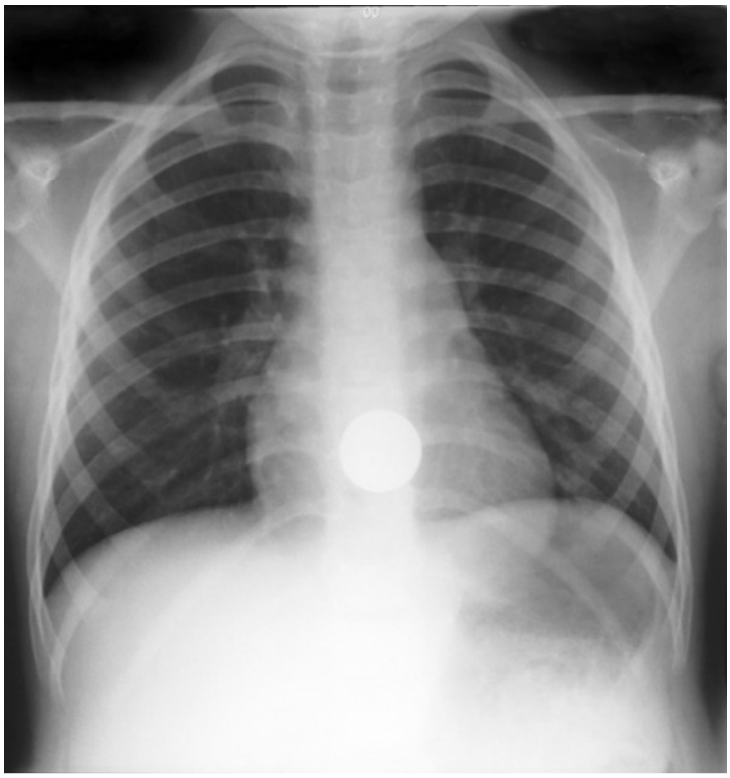
VAQ 2010.1.5 (XR)

A 4 year old boy presents to the ED following a choking episode at home 30 mins previously.
An X-ray is performed.



a. Describe and interpret his X-ray (30%)
b. What factors would determine your further management (70%)

This radiograph shows a midline radio-opaque foreign body, most likely a coin, likely to be lodged in the distal oesophagus. Although it does not have the typical concentric ring appearance of a button battery, this is another possibility as well as other metallic round objects. This has the potential to cause obstruction with potential for vomiting, aspiration, mucosal necrosis and perforation, and destructive injury in the case of button battery degradation. It will need urgent removal under appropriate anaesthesia in a suitable unit if symptomatic or button battery ingestion is a possibility.

CXR

- metallic **circular radio-opaque foreign body**
  - in the course of oesophagus (i.e. **midline**) just above diaphragm
  - no details (e.g. button battery concentric ring) visible
- lung fields clear
- normal heart size
- prominent gastric air
- no 'medical hardware'

Consistent with coin / button battery / metal round or spherical object in distal oesophagus
- unlikely extracorporeal artefact in context of clinical history

Factors determining management

History
- 4yo may or may not be able to give some history but unlikely to be reliable
- recent play with coins, battery, other similar objects (timing of ingestion)
- exposure to button battery (suggest more prompt need for removal)
- any pre-existing lesion (e.g. fistula repair, stenosis)

Examination
- respiratory distress, work of breathing (unlikely with distal oesophageal FB)
- drooling, vomiting, spitting (suggest obstruction and airway threat)
- fever, tachycardia, systemic upset (suggest prolonged FB presence and possible perforation)

Radiography
- lateral chest radiograph may delineate between button battery and other FB (i.e. coin)

Facilities
- paediatric anaesthesia / gastroenteroscopy service location
- this hospital / referral centre
- may require retrieval and consideration of definitive airway for transfer

Parental preference
- consider private referral if suitably prompt review and management possible
  - (prefer not to transfer to another hospital if local facilities)

Blunt objects impacted at the lower oesophageal sphincter (other than button batteries)
- in asymptomatic patients can be observed for up to 24h for spontaneous passage.

Endoscopic removal is required for
- button battery ingestion
- failure to progress >24h in asymptomatic patients
- symptomatic patients

If obstruction
- consider definitive airway

If infection / perforation suspected
- broad spectrum antibiotics

If suitable anaesthetic and gastroscopy services not available at hospital
- consider transfer +/- definitive airway