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Unheeded Foreign Body as a Cause of Persistent Pneumonia in a Child: A Case Report

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Abstract: ***Foreign body aspiration is common in children and notorious for its delayed presentation. It is a well-known cause of persistent pneumonia. In Paediatric population, most common area of lungs involved is right main bronchus as it is more wide and straight. Here we are reporting a case report of foreign body presenting as chronic cough and pneumonia which went unnoticed by the parents at home. X Ray chest of child showed foreign body which was retrieved by rigid bronchoscopy under GA.***

Keywords: Foreign body, Persistent Pneumonia, Right Bronchus, Rigid Bronchoscopy

1. Case Report

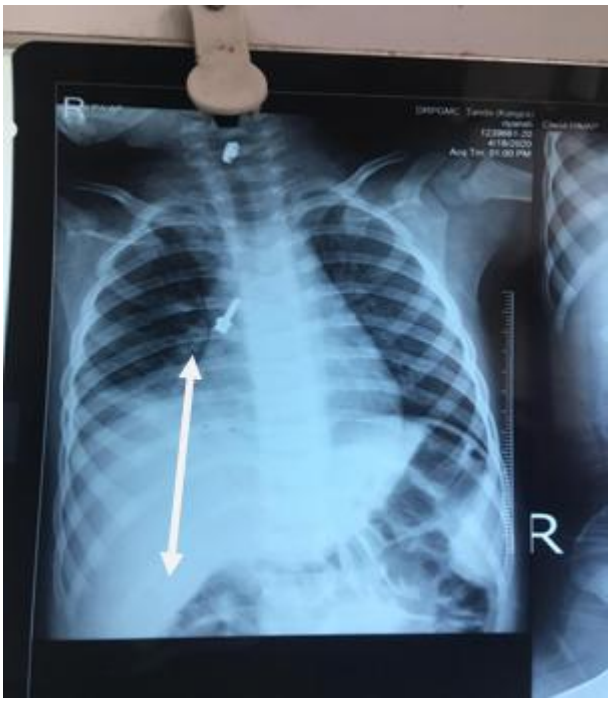
We report the management of a 3 years female child who presented to us with a prolonged history of cough(>1 month duration) followed by high grade fever with chills for 5 days and fast breathing for past 1 day. As the patient came in corona times, child was initially admitted to SARI ward. On examination child had tachypnoea and respiratory distress but maintaining saturation on room air. On systemic examination, there was flattening over right side of chest with decreased chest movement, dull note on percussion, marked decrease in bronchial breath sounds and increased vocal fremitus. Rest of the systemic examination was normal. Possibility of pneumonia was kept and inj ceftriaxone @50mg/kg/day was started. As the report of COVID virus was negative, child was taken for X ray chest PA VIEW. There was presence of foreign body (a metallic screw) in right lower lobe seen (Image 1) Her routine investigations CBC, ESR showed leucocytosis and increased ESR.

A complete review of patient's history was done from parents which revealed that she was having these symptoms for past 1 month. The sympatomatology started with cough which was intermittent initially for which due to lockdown they had taken some cough syrup from local chemist shop. For past 5 days, child started having fever documented upto 102.F and for past one day it was associated with fast breathing, so they brought the child to our institute. Before this duration of one month, there were no such symptoms observed by parents. No history suggestive of foreign body was given by parents.

Rigid bronchoscopy was planned under general anaesthesia. 16x4mm long metallic foreign body metallic screw (image 2, 3) along with pus was localised and removed with optical forceps under vision.

Following removal of foreign body child was started on Ceftriaxone and metronidazole. Subsequently air entry on left side of chest improved over 1-week and child became afebrile after 3 days. After completing 7 days of antibiotics course child was discharged successfully with special advice regarding chest physiotherapy. During follow up child was asymptomatic with improving nutritional status and chest radiograph.

Figure 1 showing foreign body (Metallic screw)



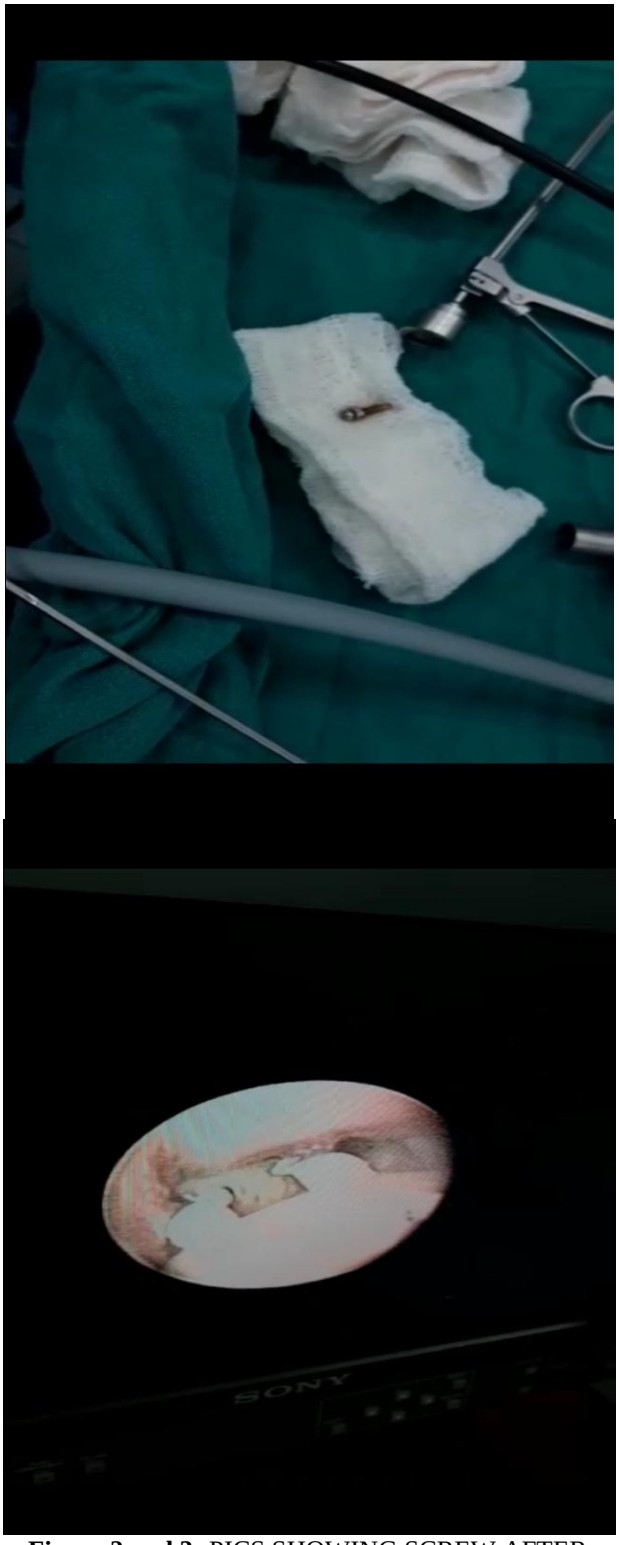


Figure 2 and 3: PICS SHOWING SCREW AFTER EXTRACTION BY BRONCHOSCOPY

2. Discussion

Most children with foreign body aspiration are infants and toddlers.[1]Cough is the predominant presenting complaint.[2,3] Foreign body aspiration can masquerade as myriad entities, from persistent/recurrent pneumonia and bronchiectasis to bronchial asthma. Nuts have been the commonest aspirated objects, though several unusual foreign bodies have been reported.[4] Aspiration of teeth has been also reported in relation to trauma, endotracheal intubation, surgical tooth extraction, and in the elderly.[5-6] Findings on chest radiograph in foreign body aspiration include hyperinflation, obstructive emphysema, atelectasis and infiltrates; 31% may be normal.[7]

Most foreign bodies are organic and radiolucent; 8%-23.5% are radiopaque and may be seen on chest radiograph.[8] These foreign bodies once impacted can lead to persistent inflammatory changes and infections. Sometimes these foreign bodies get covered with fibrosed tissue, hence difficult to localise and remove. Foreign body in respiratory tree can lead to persistent pneumonia and is most commonly seen on right side of lung. Right sided foreign bodies are common due to anatomy of right main bronchus which is more straight and wide.

In our case as per traditional knowledge the differential diagnosis about foreign body was not kept initially as still bacterial pneumonias are most common cause of cough, fever and fast breathing.

This case emphasizes that foreign body aspiration should be considered in any child with prolonged respiratory symptoms.

3. Conclusion

In case of persistent symptoms of cough, fever and fast breathing, differential diagnosis of foreign body of respiratory tract must be kept irrespective of site of lung involvement. A meticulous history, clinical examination and high index of suspicion is key to diagnosis. After removal of foreign body, good antibiotic coverage as per culture sensitivity report and incentive spirometry (chest physiotherapy) are key for fast lung parenchymal recovery.

Declaration of patient consent

The authors certify that they have obtained all appropriate consent forms, in which the, patients attendant has given his consent for his child's images and other clinical information to be reported in journal. The attendant understands the name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

Conflict of interest: Nil

Source of support and sponsorship: Nil

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