Dane Horsfall Cabrini - Monash Practice SAQ 2025.1:

SAQ (12 Marks, 6 Mins)

A 3 year old male has presented with a history of an ingested foreign body. They are comfortable, talking normally and is in no distress. His vital signs are all normal.

A.In addition to button batteries, list four (4) high risk ingested foreign bodies that require emergent removal. (4 marks)

1. ___
2. ___
3. ___
4. ___

B.List three (3) common sites of foreign body impaction within the oesophagus. (3 marks)

1. ___
2. ___
3. ___

C.List two (2) features on chest X-ray that may help identify a button battery. (2 marks)

1. ___
2. ___

Chest X-ray confirms a button battery in the oesophagus. You have made plans to transfer the patient to theatre for endoscopic removal, this is delayed for 60 minutes

D.State one (1) oral agent that may have a role in reducing damage to the oesophageal mucosa pending endoscopic retrieval. (1 marks)

___

E.List two (2) mechanisms by which button batteries can cause necrosis in the oesophagus. (2 marks)

1. ___
2. ___

Answers:

SAQ 2

A.
- Multiple magnets or magnet plus metallic object
- Sharp or pointed objects (e.g. fish bone, pins or needles)
- Lead-containing objects (e.g. fishing sinker, curtain weight or air rifle pellet)
- Organic toxic material, plants, medication patches
- Large objects (>6 cm long and/or >2.5 cm wide)
- Superabsorbent polymers
- Multicomponent objects may break apart and progress separately in the gastrointestinal tract (e.g. Toys with lights, motors and batteries) and may require removal
- Failure to pass into the stomach for >24 hours
- Coin at the level of cricopharyngeus muscle

0.5 Iron tablets usually not required to remove unless potentially toxic dose and WBI failed/impractical
Dishwashing capsule?

Not accepted:
- Large and wide
- Alkali's too vague

B.
- upper esophageal sphincter, Cricopharyngeal sling / thoracic inlet /C6 / between the clavicles
- Aortic arch
- Left main stem bronchus
- Distal oesophagus/ T10 / lower oesophageal sphincter

Not accepted:
- aortic knot area
- oesophageal junction

C.
- Double ring or halo rim appearance on PA, ring of radiolucency just inside the outer edge of the object for the BB.
- "Step off" "Bilaminar" or central bulge appearance on lateral view for the BB, although this can be difficult to appreciate if oblique or with newer, thinner Lithium batteries.

D.
- Honey
- Sucralfate

E.
- **Liquefaction necrosis(main mechanism)** from current causes hydrolysis of water generating alkaline corrosive hydroxide ions at the negative pole leading to tissue liquefaction necrosis
- Leakage of toxic battery contents potassium hydroxide and mercuric oxide
- Direct pressure

0.5 electrical current

Not accepted - thermal injury

Comments:

Generally well done

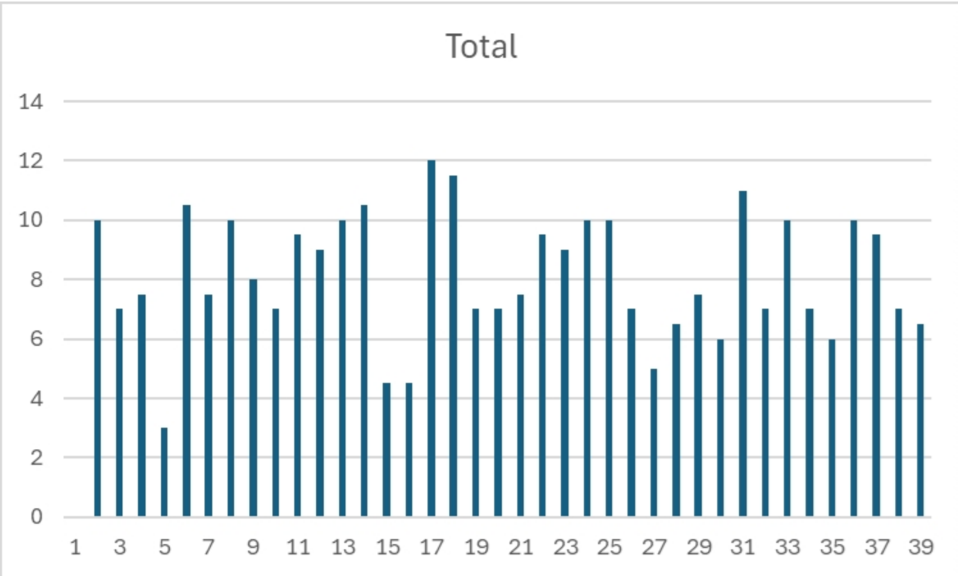
Some vague answers – need to be precise (consultant level) with objects, anatomy of oesophagus, key ways to tell on xray if its button battery and mechanism of injury

Results:

38 candidates

Cut score >=8/12

Pass 18 (47%), Failed 20



Reference:

https://www.rch.org.au/clinicalguide/guideline_index/Foreign_body_ingestion/

https://litfl.com/button-battery-update-3-0/#:~:text=Hydroxide%20production%20starts%20immediately.,location%20where%20it%20is%20lodged.