Button Battery Ingestion Post Op Management

dell children's Ascension

Inclusion Criteria: Stable Patient undergoing esophagoscopy for esophageal or gastric button battery removal.

Exclusion Criteria: Unstable Patient, Active Bleeding with Hx of Battery Ingestion

Esophageal button battery injury with necrosis or ulceration (grade 2[α] or above)

No

- Observe overnight on liquid diet.
- Advance in AM to soft.
- Follow up in 7 days to check for symptoms.
- Seek Emergent Care if dysphagia, drooling, chest pain, hematemesis or fever occur.

Yes

- Admit to ICU
- 2 LB IV
- NPO
- IV Antibiotics
- Acid Suppression
- Blakemore or esophageal balloon to bedside.
- Thoracotomy Tray to Bedside
- Type and Cross
- Have PBRC's Available

- CTA (MRI) to look for area of inflammation and structures at risk.
- May be more than one.[1]
- If Normal: Consider Reimaging 3-7 Days

α:
Zargar Classification[6]
Grade 0: Normal Mucosa
Grade I: Edema and erythema of the Mucosa
Grade IIA: Hemorrhage, erosion, blisters, superficial ulcers.
Grade IIB: Circumferential lesions.
Grade IIIA: Focal deep gray or brownish-black ulcers.
Grade IIIB: Extensive deep gray or brownish-black ulcers.
Grade IV: Perforation

Aorta or pulmonary vessels

- Consult CV Surgery
- CTA (or MRI) q 1-7 days until inflammation is receding.[1, 2, 4]
- If sentinel bleeding occurs, consider emergent thoracotomy with CV[1] vs. CT Angiogram for localization of Bleeding pre-op evaluation.

Spine

- Consult Neurosurgery
- Check MRI in 7 days to assess for progression or resolution of inflammation.

Airway or Recurrent Laryngeal Nerve

- Consult ENT.
- Laryngoscopy and bronchoscopy now and q 5-7 days or if stridor, aspiration, cough develop.
- Fistulas may develop over first few weeks.

- Esophagram within 24 hrs of Post Op
- Place NJ under flouro if any abnormality noted and easy passage.
- If NJ not possible, will need TPN with PICC/Central Line.

Normal Esophagram

- Clear liquid diet (x 24-48h)
- Advance to soft if no other areas of concern from CTA.
- Consider repeat CTA at 2-7 days if any abnormality noted on initial CTA.

Esophagram: Mucosal abnormality but no perforation

- NPO.
- Repeat esophagram or endoscopy at 4 days.[3]
- Start NJ feeds.

Esophagram: Perforation

- Continue NPO.
- Consider chest tube vs thoracoscopy if pleural communication.[5]
- Start NJ feeds.
- Consider GJ

Marked Improvement

- Start clear liquid diet and advance as tolerated.
- Consider 4-6 wk follow up esophagram to look for stricture.[4, 5]
- Repeat cross sectional imaging (CT vs MRI) as dictated by structures at risk noted above

No improvement or worsening injury

- Continue NPO
- Repeat esophagram or esophagoscopy until injury is improving.
- Repeat cross sectional imaging (CT vs MRI) as dictated by structures at risk noted above

No progression of associated vascular or airway injuries

Progression of associated vascular or airway injuries

- Consider G-Tube/GJ Tube
- Consider removal of NJ
- Repeat cross sectional imaging (CT vs MRI) as dictated by structures at risk noted above

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