

Original Research Article

Foreign bodies in the aerodigestive tract and its management - Study of 44 cases

Hamsa Shetty*, Gangadhar KS

Department of ENT, Shimoga Institute of Medical Science, Shivamogga, Karnataka, India

*Corresponding author email: hamsa.shetty@rediffmail.com

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Abstract

Aerodigestive tract foreign bodies are commonly seen either in children or in elderly age group, making its management a challenge for the otolaryngologist. Various methods have been described in literature for its removal. In our study a review of 44 patients was done who presented with history of accidental ingestion/ inhalation of foreign body to the ear nose throat out patient department. All 44 patients underwent rigid esophagoscopy/ bronchoscopy (depending on the site of lodgement) under general anesthesia, based on clinical and radiological evidence.

Key words

Foreign body, Rigid, Esophagoscopy, Bronchoscopy.

Introduction

Aerodigestive tract foreign bodies pose a significant challenge to the otolaryngologist. Commonest type of foreign body varies from region to region, however coin ingestion seems to be the commonest worldwide problem [5, 6]. Seeds and nuts are frequent causes of tracheobronchial obstruction worldwide. Several methods have been described in literature for its removal. In our study a review of 44 patients was done who presented with history of accidental ingestion /inhalation of foreign body to the ear nose throat Outpatient department. All 44 patients underwent rigid esophagoscopy/ bronchoscopy (depending on the site of

lodgement) under general anesthesia, based on clinical and radiological evidence.

Aim

- To study the incidence of age of presentation of aerodigestive foreign body and male: female ratio.
- To study the commonly encountered foreign body in the aerodigestive tract.
- Possible complications that can occur due to these foreign bodies and its incidence.
- Incidence of intra-operative complications following rigid esophagoscopy/ bronchoscopy and the

incidence of successful outcome after this procedure.

Material and methods

44 patients with history of aerodigestive foreign body who presented to the ENT outpatient department over a period of one year, were reviewed retrospectively.

Results

Our study showed that the incidence of aerodigestive foreign body is highly among the age group of 1-10 years. (Table – 1) The incidence was common in males, male female ratio 1.44: 1. Rigid esophagoscopy for digestive tract foreign body was done under general anesthesia. Rigid bronchoscopy for airway foreign body was done under general anesthesia (Figure - 1). Out of the 44 patients, 11 patients under went rigid bronchoscopy for airway foreign bodies (4 patients had right bronchus foreign body, 2 left bronchus, 1 in the carina) 33 patients under went rigid oesophagoscopy (18 patients had foreign body in the cricopharynx, 10 patients in upper oesophagus and 3 patients in the lower oesophagus) . Out of the 11 rigid bronchoscopies, foreign body was visualized in 7 patients and successfully removal with no intra or post operative complications (Figure - 2). One child however presented with history of groundnut aspiration and on examination was found to have reduced breath sound on the right side of the chest, x ray chest showed right lung collapse (Figure - 3), emergency rigid bronchoscopy was done but no foreign body was visualized. Another three patients who presented with uncertain history of ingestion / inhalation of foreign body and also with fever and cough since one week, rigid bronchoscopy was done but no foreign body was visualized.

Rigid esophagoscopy was done in 33 patients – 31 patients foreign body was visualized and removed with no intra or post operative complications. One patient was found to have periesophageal abscess which was drained but no foreign body was visualized. In another patient

who presented with history of fever and dysphagia rigid esophagoscopy showed pus seeping out of cricopharynx, athorn was seen piercing the posterior pharyngeal wall and was removed.

Figure - 1: Rigid esophagoscope and bronchoscope with forceps.



Post operative period – all the patient who underwent esophagoscopy and bronchoscopy did not have any procedure induced injury neither did have any post operative complications. All the patients were subsequently discharged.

Total number of patients – 44 Male – 26, Female – 18 ratio 1.44: 1. Number of esophageal and airway foreign bodies removed were as per Table - 2. Incidence of various types of foreign bodies was as per Table – 3.

Table – 1: Age incidence.

Age (in years)	Number
1 -10	28
11-20	3
21-30	1
31-40	2
41-50	2
51-60	7
61-70	0
71-80	1
Total	44

Table – 2: Number of foreign bodies removed.

Number of esophageal foreign bodies removed	Number of Airway foreign body removed
31	7

Table – 3: Incidence of various foreign bodies.

Type	Number
Coin	15
Mutton piece	8
Safety pin	3
Screw	1
Coconut piece	1
Seed	6
Artificial dentures	3
Nuts	1
Total	38

Figure – 2: Airway foreign bodies after removal by rigid bronchoscopy.



Figure – 3: Right lung collapse.



Discussion

After ear and nose esophagus is the commonest site for foreign body impaction [1]. 80% of impacted foreign body of the digestive tract are held up in cricopharynx [2] as reported in literature, which is similar to the finding our study. Common signs and symptoms in the digestive tract foreign body are dysphagia, drooling, vomiting. Major respiratory symptoms are more common within weeks or months after ingestion such as coughing, fever, chest pain,

stridor [3]. In the airway foreign body right bronchus foreign body incidence is highest in literature which is similar to our finding in the present study. Although most foreign bodies pass of spontaneously 10-20% of these patients need treatment and approximately 1% will require surgery [4]. The commonest foreign body in our study is coin and seeds and nuts in oesophagus and airway respectively which is comparable to the finding in other studies [5, 6]. Though many techniques have been described in literature for foreign body removal, in our study rigid oesophagoscopy/ bronchoscopy with forceps under general anesthesia was done which confirms with other studies [5, 6, 7, 8, 9, 10, 11]. In our study foreign body was successfully removed in more than 90% of the cases which is comparable with earlier studies [5, 6, 7, 8, 9, 10, 11, 12].

Conclusion

Foreign bodies in the aerodigestive tract continue to be a problem affecting children and adults alike. Rigid endoscopy with forceps removal under general anesthesia is preferred method of removing these foreign bodies. No foreign body should be left unattended expecting it to come out spontaneously. Delay in its management can lead to life threatening complications.

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