VEGETABLE FOREIGN BODY IN THE BRONCHUS IN A CHILD

(A Case Report)

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ABSTRACT

A case of vegetable foreign body in the bronchus in a child is presented. The foreign body was removed by rigid bronchoscopy, but post-operatively the child developed respiratory distress necessitating a tracheostomy. This case is illustrative of the problem inherent in the management of vegetable foreign bodies in the air passage in children. The relevant literature has been reviewed.

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Introduction

The prospect of having to deal with a very young child with a history of possible inhalation of a foreign body fills even the most experienced endoscopist with trepidation. In the case of vegetable foreign bodies the problem is complicated further. Firstly, the foreign body is non radio-opaque and this may confuse the diagnosis. Secondly, the intense inflammatory reaction of the bronchial mucosa may give rise to lung abscess and hemoptysis [1].

CASE REPORT

A 16 month old boy while playing and eating Bengal gram developed choking followed by coughing and tachypnea. Next day he continued to have coughing paroxysms and restlessness and became cyanotic. He presented at our centre on the third day. On examination he was afebrile, respiratory rate was 60 per minute, and he was acyanotic, and air entry was reduced on the right side.

Radiology revealed hyperinflation of the right lung, depressed right dome of the diaphragm, mediastinal shift to left and widened intercostal spaces (Fig 1). Clinical impression was of a non-radioopaque foreign body in right main bronchus with obstructive emphysema of same side.

The boy was taken up for rigid bronchoscopy under general anaesthesia with endotracheal intubation and jet ventilation. The bronchial mucosa was seen to be con-

gested and edematous. A bengal gram was visualised in right main bronchus and removed in one piece as a trailing foreign body.

Fig. 1 Chest radiograph showing obstructive emphysema right side.

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Fig. 2: Post-operative chest radiograph.

Post-operatively on the same day, he developed inspiratory stridor due to laryngeal edema and reactive bronchospasm following bronchoscopy in an inflamed tracheo-bronchial tree and, possibly trauma to subglottis. Medical management with steroids, antibiotics and nebulisation with terbutaline was not successful and a tracheostomy was performed. Thereafter clinical and radiological recovery was uneventful (Fig 2) and 8 days later he was decannulated.

Discussion

The most common cause of accidental death in the home in children under 6 years of age is the inhalation of a foreign body [2]. The triad of coughing, choking and wheeze is present in 91% of patients with foreign body aspiration [3]. Also, a fever associated with persistent respiratory symptoms, and persistent or recurrent lobar pneumonia, demand a diagnostic bronchoscopy to exclude a foreign body.

In the case of vegetable foreign bodies, rapid obstructive changes occur due to a combination of mucosal irritation and swelling by

hygroscopic action. The most common effect is that of a one-way valve through which air may enter the bronchus distal to the foreign body on inspiration but may not escape from the lung on expiration. This is because air passages dilate during inspiration and contract on expiration. This leads to obstructive emphysema to the foreign body, and this helps in radiological diagnosis of the foreign body. Radiological features may take 24 hours to become evident [4].

The removal of foreign bodies from the bronchus in young children presents special difficulties. The narrowest part of the larynx in a child is at the subglottis and rigid endoscopy may traumatise the region leading to post-operative airway obstruction. In the case of vegetable foreign bodies the irritation of the inflamed tracheobronchial tree may further complicate the situation. Following removal a second look is mandatory to remove any remaining small fragments. Systemic steroids may be used to reduce the incidence of post operative laryngeal edema, but if required tracheostomy has to be done.

In view of the possible serious consequences of aspiration, the preventive aspects assume great importance. Parents should be advised against allowing children under 06 yrs of age to eat nuts. Keeping small objects out of the reach of small children should be emphasised. Children should be advised not to run, scuffle or laugh while eating [5].

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