

Foreign body esophagus

Introduction:

Impaction of foreign bodies in oesophagus is a common emergency in ENT especially in children below 10 years of age and denture wearer elderly people with psychosis and prisoners.

Placing inedible objects in mouth, loose artificial denture, size and nature of the ingested material and preexisting oesophageal disease are common factors responsible for impaction of foreign bodies in oesophagus.

Foreign body ingestion accounts for low morbidity and mortality. Use of proteolytic enzyme, fogarty catheter, flexible endoscopic removal and pushing the foreign body into the stomach with bougie had been practiced but rigid endoscopic removal of foreign bodies under general anaesthesia with a secured airway is the safe and effective method and we share our experience in this respect.

PATIENT AND METHOD

Two hundred patients with foreign bodies in oesophagus admitted in Holy Family Hospital Rawalpindi between August 2004 to May 2009 were analyzed retrospectively according to the type of foreign body, site of impaction, age and sex of the patients and safest method of retrieval.

After initial assessment, X-ray chest and neck (A.P/Lat view) and hematological investigations were obtained. Rigid oesophago-scopes were used for retrieval of foreign bodies under general anaesthesia with secured airway. When foreign body retrieval was not possible in complicated objects like glass ball and impacted dentures, cervical oesophagostomy was performed.

RESULTS:

In this study 200 patients with oesophageal foreign body age ranged from 4 months to 70 years. Majority of the patients 62.5% were below the age of 10 years and male to female ratio was 3:2. (Table 1).

Coin 62.5%, meat bolus 22%, dentures 5.5%, bone pieces 6%, ear rings 1.5% and glass balls 1% were the commonest 98% of all foreign bodies.

X-rays soft tissue neck and chest revealed definite signs of radio-opaque foreign bodies in 190 patients (95%) and upper 1/3 of oesophagus was the commonest (92.5%) site of impaction of foreign bodies (table 2).

Rigid oesophagoscope was used to remove foreign bodies with a success rate of 94%. In 9 cases (4.5%), it passed into the stomach and in 3 (1.5%), cases it was not possible to remove foreign body. We have to perform cervical oesophagostomy in 2 cases, one with denture and the other with glass ball. In one case the foreign body from lower end of oesophagus was removed through abdominal approach. We have perforation of oesophagus at lower end in one patient. She developed mediastinitis and pleuritis and she died after 10 days.

Age in years	Sex		Total	%age
	Male	Female		
0 - 10	80	45	125	62.5%
11-20	8	4	12	6%
21-30	12	10	22	11%
31-40	6	7	13	6.5%
41-50	7	5	12	6%
51-70	7	9	16	8%
Total	120	80	200	100%

Table 2. Type and site of infection of foreign body

Type of foreign body	Upper 1/3	Middle 1/3	Lower 1/3	No of pts
INORGANIC				
Coins	120	3	2	125
Denture	10	1	-	11
Ears rings	3	-	-	3
Glass balls	2	-	-	2
Buttons	1	-	-	1
Safety pins	1	-	-	1
ORGANIC				
Meat bolus	35	3	6	44
Chicken bone	11	-	-	11
Fish bone	1	-	-	1
Seed	1	-	-	1
Total / percentage	185 (92.5%)	7 (3.5%)	8 (4.0%)	200

DISCUSSION:

Foreign body oesophagus is a common emergency in ENT after nose and ear. It is common in young children and older age group particularly edentulous.

In our study majority of the patients 62.5% were below 10 years of age; Youngest being of 4 months age and the oldest of 70 years age. Male to female ratio was 3:2 which is in consistent with other studies. The most common foreign body was coin found in 125/200 cases (62.5%) exclusively in children below 10 years our series; followed by meat bolus 22%, chicken bone 5.5%, ear ring 1.5% and glass ball 1%. Similar objects have been observed by other workers. But these are contrary to a study in which bone pieces were 60% and coins only 24%.

Oesophageal foreign bodies are likely to be impacted at the site of anatomical narrowings or narrowings due to strictures, stenosis or neoplasm. Because of the weak muscular activity of the upper portion of the oesophagus just below the cricopharyngeus muscle, 95% of the foreign bodies come to rest in this position. In our study the frequency of impaction at the upper 1/3 was 92.5%, at the middle 1/3 3.5%, and at the lower 1/3 4%. These findings are in consistent with other studies.

Management of oesophageal foreign bodies depends upon the time period of impaction, nature and size of foreign body and the site of impaction. Small and blunt foreign bodies may pass uneventfully through oesophagus. Trauma due to foreign body leads to mucosal oedema and foreign body thus once impacted is unlikely to pass spontaneously. Use of proteolytic enzymes, Fogarty catheter, flexible endoscopic removal and pushing the foreign body into stomach with bougie had been practiced but rigid endoscopic removal of foreign bodies under general anaesthesia with a secured airway is the safe and effective method which was used in this study. In two cases (1%) cervical oesophagostomy was done while in one case (5%) foreign body from lower end of oesophagus was removed through abdominal approach. Such experience is compatible with other authors. We have mortality in one patient (5%) due to rupture of oesophagus at lower end and development of mediastinitis and pleuritis.

CONCLUSION:

Accidental ingestion of foreign bodies especially coins predisposes children below 10 years to such emergency in majority of cases. Rigid oesophagoscopy is the best safe method for removal of these foreign bodies. Whenever necessary open surgery should be done to minimize the morbidity and mortality.