

**Case Report** 

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# An Unusual Cause of Persistent Pneumonia in a Child: A Case Report

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### Abstract

An 8 month old child was referred to us from department of paediatrics as a case of non-resolving pneumonia of 2 months duration. Bronchoscopy of the patient revealed obstruction as the cause, with a paddy grain in the right main bronchus. The grain was removed and was found in germinating phase confirming its presence for a long duration. The child improved clinically soon after the procedure.

Keywords: Pneumonia; Foreign body; Bronchoscopy

#### Introduction

Persistent pneumonia is characterized by persistence of symptoms and roentgenographic abnormalities of more than three months. Recurrent pneumonia on the other hand is defined as two episodes of pneumonia in one year, or more than three episodes at any time with radiographic clearance between episodes. It is often difficult to determine whether pneumonia is persistent or recurrent, unless there has been a symptom free interval during which chest radiographs have documented clearing of the pneumonia infiltrations [1-3].

The differential diagnosis of a child with persistent or recurrent pneumonia involving a single lobe may be due to intraluminal obstruction, extraluminal obstruction and structural malformation of the bronchus, the intraluminal obstruction being the commonest. In children, the most often cause of intraluminal obstruction is foreign body. First step in workup is the Flexible Fibre Optic Bronchoscopy (FFBS). It is useful both in diagnosis and therapy. Bronchoalveolar Lavage (BAL) or biopsy is performed in other cases of intralobar obstruction (i.e. Bronchial adenoma or lipoma) [1,4].

#### **Case Report**

An 8 month old male child from a remote rural area was referred from paediatric hospital who was being treated there for last two months for persistent chest symptoms. During these two months the child was treated with good coverage antibiotics but did not improve. The parents of the child denied any history of foreign body inhalation during this whole time. The patient was sent to us for diagnostic bronchoscopy. On evaluation, the child had mild fever and cough with mucopurulent expectoration. On auscultation of the chest there was decreased air entry on right side compared to that on the left. Chest radiograph showed right lower zone consolidation with collapse (Figure 1).

The child's condition deteriorated in short time, with total absence of breath sounds on right side of chest and radiograph showing whole right lung consolidation with collapse. A rigid bronchoscopy was done which revealed an obstruction in the right main bronchus. The foreign body was removed and found to be a germinating paddy grain (Figure 2). When the child's parents were informed about the operative findings they recalled a choking episode of the child while they were working at the field during the harvesting season. Post-operative stay of the child was uneventful and he recovered of the clinical symptoms in a few days. Chest radiograph done after 2 months revealed a fully aerated right lung shadow with no signs of previous result.

#### Discussion

It is very important to note that safe and effective treatment of recurrent or persistent pneumonia in children is based on firmly establishing an etiologic diagnosis. Empiric treatment using repeated courses of antibiotics and hope is unlikely to yield cure or even good control of most of these processes and is likely to result in more cost to the patient's health and pocketbook [1,2]. Applied in a staged and systematic way, the diagnostic tools currently available should enable the clinician caring for children to diagnose most of their patients with recurrent or persistent pneumonia. Consultation with a paediatric pulmonologist will generally speed up the process and help with difficult or confusing cases. Since effective therapy is available but differs greatly from one etiology to another, early accurate etiologic diagnosis is extremely important [1,3,4].

Not all the children with pneumonia receive chest radiographs,



Figure 1: Chest radiograph showed right lower zone consolidation with collapse.



Figure 2: Chest radiograph done after 2 months.

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but a radiograph demonstrating pulmonary infiltrates is essential in defining an episode of pneumonia in cases of suspected persistent or recurrent pneumonia. Comparison should be made to previous films to confirm the diagnosis of pneumonia and assess if the consolidation is localised to a single lobe or whether multifocal disease is present as this has implications on the differential diagnosis and subsequent investigations. Unlike adults, there is no indication for routine follow up of all otherwise healthy children with uncomplicated community acquired pneumonia [2,3]. Those with clinical evidence or suspicion of recurrent or persistent pneumonia or who are immunocompromised should have repeat films done at least 2-3 weeks after commencement of treatment. Round pneumonia is common in children and simulates a pulmonary mass. In these cases, follow up radiography is important to confirm resolution and to exclude the presence of an underlying mass [3,5,6].

Flow chart 1 for the diagnosis and management of persistent pneumonia, if followed carefully will help in the accurate diagnosis and will prevent the unnecessary delay in the management. Special mention is made of single lobe involvement which merits straight away CT or bronchoscopy. A well planned elective bronchoscopy done by expert hands carries almost no mortality and should not be delayed.

#### Conclusion

Unresolving pneumonia in infants and young children can have many causes. Presence of tracheobronchial obstruction following inhalation of foreign bodies is a rare occurrence and a high index of suspicion is essential to diagnosis.

#### References

- 1. Vaughan D, Katkin JP (2002) Chronic and recurrent pneumonias in children. Semin Respir Infect 17: 72-84.
- 2. Wald ER (1993) Recurrent and nonresolving pneumonia in children. Semin Respir Infect 8: 46-58.
- 3. Mu LC, Sun DQ, He P (1990) Radiological diagnosis of aspirated foreign bodies in children: review of 343 cases. J Laryngol Otol 104: 778-782.
- 4. Cohen SR (1981) Unusual presentations and problems created by mismanagement of foreign bodies in the aerodigestive tract of the pediatric patient. Ann Otol Rhinol Laryngol 90: 316-322.
- 5. Harries ML, Albert DM (1993) Bronchoscopic foreign bodies: overcoming granulation tissue. J Otolaryngol 22: 134.
- Moskowitz D, Gardiner LJ, Sasaki CT (1982) Foreign-body aspiration. Potential misdiagnosis. Arch Otolaryngol 108: 806-807.