



Dr. Rahul Bagla ENT Textbook

Ultimate Guide – Makes You Best

Foreign Body Oesophagus

Foreign Body in the Oesophagus

The oesophagus and surrounding regions are common sites for lodging of ingested foreign bodies (FBs). These objects can become stuck in the tonsils, base of the tongue, posterior pharyngeal wall, pyriform fossa, or the oesophagus itself. Below is an explanation of the key areas and associated clinical considerations.

Common Sites of Lodgement

1. **Tonsils:** Foreign bodies such as sharp fish bones or needles often lodge in tonsillar crypts. These can be easily identified through oropharyngeal examination and removed.
2. **Base of Tongue or Vallecula:** Commonly affected by fish bones or needles and diagnosed using a laryngeal mirror or flexible endoscope. Removal often involves the patient holding their tongue while the examiner uses curved forceps. Embedded objects might require radiological confirmation and, in rare cases, pharyngotomy for extraction.
3. **Posterior Pharyngeal Wall:** Objects such as wires, needles, or staples can adhere to this area, often taken accidentally with food. Visible on examination and removed with forceps under good illumination.
4. **Pyriform Fossa:** Objects like fish or chicken bones, needles, or dentures are commonly lodged here. Small items can be removed under local anaesthesia, while large or impacted objects may require endoscopic removal under general anaesthesia.
5. **Oesophagus:** Coins, meat pieces, chicken bones, dentures, safety pins, marbles, and disc batteries are common oesophageal foreign bodies. Most objects lodge at or just below the cricopharyngeal sphincter. If an object is located lower, underlying conditions like strictures or malignancies should be suspected and assessed with a follow-up barium swallow.

Causes of Foreign Body Ingestion

1. **Age:** Children under five years are most commonly affected, with coins being the most frequently ingested item. Parental education is crucial to prevent such incidents.

2. **Loss of Protective Mechanisms:** Factors include the use of dentures, loss of consciousness, epileptic seizures, deep sleep, or alcohol intoxication.
3. **Carelessness:** Hasty eating, poorly prepared food, and improper mastication contribute to foreign body ingestion.
4. **Narrowed Oesophageal Lumen:** Conditions like strictures or carcinomas may cause food impaction. A sudden obstruction, such as from a meat bolus, could be the first symptom of oesophageal cancer.
5. **Psychiatric Factors:** Individuals with mental health conditions may swallow objects intentionally.

Common Sites of Lodgement

Foreign bodies often lodge at specific anatomical locations:

- **Cricopharyngeal Sphincter:** This is the most common site for flat objects like coins.
- **Upper Esophagus:** Objects may lodge due to poor peristalsis.
- **Bronchoaortic Constriction or Cardiac End:** Sharp or pointed objects may lodge here.
- **Post-Esophageal Passage:** Objects that pass the esophagus often traverse the gastrointestinal tract without issue but may occasionally obstruct areas like the pylorus, terminal ileum, or sigmoid colon.

Factors such as object size, shape, and sharpness determine the likelihood and location of impaction.

Clinical Features

Symptoms:

1. **History of Choking or Gagging:** Initial symptoms often include these reactions.
2. **Pain or Discomfort:** Discomfort may localize to the neck or chest and worsen with swallowing.
3. **Dysphagia and Odynophagia:** Partial or total swallowing obstruction often progresses due to oedema.
4. **Drooling of Saliva:** Seen in cases of total obstruction, sometimes leading to aspiration and pneumonitis.

5. **Respiratory Distress:** Foreign bodies in the upper oesophagus can compress the trachea, especially in children, causing airway obstruction.
6. **Substernal or Epigastric Pain:** Indicative of oesophageal spasm or potential perforation.

Signs:

1. **Tenderness:** Palpable in the lower neck on either side of the trachea.
2. **Pooling of Secretions:** Observed during indirect laryngoscopy, indicating obstruction.
3. **Protruding Foreign Body:** Occasionally visible in the post-cricoid region during an examination.

Diagnostic Investigations

1. **Radiographic Imaging:** Posteroanterior and lateral X-rays of the neck, chest, and abdomen help identify radio-opaque objects and their locations. Radiolucent objects may appear as air bubbles in the cervical oesophagus.
2. **Flexible Nasendoscopy:** Useful for identifying foreign bodies or saliva pooling in the pyriform fossae, indicating oesophageal obstruction.
3. **Contrast Studies:** Barium swallow is avoided initially due to aspiration risk and interference with endoscopy.



Foreign body food passage.
X-ray PA view showing 1 Rupee coin.



Foreign body food passage.
Lateral view showing 1 Rupee coin.

Management of Oesophageal Foreign Bodies

1. **Endoscopic Removal:** Most foreign bodies can be removed via endoscopy under general anaesthesia using either rigid or flexible scopes. Sharp objects require early removal to prevent complications like perforation or migration into surrounding tissues.
2. **Hypopharyngeal Speculum:** Particularly useful for foreign bodies near the upper sphincter.
3. **Surgical Interventions:**
- **Cervical Esophagotomy:** For sharp or impacted objects above the thoracic inlet.
 - **Transthoracic Esophagotomy:** Required for impacted objects in the thoracic oesophagus.
4. **Post-Pyloric Foreign Bodies:**
- Most objects pass naturally, but surgical intervention may be necessary if:
 - The object causes abdominal pain or tenderness.
 - X-rays show no progress over several days.
 - Objects are sharp, long (e.g., >5 cm in children), or hazardous (e.g., disc batteries).

Comparison of Rigid and Flexible Oesophagoscopy

Aspect	Rigid Oesophagoscopy	Flexible Oesophagoscopy
Anaesthesia	Requires general anaesthesia	Topical or sedation
Route	Oral	Oral or nasal (for transnasal diagnosis)
Jaw/Neck Abnormalities	Difficult to perform	Can be done
Structures Seen	Oesophagus only	Oesophagus, stomach, pylorus, and duodenum
Admission	Requires hospital admission	Usually done as an outpatient procedure
Foreign Body Removal	Suitable for sharp and impacted objects	Best for small, soft objects; harder for impacted ones
Accessories	May need separate telescopes; documentation is difficult	Built-in camera, light, and easy documentation
Cost	Higher due to hospital stay and anaesthesia	Lower cost

Complications

1. **Respiratory Obstruction:** Due to tracheal compression or laryngeal oedema.
2. **Perioesophageal Cellulitis or Abscess:** Infections that may occur in the neck.
3. **Perforation:** Sharp objects can cause mediastinitis, pericarditis, or empyema.
4. **Tracheoesophageal Fistula:** Rare but serious.
5. **Ulceration and Stricture:** Long-term presence of foreign bodies can lead to these complications.

Special Considerations: Disc Batteries

The ingestion of disc batteries is increasingly common due to their widespread use in electronic devices. These batteries cause

significant harm due to leakage of sodium hydroxide, potassium hydroxide, and mercury and thermal and chemical injury to mucosa within hours. The disc battery causes damage to the mucosa in 1 hour, damage to the muscle coat in 2–4 hours and perforation of the oesophagus in 8–12 hours.

Management:

- Prompt removal is critical to prevent complications like strictures, perforations, or even death.
- Batteries lodged in the stomach require radiographic monitoring every 4–7 days. If a battery remains in the stomach for more than 48 hours in children under six years, it should be removed endoscopically.

X-Ray Findings:

- Disc batteries often display a “double contour” on imaging, aiding diagnosis.

Key Guidelines

1. **Avoid Blind Removal:** Always perform removal under direct visualization to prevent further complications.
2. **Do Not Push Objects Further:** Attempts to push objects into the stomach for natural expulsion are discouraged.
3. **Avoid Use of Papain:** Meat tenderizers can digest the oesophageal wall and should not be used.
4. **Avoid Glucagon:** It is ineffective in relaxing the lower oesophageal sphincter if obstruction is due to stricture or other pathologies.

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