Retrospective Study of Management of Foreign Body Oesophagus in Adult Patients Attending a Tertiary Care Centre

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ABSTRACT

BACKGROUND
Foreign body in oesophagus is a common health problem. It is more common in children than adults. The patients present with history of ingestion of foreign body, difficulty in swallowing, pain in throat and neck and pooling of saliva. Sometimes they present with serious complications. Urgent intervention is necessary to prevent complications.

METHODS
This study was carried out in the department of Otorhinolaryngology of a tertiary care centre of North Bengal. Age of the patients, types of foreign bodies, sites of impactions, removal and complications were studied and outcomes were analyzed.

RESULTS
Total 83 patients were studied. There were 53 (63.85%) males and 30 (36.14%) females. Oldest patient was 88 years old and youngest patient was 18 years of age with a mean age of 44.54 years. Commonest foreign body was meat bone 35 (42.16%) followed by artificial denture 17 (20.48%), chicken bone 10 (12.04%), fish bone 10 (12.04%), meat bolus 5 (6.02%) and safety pin 2 (2.4%). 8 patents presented late with complications, retropharyngeal abscess 8 (9.63%), 2 of them died of septicaemia (2.4%).

CONCLUSIONS
Foreign body in oesophagus is common in adults. Urgent oesophagoscopy and removal of foreign body should be done to avoid complications. Commonest foreign body was meat bone 35 (42.16%).

KEYWORDS
Foreign Body, Oesophagus, Adults, Urgent Oesophagoscopy
Foreign body in oesophagus is a common health problem. It is more common in children than adults. Coins are most commonly seen lodged in the oesophagus of children and fish bones, meat bones, chicken bones and artificial dentures are common in adults. Matheson (1949) reported 29 cases of denture in oesophagus in adults in a review of 602 cases of foreign bodies in oesophagus. Hussain et al reported in his study, coins (55.6%) were the commonest followed by meat bolus (20.75%), dentures (7.07%). Ingestion of an artificial denture is a challenging situation and needs early intervention. Delay in management can cause significant morbidity and even mortality. In elderly patients, especially with dementia, impacted dental prosthesis in esophagus can create serious problems. The patients present with history of ingestion of foreign body, difficulty in swallowing, pain in throat and neck and pooling of saliva. Sometimes they present with serious complications, like retropharyngeal abscess, perforation, septicaemia and even death. Urgent intervention is necessary to prevent complications.

Objectives
- To see the outcome of oesophageal foreign bodies removal under general anaesthesia.
- To see the commonest age group of foreign body impaction in adults.
- X-ray findings.
- To see the types of foreign bodies.
- To see the sites of foreign body impaction.
- To see the types of complications.

METHODS
This study was carried out in the department of otorhinolaryngology of a tertiary care centre of North Bengal. Hospital data from July 2014 to October 2019 were taken for the study. Outcome of oesophageal foreign bodies, the commonest age groups, X-ray findings, the type of foreign bodies, the sites of foreign body impaction and complications were studied and outcomes were analyzed. All the data were de-identified through irreversible coding. Category of risk is less than minimal risk.

Inclusion Criteria
- Age more than 18 years.
- History of Foreign Bodies impactions, with or without positive radiological findings.
- Foreign Bodies impacted in oesophagus which needed intervention.

Exclusion Criteria
- Age less than 18 years.
- Foreign Bodies passed spontaneously.
- Foreign Bodies lodged in pyriform sinus and posterior pharyngeal wall.

RESULTS
Total 83 patients were studied. There were 53 (63.85%) males and 30 (36.14%) females. Oldest patient was 88 years old and youngest patient was 18 years of age with mean age 44.54 years (SD ± 16.7). Symptoms like pain, foreign body sensation and difficulty in swallowing were present in 80 (96.38%) cases and absent in 3 (3.61%) cases. Pooling of saliva was present in 68 (81.92%) cases and absent in 15 (18.07%) cases. Radio opaque shadows were found in 70(84.33%) cases and absent in 13 (15.66%) cases. Commonest foreign body was meat bone 35 (42.16%) followed by artificial denture 17 (20.48), Chicken bone 10 (12.04%), fish bone 10 (12.04%), meat bolus 5(6.02%) and safety pin 2 (2.4). Foreign body impaction was present in upper part 49 (59.03%) cases, middle part 24 (28.91%) cases and lower part 10 (12.04%) cases. 8 (9.63%) patients presented late with complications, retropharyngeal abscess, 2 (2.4%) of them died of septicaemia.
Total 83 patients were studied. There were 53 (63.85%) males and 30 (36.14%) females. In our study there were male preponderance whereas Nadir A et al\(^7\) and Hurtado CW et al\(^8\) found equal sex distributions in their studies.

Oldest patient was 88 years old and youngest patient was 18 years of age with mean age 44.54 years (SD ± 16.7). Okafor B C et al\(^7\) and Barakat A et al described that esophageal foreign bodies in the adult have a varied etiology as compared to children.\(^9,10\) Edentulous patients are likely to ingest a foreign body as they are unable to masticate properly and absent teeth sensation.

Symptoms like pain, foreign body sensation and difficulty in swallowing were present in 80 (96.38%) cases and absent in 3 (3.61%) cases. This is similar with the study of Sittitriai et al\(^11\) and Brady PG.\(^12\) Pooling of saliva was present in 68 (81.92%) cases and absent in 15 (18.07%) cases. Khan MA et al also found pooling of saliva in majority of cases.\(^13\)

Radio opaque shadows were found in 70 (84.33%) cases and absent in 13 (15.66%) cases. Goh BK et al also described that radiography does not always reliably detect radiolucent foreign bodies, especially fish bones. Though fish bones are sufficiently radio opaque to be visualized on radiographs, large soft-tissue masses and fluid can obscure the minimal calcium content of the bone, particularly in obese patients.\(^14\)

So, we performed esophagoscopy in all cases on the basis of history and clinical suspicion. Small fish bones and meat boluses do not show radio opaque shadow. Considering the discomfort, possibilities of complications we performed esophagoscopy in all patients within 24 hours of admission in the hospital. Webb W. A. and Longstreth GF et al performed emergency oesophagogastrroduodenoscopy in cases with complete occlusion of the oesophagus, with pooling of saliva.\(^15,16\)

Commonest foreign body was meat bone 35 (42.16%) followed by artificial denture 17 (20.48), Chicken bone 10 (12.04%), fish bone 10 (12.04%), meat bolus 5 (6.02%) and safety pin 2 (2.4%). Accidental ingestion of food items meat bone, Chicken bone, fish bone and meat bolus were present in 60 (72.28%) cases. This is comparable with the study of Webb WA. Artificial dentures were present in 17 (20.48) cases. Use of artificial dentures has been increasing now days for better cosmetic appearance of face. Accidental ingestion of artificial dentures occurs very frequently.

Various options for management of oesophageal foreign body impaction are simple observations, pharmacotherapy, flexible endoscopy, rigid endoscopy, Foley’s catheter removal, oesophageal bouginage and surgery. All of these methods have their own merits and demerits. Management options depend on personal preferences and experience of the surgeon and availability of facility. We used rigid oesophagoscopy in all cases under general anaesthesia with orotracheal intubation. Conners G P. agrees that rigid oesophagoscopy stands the most popular approach in dealing such cases.\(^17\) We removed foreign bodies in 82 (98.79%) cases. 1 (1.83%) cases with retropharyngeal abscess had per operative anaesthetic complications. We had to stop the procedure. We had to cut 1 artificial denture and removed in pieces. Meat boluses are very difficult to remove. Partially cooked and partially digested meat boluses are very difficult to hold. Repeated removal of very small
pieces was performed and the meat boluses were pushed in
the stomach when these became small. 1 safety pin was
removed easily and we faced difficulties while removing
other case. The safety pin was embedded in granulations,
we took time, removed the granulations in small pieces,
safety pin was mobilized and removed. The patient was put
on Ryle's tube feeding for 10 days. Cases with
retropharyngeal abscesses were drained in the same sitting.

Foreign body impactions were more common in upper
part 49 (59.03%) cases, followed by middle part 24
(28.91%) cases and lower part 10 (12.04%) cases. The
frequency of foreign bodies in oesophagus in our study is
similar to the findings of Nandi and Ong. Most of these
were arrested at a distance few centimetres below the
cricopharynx. This is due to the strong propulsive pharyngeal
muscles force pushes the object in this region. 8(9.63%)
patients presented late, referred by other centres with
complications, retropharyngeal abscess, 2 (2.4%) of them
died of septicaemia. Considering the risk of complications
like aspiration, perforation and retropharyngeal abscess, we
performed oesophagoscopy in all the cases and foreign body removal on emergency basis.

CONCLUSIONS

Foreign bodies in oesophagus in adults are less common
than in children. Sharp foreign bodies are more common in
adults and they easily penetrate the oesophagus and are
more prone to complications. Meticulous assessment and
urgent oesophagoscopy and early removal of foreign bodies
should be done to avoid complications. Patients with
retropharyngeal abscess should be managed carefully.
During intubation care should be taken so that the abscess
does not rupture. Preferably awake intubation or tracheostomy should be done.

ACKNOWLEDGEMENTS

Authors thank Prof. Prabir Deb, Principal, North Bengal
Medical College, Prof. Koushik Samajdar, Medical
Superintendent cum Vice Principal, North Bengal Medical
College, Dr Subrata Mandal, Head, Department of
Anaesthesiology, North Bengal Medical College and Dr.
Kalyan Khan, Associate Professor, Department of Pathology
and Convener, Medical Education Unit, North Bengal Medical
College.

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