BRONCHIAL FOREIGN BODY : A CASE REPORT

J.K. Sharma,* S.K. Pippal,**

Yatin Sethi,*** Shitij Arora,*** S.K.Raghuvanshi.***

Abstract: Exogenous foreign bodies in the tracheo bronchial tree are not uncommon particularly in children. Children who are not given proper individual attention at an early age are more liable to ingest or inhale foreign body. Complications are related to site, size, shape, nature and duration of foreign body. Foreign body aspiration is associated with significant morbidity. Awareness of these possible complications and a high index of suspicion is the key to successful management. We report a case of bronchial foreign body in a 12 year old boy who had accidentally aspirated a metallic whistle. The foreign body was removed successfully without any complications.

Keywords: Foreign body, tracheobronchial, bronchoscopy.

INTRODUCTION

Foreign body aspiration is a common surgical problem in children two to three years of age ^(1,2). Its sequelae range from choking and fatal asphyxiation to a chronic forgotten episode that may mimic chronic and recurrent chest infections, with a spectrum of severity in between ⁽³⁾. Complications rate has decreased in the last two decades ⁽⁴⁾. Complications depend on site, size, shape, nature and duration of the foreign body especially in the early phase ⁽⁵⁾. The majority of fatalities due to foreign body aspiration are caused by round, smooth objects that occlude the airway either supra or infraglottic ⁽⁵⁾. On the other hand, smaller objects that pass this site tend to lead to the late complications. As the right bronchus is wider, shorter and more straight than the left one, they are more likely lodged on right. About two third lodge in the main stem bronchus and the remainder in lower branches. Eighty five percent are vegetable in origin; peanuts being most common. Seeds, beads, pins, coins and dentures are other foreign bodies commonly encountered in the air passages ⁽⁶⁾.

Although in most cases aspiration of a foreign body is diagnosed in 2-3 days of the event, in a few cases the diagnosis may not be made for several weeks or months. Negative imaging studies however do not exclude the presence of foreign body in the airway. Many advances have been made since Chevalior Jackson described the technique of removal of foreign bodies from the airway. Our case had interesting presentation of whistling sound on expiration and phonation. There was no respiratory distress as the foreign body was fenestrated.

CASE REPORT

A 12 year old boy presented at the Department of ENT Hamidia Hospital & Gandhi Medical College, Bhopal with complaint of whistling sound on expiration and while speaking for past one day. Patient gave history of aspiration of a whistle while playing flute one day back.

Patient didn't have any signs of respiratory distress. On examination air entry was normal on both sides and whistling sound could be heard and auscultated on expiration.

Chest X-ray PA view was done which showed a radio opaque foreign body at the level of right main bronchus. The visualized lung fields were normal as the foreign body was fenestrated.

Bronchoscopy was done under general anaesthesia. The rigid ventilating type of bronchoscope with a venturi connection was used. Foreign body whistle was visualized in the right main bronchus and was grasped with the telescopic optical bronchial foreign body forceps and was taken out into the lumen of the bronchoscope and then bronchoscope was taken out along with foreign body. The post-operative period was uneventful and check radiograph was normal and the patient was discharged.

DISCUSSION

As a general rule the surgeon must proceed for bronchoscopy as soon as there is a suspicion of FB. Although the procedure should be done as early as possible, the endoscopist must not rush into it without careful preparation. Holinger has rightly said "if two hours are spent in preparation, the safe endoscopy procedure may take 2 minutes. But if only two minutes are taken for preparation the endoscopist may find himself attempting make-shift ineffective procedure for the next two hours" ⁽⁷⁾.

Foreign bodies in tracheobronchial tree can present with varied symptomatology. Not very often the history is contributory and diagnosis depends on high index of clinical suspicion, clinical signs and radiological findings. Aspirated tracheobronchial foreign bodies are more commonly seen in children (91% in children and 59% in the adult group). In the children group, 74% of the aspirated foreign bodies are found in proximal airways (larynx, trachea, main bronchus), probably due to smaller bronchial tree diameter in this age group. In adult group, only 43% are lodged in the proximal airways ⁽⁸⁾.

Metallic foreign bodies as compared to vegetative foreign body are inert and minimally reacting. As a result, these do not produce any immediate signs and symptoms of foreign body unless obstructing the airway significantly. In contrast vegetative foreign bodies are fast reacting, after lodging in tracheo-bronchial

*Professor & Head, **Associate Professor, ***Resident, Department of ENT, Gandhi Medical College & Hamidia Hospital, Bhopal [India]

Fig I : Chest X-ray PA view showing metallic foreign body in the right bronchus.

tree, these swell up blocking the passage and producing chemical reaction leading to pneumonitis⁽⁹⁾.

Radio opaque foreign body may be seen in plain X-ray of the chest in only 9% cases. Hence, CT scan is a better modality in these cases. Fluoroscopy may be used to demonstrate air trapping in the lung. Alternate to this technique is assisted expiratory film consisting of chest X-ray taken while gentle pressure is applied to the epigastrium⁽¹⁰⁾.

In most cases, bronchoscopic removal is the treatment of choice. The commonest complication of foreign body that pass the central air way passages and go into either the right or left main bronchus or their primary subdivisions is usually chronic obstructive symptoms mimicking bronchial asthma, and persistent bronchitis. They may be retained for a various period of time leading to bronchiectasis and hemoptysis^(12,13).

Difficulties arising in removing these foreign bodies are related to technical factors in grasping, or because of inflammatory changes, making their visualization difficult. Some of these are coughed up spontaneously before or after bronchoscopy. If the foreign body is retained, it may cause complications like impaction, recurrent pneumonia, lung abscess, bronchiectasis, infiltrations and effusion⁽⁶⁾.

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Fig II : Showing metallic whistle after removal by Bronchoscopy.

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Address for correspondence:

J.K. Sharma,
Room No. 36, Department of ENT
Hamidia Hospital, Bhopal (India)
Pin : 462001
Phone No. : +91-9827229649
E-mail : dryatinsethi@yahoo.com