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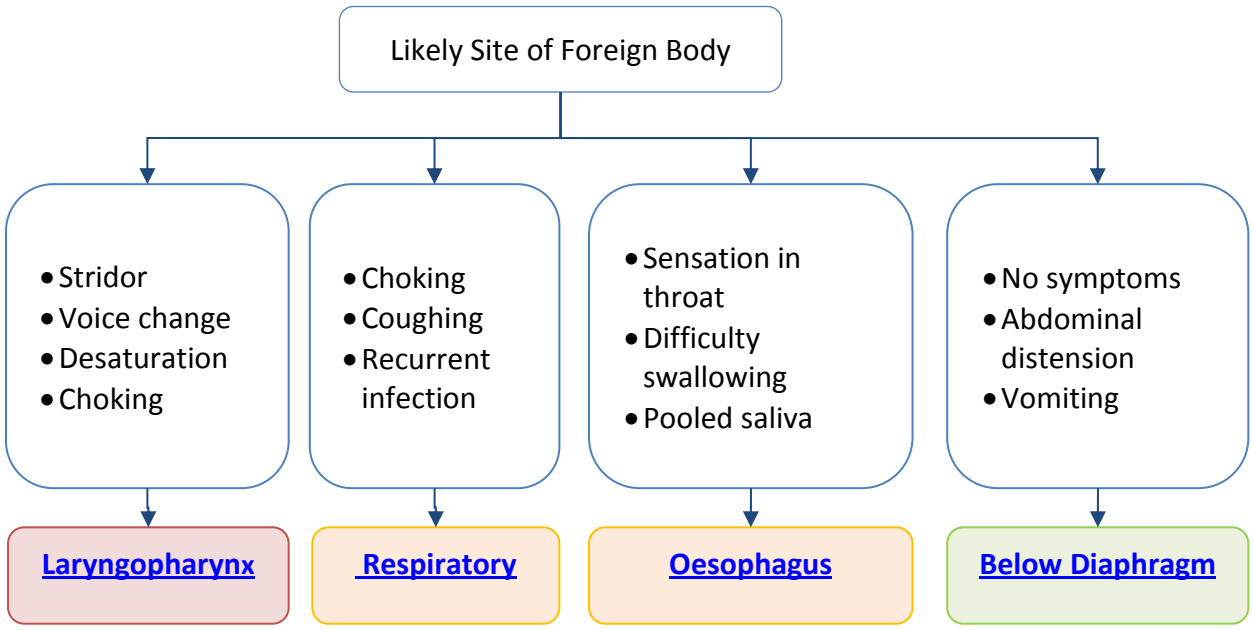
Foreign bodies – Ingested and Inhaled (Adult)

Most foreign bodies are ingested and pass spontaneously without harm. Conversely foreign bodies can also obstruct the airway or cause permanent damage to the GI tract so vigilance is required.

Sometimes there is no history of foreign body ingestion/aspiration and a high index of suspicion is required.

Consider FB in any patient with sudden onset of dysphagia, respiratory distress or who has 'lost their dentures'.

Think of button batteries (from hearing aids etc.) with any new onset haematemasis or haemoptysis.



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Laryngopharynx Foreign Body

Any sign of airway compromise or potential airway compromise?

Stridor, Voice change, Desaturation, Choking

Partial obstruction

- Maintain in sitting/most comfortable position
- Move to resuscitation bay
- Inform most senior ED doctor in department
- Early call for assistance - Likely to need senior ITU/anaesthetics input & senior ENT
- Lateral neck x-ray may be indicated

Total obstruction

- In event of deterioration use ALS choking algorithm (back slaps, abdominal thrusts).
- In event of cardiac arrest ALS algorithm with early laryngoscopy.
- Consider McGills forceps if FB visible
- Can't intubate & can't ventilate – Surgical Cricothyrotomy

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Respiratory FB

- If compromised please see treatment algorithm above

Presentation

- High index suspicion needed as sometimes no choking history
- Consider if acute onset of respiratory compromise or wheeze
- Ongoing coughing
- Patients often present with secondary infection

Examination

- Examination is often normal. Other findings include stridor, wheeze, decreased breath sounds and asymmetrical chest wall movement.

Imaging

- Image all suspected Foreign Body aspirations -PA Chest x-ray
- Up to 50% of patients who have aspirated will have a normal CXR
- Air trapping from radiolucent foreign bodies can be very subtle –discuss with radiologist if any concerns.

On-going care

- If x-ray is abnormal **OR** if continued suspicion of respiratory foreign body then admit patient under medical team for respiratory review. It is not unusual to perform CT or bronchoscopy on these patients as retained FB can cause morbidity and mortality.
- Even if there are no on-going symptoms or signs and the x-ray is normal, there is still a chance of FB aspiration. If discharging home then advise to return if any chest infection or worsening symptoms.

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Ingested FB

Special Circumstances

- For batteries, objects larger than 2 ½cm, sharp objects (including some fish bones) and magnets see special circumstances below

Is the FB Radio-opaque?

- If the foreign body does not show up on x-rays then imaging will not change your management.
    a. Decide if the foreign body can be differentiated from soft tissues on an x-ray– whilst metal and stone are easily visible, plastics, glass and bones can be difficult or impossible to see. Wood and food boluses normally cannot be differentiated from soft tissues. Some dentures cannot be seen on x-ray.
    b. If you are unsure if an object is radio-opaque the default position is to perform an x-ray.

X-ray choice:

- PA chest x-ray - Standard view showing oropharynx to the base of the stomach
- Lateral neck soft tissue - In radiolucent objects thought to be lodged in the throat or upper oesophagus this view may be obtained in addition to or instead of the above film.
- Abdominal x-ray - If acute obstruction suspected. For monitoring passage of batteries.

FB in Oesophagus: Refer

- Typical clinical presentation is the acute onset of dysphagia or complete inability to swallow saliva
- For batteries, objects larger than 2 ½cm, sharp objects (including some fish bones) and magnets see special circumstances below
- X-ray may be useful if object clearly radiolucent but if any doubts treat on clinical suspicion.
- Refer to ENT if proximal oesophagus and to gastroenterology team via acute medical take if mid to lower oesophagus. Also see timings of endoscopy below.
- Food Bolus: If airway not compromised and patient otherwise well trial of slow 1mg IV glucagon may be given in a stable patient with a food bolus. This is off label use and there is little evidence base to these methods [Best Bet]. A small cup of fizzy drink and jumping up and down is an alternative.

FB below diaphragm: Discharge

- Unless they fall into the special circumstances category, generally these will pass harmlessly in 4-6 days.
- For management of lead, copper or other toxicological ingestion please consult Toxbase
- Discharge home
- Return if increased pain, abdominal swelling, melaena or vomiting
- No check x-ray.
- No need to check stools.

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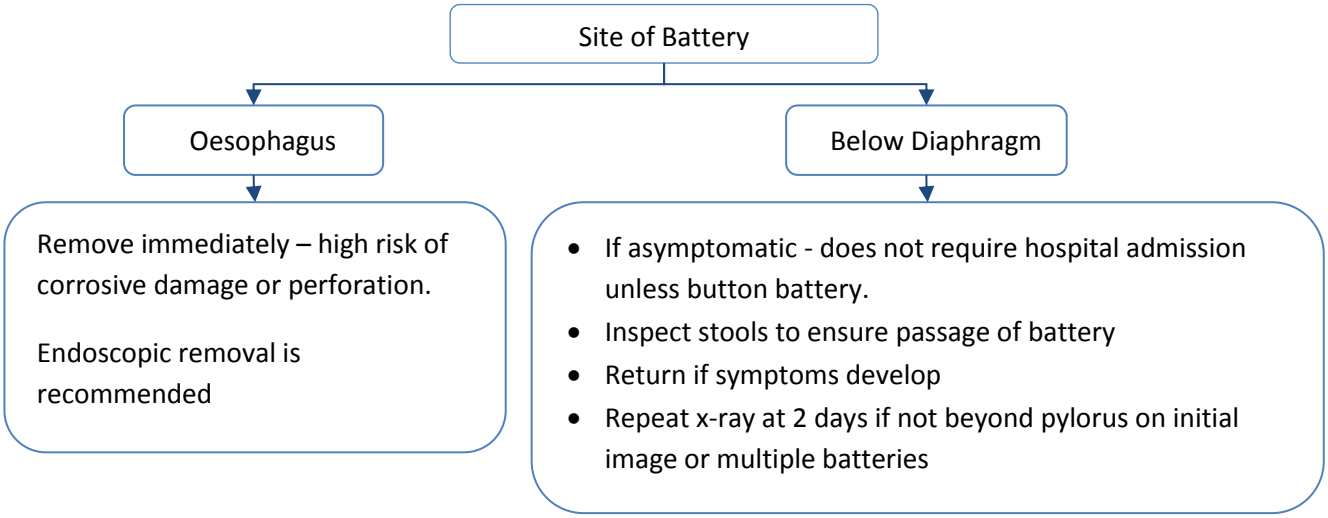
Special Circumstances

Batteries

Button batteries in particular are of great concern and can cause serious harm and even death in a matter of hours. There may even be delayed serious injury. Any button battery in the Oesophagus should be removed as an emergency. Any button battery, which has passed into the stomach, should still be admitted for an observation period and consideration of endoscopy.



Large foreign body

For objects with a **diameter >2.5cm** or **length >6cm** refer to medical team for gastroenterology review and possible endoscopy. Otherwise manage as Ingested FB

Magnets

If more than one magnet has been ingested or if a magnet plus a piece of ferrous metal has been ingested then refer for urgent endoscopy. If single magnet, advise to wear clothing with no metal and treat as standard Ingested Foreign Body.

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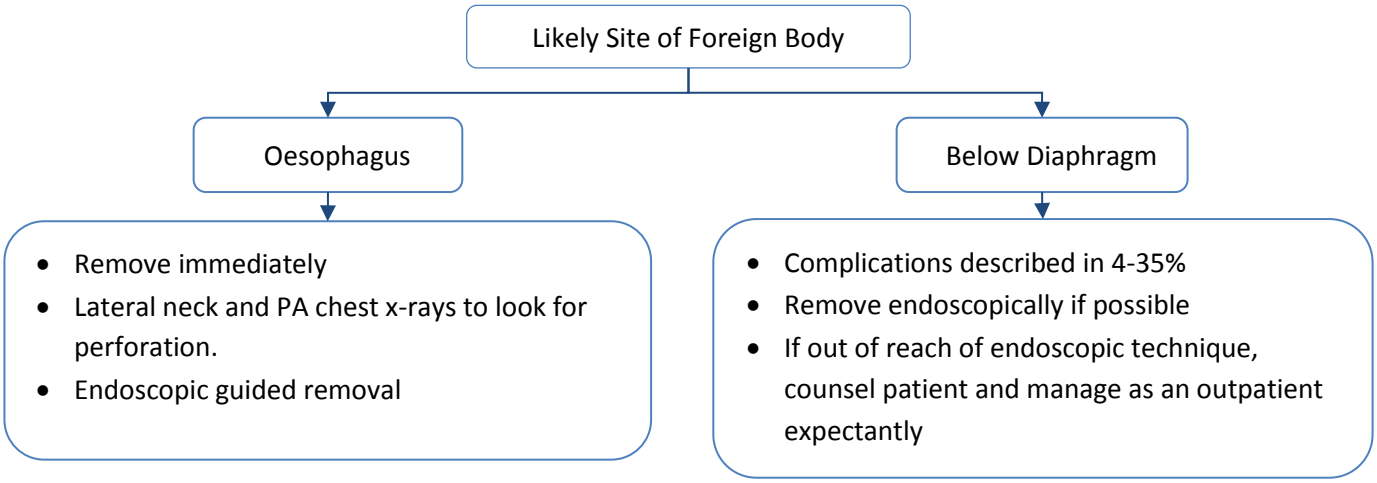
Sharp objects (such as metal wire, glass, some fish bones)



Timing of Endoscopy for Ingested FB's

Emergent endoscopy:

- Oesophageal obstruction (evidenced by an inability to handle oral secretions)
- **Button batteries** in the oesophagus
- **Sharp-pointed** objects in the oesophagus

Urgent endoscopy within 12-24 hours:

- Oesophageal foreign objects that are not sharp-pointed
- Oesophageal food impaction without complete obstruction
- **Sharp-pointed objected** in the stomach or duodenum
- **Objects >6 cm in length** at or above the proximal duodenum
- **Magnets** within endoscopic reach

Non-urgent endoscopy:

- Blunt objects in the stomach that are **>2.5 cm in diameter**
- All **batteries** that are in the stomach in patients without signs of GI injury may be observed for up to 48 hours