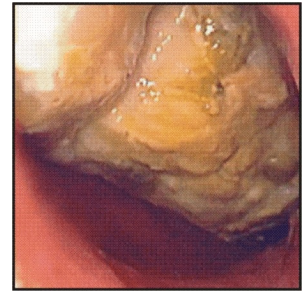


ORIGINAL

PROF-901

# MANAGEMENT OF OESOPHAGEAL FOREIGN BODIES



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**ABSTRACT ...** [entdrmasood@yahoo.com](mailto:entdrmasood@yahoo.com) **Objectives:** To evaluate management of oesophageal foreign bodies. **Design of study:** Cross sectional analytic study. **Settings and period:** Department of otorhinolaryngology and head and neck surgery Bahawal Victoria Hospital Bahawalpur, from May 2003 to December 2004. **Material and methods:** A total of 186 patients with history of foreign body ingestion were admitted and included in the study. A structured questionnaire was designed to record the informations. X-ray neck and rigid oesophagoscopy was carried out to diagnose and remove foreign bodies. **Results:** Out of 186 patients, 155(83.33%) were from paediatric age group and 31(16.66%) above 12 years of age. Coin was the commonest foreign body (77.41%). Dysphagia was the commonest symptom (96.77%). X-rays were conclusive in 181(97.3%) patients. Rigid oesophagoscopy was carried out in all cases and removal of foreign body was successful in 95.69% cases, and complication rate was very low.

**Key Words:** Oesophagus. Oesophagoscopy. Foreign body.

## INTRODUCTION

The human race will certainly never cease to insert different foreign objects into its various orifices and eating is the most frequent act in daily life so foreign bodies in oesophagus is common problem encountered in ENT practice. Eighty percent of the foreign bodies are seen in children<sup>1</sup>, followed by edentulous and insane persons. Boys are at greater risk<sup>2</sup>.

Over 90% of foreign objects pass uneventfully through GIT. If foreign object fails to pass through, hold up most commonly occurs in oesophagus<sup>3</sup>. Eighty percent of impacted foreign objects are held up at cricopharyngeus.

Varieties of foreign bodies lodged in oesophagus is

legion, but coin, bone, meat bolus, denture, battery are reported in literature.

Common route of entry of foreign bodies in oesophagus is oral but foreign bodies may enter through stab wound or stomach.

Rigid oesophagoscopy remains the effective and safe method of removal of foreign bodies. Other methods are flexible oesophagoscopy, advancement with bougienage, balloon extraction and esophagotomy.

The purpose of this study was to describe our experience in study of the various types of the foreign bodies, causes, their removal and problems associated with the removal.

**MATERIALS AND METHODS**

This study was carried out at ENT unit of Bahawal Victoria Hospital Bahawalpur, Pakistan from May 2003 to December 2004. A total of 186 patients with history of foreign body ingestion were admitted and included in the study. A questionnaire was designed to keep the record of all patients. The questionnaire included name, age, gender, address, complaints with duration, signs, possible cause, type of foreign bodies and site of impaction. Patients were divided into two age groups, first was paediatric below 12 years and second was above 12 years. All patients underwent routine and radiological investigations and rigid oesophagoscopy was used in all cases for foreign body removal.

**RESULTS**

The 186 patients included in the study comprised 113 male (60.75%) and 73 female (39.24) Table I, with an age range of 6 months to 80 years. Children below 12 years of age were 155(83.33%), and 31 patients (16.66%) were above 12 years age, Table II. Patients belonging to rural area were 148(79.56%) and from urban area were 38(20.43%). Coin was the commonest foreign body, seen in 149(77.41%) and all cases were in paediatric age group. Next common foreign body was meat bolus seen in 13 cases (6.45%). Bone chip was seen in 10 cases (5.37%), denture was in 03 cases (1.61%), tablet in two cases and in nine cases other varieties of foreign bodies were seen, Table III.

Gender	No. of patients	% Age
Male	113	60.75
Female	73	39.24
Total	186	100

All patients presented with definite history of foreign body ingestion. Other symptoms were initial choking and gagging in 72(38.70%), dysphagia in 180(96.77%), odynophagia in 101(54.30%), retro sternal pain in 07(3.76%), respiratory distress in 04 (2.15%) patients and previous history of foreign body impaction was seen

in 04 patients (2.15%).

Age group	No. Of patients	% Age
Paediatric	155	83.33
Adult	31	16.66
Total	186	100

Types of foreign bodies	No. Of patients	% Age
Coins	149	80.10
Meat bolus	13	6.98
Bone chips	10	5.37
Dentures	03	1.61
Tablets	02	1.07
Wrist watch dial	01	0.53
Locket	01	0.53
Glass ball	01	0.53
Mango seed	01	0.53
Plastic piece	01	0.53
Ear ring	01	0.53
Screw	01	0.53
Wood piece	01	0.53
Finger ring	01	0.53
Total	186	100

Neck tenderness was present in 53 patients (28.49%), pooling of saliva on laryngoscopy was present in 25 patients (13.44%). The earliest case presented after 50 minutes and the latest presented after 1 year of foreign body ingestion.

Plain radiographs were taken in all cases, and in 159(85.48%) cases the foreign body shadow was visible, in 22(11.82%) cases only air shadow was found, and in

5 cases (2.68%) neither foreign body nor air shadow was visible.

Rigid oesophagoscopy was performed in all cases for foreign body removal. Foreign body was found in 180 (96.77%), in 178(95.69%) cases foreign body was successfully removed per endoscopically, in one case (glass ball) foreign body could not be captured by forceps and pushed to stomach, and in one case impacted denture was removed through cervical esophagotomy. In 6 patients (3.22%) foreign body could not be found, inspite of X-ray shadow, as it passed spontaneously during anaesthesia relaxation.

One sixty five (88.70%) foreign bodies were impacted at upper end of esophagus, 7(3.76%) in mid esophagus, 3(1.61%) at lower end, 3(1.61%) in pyriform fossa, 1(0.53%) in post cricoid region and 1(0.53%) in posterior pharyngeal wall. In 173 patients (93%) no underlying pathology was found, only 5(2.68%) were edentulous, stricture found in 5(2.68%), growth in 2(1%) and 1 patient (1%) was insane.

No complication occurred due to foreign body impaction, but complications of oesophagoscopy did occur. Mucosal injury was the commonest complication of oesophagoscopy which occurred in 28(15.05%) and in 1(0.53%) case esophageal perforation and pneumomediastinum occurred which was managed by antibiotics and chest intubation.

## DISCUSSION

In ENT practice, after nose and ear the oesophagus is the commonest site for foreign body impaction<sup>4</sup>. Most of the cases present as an emergency and undergo removal except when the foreign body passes down spontaneously. Although foreign body ingestion occur in all age groups but it is common in children below 12 years of age, due to attraction by shiny objects like coin and the habit of putting every thing into mouth.

Majority of our patients were children 83.33% while Mehmood<sup>5</sup> reported an incidence of 57.4% below 10 years of age. Adult patients were 16.66%. Boys have a

greater risk of foreign body impaction because they have greater out door exposure and also they are more courageous. In our study 113 patients (60.75%) were male and 73(39.24%) female while Khan<sup>6</sup> reported 57% male and 43% female.

Most of our patients were from rural areas, 148(79.56%), because these people are less educated and have more number of children so they are unable to take proper care of their children.

The commonest route of entry of foreign body is oral but foreign objects may enter through stomach<sup>7</sup>, or stab wound. In our study the route of entry of foreign body was oral in all cases. Symptoms produced by oesophageal impaction of foreign bodies usually alarm patients causing them to immediately seek medical attention. Symptoms, clinical examination and radiographical studies help the surgeon to decide whether to admit the patient for endoscopy. There is no rule of thumb to determine whether a foreign body is present or more difficult to rule out its presence. In our study the presenting symptoms have been the most accurate indication of foreign body impaction. All patients presented with definite history of foreign body ingestion and impaction.

Dysphagia was present in 180(96.77%) patients, initial choking and gagging in 72(38.70%) patients, odynophagia in 101(54.30%) patients, retrosternal pain in 07(3.76%) patients, respiratory distress in 04(2.15%) patients and previous history of foreign body impaction was present in 04(2.15%) patients. Tenderness of neck was noted in 53 patients (28.49%). Pooling of saliva was noted in 25 patients (13.44%), as most of the patients were children where laryngoscopy was not possible, Coin turned to be the commonest foreign body (80.10%) exclusively in children while Khan reported 60%. Other foreign bodies noted were meat bolus 13 patients (6.98%), bone chip in 10 patients (5.37%), denture in 03 patients (1.61%). Other rare foreign bodies were also noted Table III.

There is no doubt about usefulness of plain radiology if a radio opaque foreign body is suspected as was the

case with children, but in adults in whom most of the foreign bodies were radiolucent its accuracy becomes lower. We got plain x-rays AP and lateral view in all cases. Foreign body was visible in 159(85.48%), in 22 patients (11.82%) only air shadow was visible above foreign body entrapment, and in 5 cases (2.68%) plain x-rays were not conclusive.

Cricopharyngeal muscle is strong and 90% of foreign objects come to rest in this location. In our study 165(88.70%) foreign bodies were at upper end of esophagus, 07 in mid oesophagus, 03 at lower end, 03 in pyriform fossa, and 01 in posterior pharyngeal wall.

A foreign body of oesophagus is removed more safely with an open oesophagoscope and general endotracheal anaesthesia<sup>8</sup>, we also selected this method in all 186 cases. Foreign bodies were found in 180 (96.79%), in 06 patients foreign body was not visible as it was slipped during anaesthesia relaxation.

In 178 cases foreign object was removed through endoscope, in 01 case cervical esophagotomy was done to remove impacted denture and in one case foreign body was pushed to stomach.

In 173 cases no underlying pathology was found, only 05 patients were edentulous, stricture was found in 05 patients, growth in 02 patients, and 01 patient was insane. Complications of oesophagoscopy may be minor like mucosal injury to serious like perforation. In our series mucosal injury occurred in 28(15.05%), and perforation in one case.

## CONCLUSION

Keep coins and other inedible objects away from

children. Proper chewing and scrutiny of food. If dysphagia or foreign body impaction occurs immediately medical advice. Foreign body may prove fatal so early removal is recommended. Rigid oesophagoscopy is the safest and effective method of removal.

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