

# GROUND NUT ASPIRATION IN CHILDREN: A COMMON CAUSE OF UNRECOGNISED FOREIGN BODY ASPIRATION IN RURAL AREA

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### Abstract:

**Introduction:** Foreign body in the tracheobronchial tree in childhood is one of the most common emergencies encountered and in neglected cases may lead to fatal outcome. The presentation of occult foreign body is complex and the diagnosis of such foreign body claims most minute attention.

**Material and methods:** Our study was a prospective study carried out in pediatric department of a rural based tertiary care centre. Of 50 cases of FB aspiration which we studied in 2 years there were 9 cases where no history of aspiration of FB was available.

**Conclusion:** Strong suspicion of Foreign Body aspiration is the mainstay in management of such cases as removal of foreign body is the definitive treatment in such cases. Nuts specially ground nut is a very common cause of aspiration in children and is more so common in this part of country as this is cultivated in this region on a large scale.

**Keywords :** Foreign body aspiration, Rigid Bronchoscopy, Ground nut

### Introduction

Foreign body aspiration is common in young children.<sup>1</sup> It is not commonly reported as foreign body aspiration in rural areas as the history of aspiration is often missed. Many a times these children present with various respiratory complications in form of repeated respiratory tract infection or non resolving pneumonia.<sup>2</sup> If not suspected early and treated with removal of foreign body the condition is associated with increased morbidity and can be fatal also.<sup>1</sup> We present nine children who were admitted with recurrent respiratory infections where no history of FB aspiration was available.

### Material and methods:

Our study was a prospective study carried out in pediatric department of a rural based tertiary care centre. Of 50 cases of FB aspiration which we studied in 2 years there were 9 cases where no history of aspiration of FB was available. These children were between the age group of 1 year to 4 years. All these children underwent treatment by various practitioners for repeated respiratory tract infections for duration which varied for 3 weeks to 2 months. They were mostly diagnosed as Bronchopneumonia or wheeze associated lower respiratory infection (WALRI) and their definitive treatment i.e. removal of foreign body was thus delayed.

## Observations

**(Table 1) Ground nut aspiration in children with no history of foreign body aspiration : Incidence**

Age group	Foreign body Ground nut	Percentage
1year – 2 years	01	11.1%
2 year – 3 years	06	66.6%
3 years – 4 years	02	22.2%

distribution observed as per age group

These children were between age of 1–4 years with majority of them in age of 2–3 years

**(Table 2) Symptoms at the time of admission to hospital**

Symptoms	Number of cases	Percentage
Fever	08	88.8%
Cough	09	100%
Breathlessness	07	77.7%
Chest Pain	01	11.1%
Blood in sputum	01	11.1%

Cough and high fever were commonest symptoms noted at time of admission to hospital..

**(Table 3) Signs on chest examination**

Signs	No of Cases	Percentage
Tachypnea	9	100%
Lower Chest indrawing	6	66.6%
Hyper resonance on one side	6	66.6%
Crepts	8	88.8%
Rhonchi	9	100%

Majority of patients had prominent rhochi and crepitations.

**(Table 4) Radiographic findings - Only 2 patients had normal chest radiograph**

Findings	No. of Cases	Percentage
Normal	2	22.2%
Emphysema	8	88.8%
Collapse	2	22.2%
Bronchopneumonia	5	55.5%
Mediastinal Shift	7	77.7%

## Some chest radiographs of the cases at the time of presentation



**2 years, Male 3 years, Male**



**2 years, Female 4 years, Male**

All these children were not responding to various treatment given over last 3 weeks to 8 weeks at various medical centres before being referred to our centre. We had strong suspicion of foreign body aspiration in these cases. All these patients were taken up for bronchoscopy within 24 hours of admission. The procedure was performed with rigid bronchoscope under general anesthesia. In 8 cases vegetative foreign body was found in right main bronchus while in one case it was found on left bronchus. In 6 cases ground nut could be removed as a whole while in 3 cases broken pieces of ground nut were removed. All these patients showed clinical improvement within few hours and recovered completely within next 4 – 7 days.

## Discussion

The potential consequence of foreign body aspiration should not be underestimated and should be managed on emergency basis as the condition can at times lead to fatal consequences.<sup>1</sup> Strong suspicion is the key to successful management of these patients.<sup>3</sup> FB aspiration commonly occurs in children younger than 4 years as they out of curiosity tend to put every object in their mouth. Some patients present with history of choking and vomiting soon after aspiration which may go unnoticed followed by a silent symptomless period of few days. Once vegetative foreign body gets swollen causing surrounding reaction, pooling of secretions, and obstruction to air flow etc<sup>4</sup> these children

develop respiratory tract infection. They now present with chronic cough or wheezing associated with various symptoms and signs. Rigid bronchoscopy is preferred over flexible bronchoscopy due to need of ventilator support in children with small airways which gets compromised with flexible bronchoscopy.<sup>5</sup> Nuts specially ground nut is a very common cause of aspiration in children and is more so common in this part of country as this is cultivated in this region on a large scale.

## **Conclusion**

Strong suspicion of Foreign Body aspiration is the mainstay in management of such cases as removal of foreign body is the definitive treatment in such cases. Children in age group of 1–4 years with varied respiratory symptoms mainly with unilateral clinical and radiological findings should be subjected to rigid bronchoscopy which should be performed at the earliest to avoid morbidity associated with delayed diagnosis and removal of foreign body.<sup>2</sup>.

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