Ingestão Acidental de Corpos Estranhos: 
Análise de 163 Casos 

Accidental Foreign Body Ingestion: Analysis of 163 Cases

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Resumo

Introdução: A ingestão acidental de corpos estranhos por crianças ou adultos é um problema frequentemente encontrado nos pronto-socorros. Esta situação carrega consigo uma significativa morbidade e mortalidade se não solucionada precoceamente.

Objetivo: Este estudo foi realizado para identificar o tipo e a localização de corpos estranhos ingeridos por crianças e adultos.

Casuística e Método: Uma análise retrospectiva de 163 casos de ingestão de corpos estranhos foi feito em pacientes admitidos no departamento de Otorrinolaringologia e Cirurgia de Cabeça e Pescoço do TU Teaching Hospital entre abril de 2004 e outubro de 2006. Em todos os casos, radiografias simples de pescoço e tórax foram realizadas conjuntamente a outras investigações pré-operatórias. Em todos os pacientes foi realizada endoscopia rígida de esôfago ou laringoscopia direta sob anestesia geral, para a remoção dos corpos estranhos.

Resultado: Do total de pacientes, 48,5% eram crianças e 51,5% eram adultos. Nas crianças, os corpos estranhos mais comuns foram moedas (60,7%), carne (15,2%) e corpos estranhos metálicos (8,9%). A localização mais comum foi na junção cricofaríngea (51,9%), seguida pelo esôfago (46,8%). Diferentemente, em adultos os corpos estranhos mais comuns foram carne (76,1%), moedas (3,6%) e dentaduras (2,4%). A localização mais comum em adultos foi no esôfago (62%), seguida pela junção cricofaríngea (25%) e seio piriforme (4,7%). Corpos estranhos não foram detectados em 8,3% dos adultos e 1,2% das crianças. Não se observou nenhuma morbidade ou mortalidade durante todo o período deste estudo.

Conclusão: Corpos estranhos não pontiagudos foram mais comuns em crianças, ao passo que em adultos os corpos estranhos pontiagudos foram mais comuns. A junção cricofaríngea foi o local de acometimento mais comum em crianças e em adultos o esôfago. A redução precoce destes corpos estranhos deve ser considerada para uma redução no risco de complicações.

Palavras-chave: corpos estranhos, deglutição, endoscopia e esôfago.

Summary

Introduction: Accidental foreign body ingestion is a common problem encountered in emergency department in both children and adults. It carries significant morbidity and mortality if not removed at the earliest.

Objective: This study was done to identify the type and site of foreign body ingestion in children and adults.

Materials and Methods: A retrospective analysis of 163 cases of foreign body ingestion were done in patients admitted in ENT & Head and Neck Surgery department of TU Teaching Hospital in between April 2004 and October 2006. In all cases, x-ray soft tissue neck and x-ray chest were done along with other preoperative investigations. In all patients rigid oesophagoscopy or direct laryngoscopy under general anaesthesia were done to remove foreign bodies. While in two cases flexible endoscopies were done.

Results: There were 48,5% children and 51,5% adults. In children, the most common foreign bodies (F.B.) were coin (60,7%), meat bone 15,2% and metallic foreign bodies 8,9%. The most common site of F.B. was at cricopharyngeal junction 51,9%, followed by oesophagus 46,8%. In contrast, in adults most common foreign bodies were meat bone 76,1%, followed by coin 3,6% and denture 2,4%. The most common site in adults was oesophagus 62,0% followed by cricopharyngeal junction 25,0% and pyriform sinus 4,7%. Foreign bodies were not present in 8,3% of adults and 1,2% of children. There was no morbidity and mortality noted during entire period of this study.

Conclusion: Blunt foreign bodies were more common in children while sharp foreign bodies were in adults. The cricopharyngeal junction was the most common site of F.B. in children where as in adult it was the oesophagus. Early removal of these foreign bodies must be considered to reduce the risk of complications.

Key words: foreign bodies, swallowing, endoscopy, oesophagus.
**INTRODUCTION**

Foreign body ingestion is a common problem (1). Mostly it is accidental but sometimes individuals ingest certain materials to conceal it. The most frequently swallowed foreign bodies in children include coins, metallic foreign bodies (parts of playing objects) and while meat bone (chicken bone/fish bone/mutton/buff) are common in adults and elderly (2,3,4,5,6). Children between the ages of one and three years were the most commonly affected (7). Foreign bodies frequently occur in the cricopharyngeal and oesophageal regions (8). Most of the foreign body which have gone beyond esophagus will pass uneventfully through the intestinal tract (1). Foreign bodies in upper digestive tract whether blunt or sharp should be considered as an emergency to reduce the associated complications. If foreign bodies are not removed on time, it can cause intramural perforation, subacute mediastinitis, aortoesophageal fistula (9), tracheoesophageal fistula, and long-term residual injury to the esophagus (10). This study was done to identify the type and site of foreign body ingestion in both children and adults.

**MATERIALS AND METHODS**

A retrospective analysis of 163 cases of suspected foreign body ingestion were done in patients admitted in ENT& Head and Neck Surgery department of TU Teaching Hospital in between April 2004 and October 2006 (2 ½ years). All age groups with suspicion of foreign bodies were included. Age less than 12 years was included in children while age more or equal to 13 years was included in adults. Informed consent was taken from all patients in order to participate in this study and the work was approved by local ethical committee. In all cases, x-ray soft tissue neck lateral and x-ray chest anteroposterior view done along with other preoperative investigations were done. In all patients rigid oesophagoscopy or pharyngoscopy under general anaesthesia were done to remove foreign bodies. While in two cases flexible endoscopies were done.

**RESULTS**

There were 163 cases of foreign body ingestion, out of which 48.5% were children and 51.5% adults. Foreign bodies were common in 0-4 year age group in children where as in adults it was common in 31-40 years age group (Table 1, 2). In children, the most common foreign bodies were coin (60.7%), meat bone 15.2%, and metallic foreign bodies 8.9% (Table-3). The most common site of all these F.B. was at cricopharyngeal junction (51.9%), followed by oesophagus (46.8%). In contrast in adults the most common foreign bodies were meat bone (76.1%) followed by coin (3.6%) and denture (2.4%) (Table-4). The foreign bodies were more common (29.8%) in 30-40 years age group. The most common site in adults was oesophagus (62.0%) followed by cricopharyngeal junction (25.0%) and pyriform sinus (4.7%). There were 8.3% of adults and 1.2% of children in whom foreign bodies were not present. There was no mortality noted during entire period of this study.

**DISCUSSION**

Foreign body ingestion is a common occurrence and carries significant morbidity and mortality. The peak age in children is between 6 months to 3 years (7). Our study showed that foreign bodies were common in 0-4 year age
group in children where as in adults it was common in 31-
40 years age group. On analyzing 163 cases of ingested
foreign body we found almost equal percentage in children
and adults/elderly. However, Foreign body were common
(29.8%) in 30-40 years age group.

Most common foreign bodies in pediatric age group
are coins (2,3,4,5,6), but meat bone, marbles, safety pins,
button, batteries and screws are also reported. Our study
also revealed coins (60.7%) to be the most common
foreign body in children followed by meat bone (15.2%)
and metallic F.B. (8.9%).

In old age ingestion of a bolus is common occurence
specially elders who are edentulous who cannot chew
properly, particularly food like meat and swallow it as a
whole. Moreover elderly patient most of the times have
other underlying pathology which needs to be screened.

F.B. can be impacted in the pharynx and oesophagus
because of their shape, size and anatomical narrow segments.
More adults than children tend to have impaction of bones
in the pharynx and oesophagus. The oesophagus is a
passive and unadaptable organ and its peristalsis is not
strong enough to prevent its retaining certain types of
swallowed objects (9). Meat bones are common in an adult
which is similar to our study. Our study also showed coins
and denture as a common foreign body in adults. The most
frequent location was the oesophagus and cricopharyngeal
junction. However there are several studies done showing
cricopharyngeal and oesophageal region to be the common
site (2,8).

In all of our patients rigid oesophagoscopy or
pharyngoscopy under general anesthesia were done to
remove foreign bodies. While in two cases, flexible
endoscopies were done and in four cases foreign body were
advanced into the stomach. There were 8.3% of adults and
1.2% of children in whom foreign bodies were not present
two cases of children had associated oesophageal stricture.

Sharp F.B. is frequently associated with serious
complications. If they are not removed at the earliest, they
can cause erosion, perforation, abscess or mediastinitis (3).
The incidence of such complications occurs even after the
removal of F.B which is often due to anesthesia, or due to
delayed presentation. There were no morbidity and
mortality noted in our case series. However other studies
showed complications like oesophageal perforation,
oesophageaoartic fistula, empyema thoracis, mediastinitis
and lung abscess (3,8).

**Conclusion**

Blunt foreign bodies were common in children
while sharp foreign bodies were in adults. Early removal of
these foreign bodies must be considered to reduce the risk
of complications. It is better to prevent children by not
allowing them to play with coins/metallic foreign bodies/
safety pins etc. Parents/ caretaker should be educated to
take their children to the hospital even there is a suspicion
of foreign body ingestion. Even if there is a not a clear cut
history of foreign body ingestion and if you suspect, you
should not neglect it.

<table>
<thead>
<tr>
<th>Types of F.B</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Meat Bone</td>
<td>76.1%</td>
</tr>
<tr>
<td>Coin</td>
<td>3.6%</td>
</tr>
<tr>
<td>Denture</td>
<td>2.4%</td>
</tr>
<tr>
<td>Wood</td>
<td>1.2%</td>
</tr>
<tr>
<td>Metallic F.B.</td>
<td>1.2%</td>
</tr>
<tr>
<td>Electric Plate</td>
<td>1.2%</td>
</tr>
<tr>
<td>Lapsi Seed</td>
<td>1.2%</td>
</tr>
<tr>
<td>Meat bolus</td>
<td>4.8%</td>
</tr>
<tr>
<td>No F.B.</td>
<td>8.3%</td>
</tr>
</tbody>
</table>

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