Food Bolus Impaction and Foreign Body Ingestion – The Emergency Presentation

Outline

Food Bolus Impaction

Foreign Body Ingestion

Any Questions?

Swallowed Foreign Bodies


Food Bolus Impaction

What? (Definition and Aetiology)

Food bolus impaction is unexpected lodging of a piece of food in the oesophagus

Generally, inadequately chewed meat (e.g. chicken, steak)

Common, 15/100,000 adults annually

Most cases occur in patients with existing oesophageal disease

- Peptic stricture (50%)
- Eosinophilic oesophagitis (40%)

What? (Definition and Aetiology)

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Food Bolus Impaction

What?

What now?

Who?

When?

Why?

How?
What now? (Initial Assessment and Workup)

Take a history (identify likely culprit, location of discomfort, duration)

Assess for level of obstruction (complete, partial, passed bolus)

Physical examination (classically – hunched over, sitting up, vomit bag in hand, excessive salivation, distressed)

Vital signs (haemodynamic instability, shock)

Co-morbid conditions (fitness for sedation/anaesthetic)

Consider imaging (usually not required, easy CT scan)

Who? (Staff members involved)

Endoscopy Nurses (Procedure, Sedation)

Endoscopist (Gastroenterologist, Surgeon, General Physician)

Anaesethetist (Consultant Anaesthetist, GP Anaesthetist)

Anaesthetic Nurse

Anaesthetic Technician

Theatre Coordinator

Theatre Wardsperson

Recovery Nurses

When? (Urgency)

Ideally, all retrievals within 24 hours

If patient has complete oesophageal obstruction, as soon as practicable

Why? (Potential complications)

Extreme distress, discomfort

Aspiration pneumonia

Ulceration

Perforation

Peritonitis/ Sepsis

Small bowel obstruction

Death

How? (Methods and Approaches)

Aim: To remove food bolus with minimal damage to gut

Key: require intubation in under 13 years, high oesophageal food bolus

Method: Any device/tool which works!

Tools to consider: forceps, graspers, polypectomy snares, nets, use of clear cap/distal attachment, Overseal

Approaches: whole, piecemeal, or gentle pushing into stomach

The longer the food is lodged, the harder it is to remove in one piece!
Foreign Body Ingestion

**What?**
Foreign body ingestion is a common emergency presentation. Usually in the pediatric population (6 months to 6 years) in adults with psychiatric illness, developmental delay, alcohol intoxication or secondary gain.

**What now?**
Initial assessment and workup:
- Take a history (identify likely culprit, location of discomfort, duration)
- Consider motivation for ingestion (repeat offenders common)
- Assess for oesophageal obstruction (present, absent)
- Physical examination (may be asymptomatic)
- Vital signs (haemodynamic instability, shock)
- Co-morbid conditions (fitness for sedation/anaesthetic)
- Consider imaging (usually not required, x-ray/CT scan)

**Who?**
Endoscopy Nurses (Procedure, Sedation)
Endoscopist (Gastroenterologist, Surgeon, General Physician)
Anesthetist (Consultant Anesthetist, GP Anesthetist)
Anesthetic Nurse
Anesthetic Technician
Theatre Coordinator
Theatre Wardsperson
Recovery Nurses

**When?**
Emergent (within 6 hours): complete oesophageal obstruction, disc batteries or sharp objects in oesophagus.

Urgent (within 24 hours): partial oesophageal obstruction, blunted foreign objects in oesophagus, sharp objects in stomach or duodenum, magnets within reach, objects >2.5cm above proximal duodenum.

Non-urgent (within 72 hours): objects in stomach with diameter >2.5cm, coins in oesophagus, disc/cylindrical batteries in stomach without GI injury.

**Why?**
Most foreign objects (80-90%) will pass through without intervention. Maximum size to pass through is 2-2.5cm diameter (pylorus, ileocaecal valve) and 5-6cm in length (duodenum).

**How?**
There is a <1% need for surgery for extraction or to treat complications.
Why? (Potential complications)
- Extreme distress, discomfort
- Aspiration pneumonia
- Ulceration
- Perforation (Subcutaneous emphysema, pneumoperitoneum)
- Peritonitis/Sepsis
- Small bowel obstruction
- Death

How? (Methods and Approaches)
Aim: To remove foreign object before damage from object, without injuring surrounding tissues
Consider intubation if there are many, sharp, or difficult to remove objects
Method: Any tools which work!
Tools: grasper, forceps, polypectomy snare, clear cap/distal attachments, retrieval basket, overtube, foreign body protector hood

- Remove disc batteries and magnets sooner rather than later!
- Don’t remove narcotic pouches endoscopically!

Grasper
- 3 prong grasper
- 5 prong grasper
- Retrieval basket

Forceps
- Rat tooth forceps
- Alligator jaw forceps
- Rat tooth and alligator jaw forceps

Overhood Patent, 14 April 1987

ABSTRACT
This invention relates to a small bell-shaped latex rubber protector that is designed to be placed over (e.g.) an endoscope or the entrance of a lumen or cavity, through which (e.g.) a sharp, pointed or cutting foreign object can be retrieved from the cavity using a familiar or utilitarian accessory. The protector hood is then flipped into the open position by pulling the instrument back through the lower esophageal narrowings, or other body segment.

Grasper Device
Take Home Messages

- Food bolus impaction is common, and occurs mainly in the setting of existing oesophageal disease.
- Food bolus should be removed as soon as practicable, especially in complete oesophageal obstruction.
- Time to endoscopy more than 24 hours is associated with increased rate of perforation.
- Foreign body ingestion is most common in children (6 months – 6 years).
- Adults usually have psychiatric illness, developmental delay, alcohol intoxication, or perceived secondary gain.
- Most foreign bodies will pass spontaneously.
- Remove magnets and disc batteries as soon as practicable.

Thank You!
References

