

Tracheobronchial Foreign Bodies

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Abstract

Background: To assess the types of tracheobronchial foreign bodies, the means by which they gain access and the measures by which accidental aspiration can be prevented.

Methods: Bronchoscopy was performed in 39 patients who presented with a suspicion of foreign body aspiration during a three-year period (Jan 2002 - Dec 2004) in the Department of ENT, Holy Family Hospital, Rawalpindi.

Results: The common symptoms were sudden onset of dyspnoea and cough. Whistle was commonest object removed (46.15%). Majority of patients were above ten years of age (38.46%). Left main bronchus was the commonest site of involvement.

Conclusion: Foreign body aspiration should be suspected when there is sudden onset of respiratory symptoms, even in the absence of a history of aspiration. Emergency bronchoscopy facility should be available in all hospitals. Mass awareness should be created through electronic media and family physicians, to decrease the incidence of such accidents.

Keywords: Foreign body, Tracheobronchial tree, Dyspnoea.

Introduction

Foreign body in tracheobronchial tree is a common, potentially fatal and easily preventable condition. The most common cause of accidental death at home in children under 6 years of age is the inhalation of foreign body¹. In USA alone about 300 deaths occur every year in children due to foreign body aspiration². It is not infrequently encountered in our emergency departments. The purpose of this

study was to assess the types of tracheobronchial foreign bodies, the means by which they gain access and the measures by which accidental aspiration can be prevented. We report our experience of this condition.

Patients and Methods

This prospective study was conducted in the Department of ENT at Holy Family Hospital Rawalpindi, over a period of three years (Jan 2002 to Dec 2004). Thirty-nine patients with suspicion of foreign body aspiration were seen during this period. Bronchoscopy was performed in all of them for the removal of foreign body; suspected on the basis of history, clinical examination (sometimes with negative history) and radiological findings. The data was collected on a proforma specially designed for the purpose. Data included age of the patient, sex, history of foreign body aspiration, time between aspiration and reporting to the hospital, site of impaction, investigations, postoperative complications and follow up. The results were analysed.

Results

Thirty-two (82.0%) patients were males and 7 (18%) were female patients. Maximum patients were above ten years of age (Table 1).

Although bronchoscopy was performed in all the 39 patients, foreign body was found in 34 (87.16%) of them. The foreign body was removed successfully in all these patients. No foreign body was found in 5 (12.82%) patients.

Table 1: Age Distribution

Age	Patients	Percentage
1-4 years	11	28.20
5-10 years	13	33.33

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Above 10 years	15	38.46
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The commonest site of impaction of foreign body was left main bronchus, followed by right main bronchus and trachea (Table 2).

In our series, whistle or the part of whistle was the commonest foreign body (46.15%), followed by betel nut (28.20%) and peanuts (15.38%). Beads were found in 5.1% and other foreign bodies also constituted 5.1% (Table 3). In one patient, a whistle had to be removed from a tracheostomy opening.

Table 2: Sites of Foreign Body Impaction

Site	Patients	Percentage
Left Main Bronchus	17	43.58
Right Main Bronchus	10	25.64
Trachea	07	17.94
No Foreign Body	05	12.82

Table 3: Types of Foreign Bodies removed

Type of Foreign Body	Patients	Percentage
Part of Whistle	18	46.15
Betel nut	11	28.20
Peanut	06	15.38
Bead	02	5.1
Miscellaneous	02	5.1

Discussion

A foreign body impacted in the tracheo-bronchial tree is a common ENT emergency. It has varied presentations^{3, 4} and requires an accurate history, a thorough clinical examination and a high degree of suspicion.

The clinical picture produced by the foreign body depends upon the type, size, shape and time since the occurrence of the accident; and may vary from sudden death; repeated episodes of cough, dyspnoea and cyanosis to recurrent chest infections⁵⁻¹⁰. The whistle, the commonest foreign body in our series, is freely available in market and placed in

packets of chips and popcorn as a gift from manufacturers. It whistles on taking a deep breath and as it lies, loose in an outer shell, gets aspirated easily.

Foreign body aspiration is a preventable condition. The majority of foreign bodies in our study included whistles and betel nuts, which the children purchased from hawkers at the school or from shops near their homes. The family physicians and electronic media can minimize these incidents by promoting awareness in people. Postgraduate educational programmes on diagnosis, morbidity and treatment have also been shown to have a positive impact on prevention of this condition¹¹. Endoscopic facility, and trained staff for the removal of foreign body should be available in all hospitals as the procedure is urgently required and is life saving.

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