

MANAGEMENT OF TRACHEO BRONCHIAL FOREIGN BODIES IN CHILDREN

Rehman Ghani, Saleem Akhtar, Syed Mushtaq Ahmed Gillani and Ghulam Nabi

This is a study of 32 cases of foreign body tracheobronchial tree in children, spread over two years' period. More than 65 % of patients were of two years and below. The male to female ratio was 2:1. More than 70% of foreign bodies were vegetable in nature. Foreign bodies were located more often in the right main bronchus as compared to the left (3:2). In all cases, foreign bodies were removed under G.A., with the help of rigid pediatric bronchoscopes. There was no mortality. In 04 cases no history of foreign body inhalation was forthcoming and bronchoscopy was done because the child had persistent cough and episodes of dysphonia. There was a delay of 1-10 days before presentation in the majority of patients. Majority of the patients presented 24 hours after the inhalation of foreign body. Removal of foreign body tracheobronchial tree through rigid bronchoscope under GA is a safe and lifesaving procedure with good results.

INTRODUCTION

Inhaled foreign body usually happens in early childhood. The sequel of this serious condition depends upon the age of the patient and duration of presentation¹. Good knowledge instrumentation and a skilled anesthetist are important factors for safe extraction of foreign bodies.

MATERIALS AND METHODS

We conducted a study of 32 patients of inhaled foreign bodies in children over a period of two years from April 1996 to April 1998 in the ENT Department of Ayub Medical College, Abbottabad. Diagnosis was made on the history- given by the parents in all cases except 4 where bronchoscopy was carried out as diagnostic procedure, following persistent cough, dyspnea and fever. X-ray chest was done in all cases to locate the inhaled foreign body or consolidation distant to the impacted foreign body in tracheobronchial tree. In all cases foreign bodies were removed under GA with rigid pediatric bronchoscopes and the help of skilled anaesthetist was available every time.

RESULTS

Out of the 32 cases included in this study 16 were males and 8 were females. Male to female ratio was 2:1. The youngest patient was 6 months and the oldest 14 years. More than 65% of patients were aged 2 years and below. In 18 patients the foreign body was lodged in the right main bronchus. Out of total 32 foreign bodies 20 were vegetable in nature, 12 being peanuts.

TABLE-1: LOCATION OF FOREIGN BODIES IN TRACHEOBRONCHIAL TREE (N = 32)

Site	No. of	%
Right main bronchus	18	53.8
Left main bronchus	12	38.5
Subglottic region and trachea	2	7.7

Other vegetable foreign bodies included maize seeds, water melon seeds, peas, siparies, and in one case a piece of coconut. The non-vegetable foreign bodies included plastic beads, pebbles, a piece of meat bone, plastic pen heads, and four cases of small whistle toys.

TABLE-2: DURATION OF SYMPTOMS BEFORE PRESENTATION

Duration of Symptoms	No. of cases	%
Less than 24 hours	6	15.4
1-5 days	14	42.5
5-10 days	8	30.8
15 days	2	3.7
22 days	1	-1.8
26 days	1	3.8

DISCUSSION

Foreign bodies frequently lodge in major bronchi especially in the right bronchus and to remove them the rigid bronchoscope is best. Smaller foreign bodies lodge more peripherally in segmental or smaller bronchi and are more easily removed using fibroptic bronchoscope.

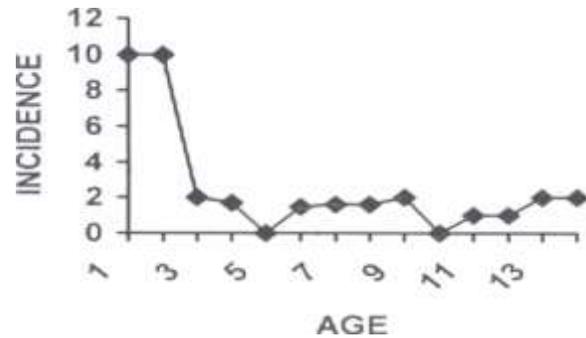
From Ayub Medical College, Abbottabad.
Rehman Ghani, Associate Professor, E.N.T.
Saleem Akhtar, Assistant Professor, Radiology
Syed Mushtaq Gillani, Assistant Professor, Anaesthesia.
Ghulam Nabi, Prof. & Head Department of

Nevertheless, the majority of the patients presenting with inhaled foreign bodies are children and it is more appropriate to attempt removal with rigid bronchoscope under GA¹². It may become necessary to use the fibroptic bronchoscope as well for removal of more peripheral foreign bodies. In our study the male and female ratio was 2:1. The commonest site was the right main bronchus. The majority of foreign bodies were vegetable in nature. These findings are similar to those of other studies conducted on this subject. We did not have any mortality in 32 cases and this is primarily due to the availability of modern equipment for bronchoscopy and skilled anaesthetist. Rothmans reported no mortality in 225 cases of children with inhaled FB³. Avtac in 500 cases reported mortality rate of 1.8% and 1.4% post bronchoscopy tracheostomy⁴. In our study, none of the 32 patients required post bronchoscopy tracheostomy. In our opinion selection of proper size of Paediatric bronchoscope and the duration of procedure are important considerations in this regard. In our study, four cases didn't have a history of foreign bodies inhalation and bronchoscopy was done for symptoms of persistent cough and episodes of dyspnoea. This shows bronchoscopy should be done in such children even when a history of foreign body inhalations is not forthcoming. Kanata in a series of 36 children under the age of 3 years with inhaled non-contrast foreign body came across obstructer emphysema and consolidation on the affected side in most of the cases.

CONCLUSION

Removal of foreign body tracheobronchial tree through rigid bronchoscope under GA and expert anaesthetist is a safe and lifesaving procedure with good results and complete recovery.

FIGURE-1: AGE WISE INCIDENCE OF FOREIGN BODIES IN TRACHEOBRONCHIAL TREE



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