 18: 55-57.
9. Miladinovi CA, Hajdarevi CB. End bronchial foreign bodies as cause of bronchial carcinoma. *Plucne Bolesti Tuberk.* 1971;23:344–346.

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