CLINICAL PATHWAY:

Esophageal Button Battery Clinical Management Algorithm

THIS ALGORITHM SERVES AS A GUIDE AND DOES NOT REPLACE CLINICAL JUDGMENT.

Patients from home, or outside hospital, with suspected or known button battery ingestion:
If >12 months old and ingested possible button battery within prior 12 hours:
- Give honey 10 ml q10 min PO
- Do NOT delay transport to ED to give honey
- Call poison control for additional guidance (888) 222-1222

Inclusion Criteria:
- Patient with known or suspected button battery ingested presents to CT Children's ED *OR*
- On-call or ED physician receives call from a referring facility about a patient with known or suspected button battery ingestion (*arrange transport via ground or Life-Star, whichever is faster*)

Reference:
National Capital Poison Center Button Battery Ingestion Triage and Treatment Guideline

Emergency Department Management
- Determine size and location of button battery
- Obtain PA/lateral CXR
- Keep NPO
- Provide oral suctioning as needed

Button battery identified in the esophagus on CXR?

No → Proceed with appropriate evaluation and treatment per the ED

Yes

Perioperative Management:
- Call 8-8888 and inform operator to activate **CART - Button Battery Team.** Provide the following: unit, room #, extension, name of attending activating the team.

*Acetic acid 0.25% in 250mL bottles are kept in the CT Children's pharmacy. Call to request this at 5-9935.

OR Team will prepare room with rigid and flexible scopes, retrieval equipment, notify pediatric anesthesia team, and obtain Acetic acid solution from CT Children's Pharmacy*

ENT, pediatric GI, and pediatric surgery teams will respond. First team to arrive will transport patient to the OR without delay for button battery extraction.

Intraoperative Management:
- Endoscopic removal with evaluation for esophageal damage
- If no evidence of esophageal perforation, flush with 50 – 150 mL of sterile 0.25% acetic acid
- For prolonged button battery exposure (>24 hours) or severe esophageal damage, perform lateral neck x-ray in the OR to evaluate for retained metal fragments. If fragments are present, flush and debride as necessary

Evidence of esophageal perforation:
- DO NOT place an NG tube
- Consider placement of CVL +/- laparoscopic G-tube

Significant esophageal damage:
- Place NG tube with endoscopic guidance
- Consider placement of CVL +/- laparoscopic G-tube

No significant esophageal damage:
- Do not place NG tube

Post-Operative Management:
Per primary team (may vary depending on clinical situation)
- Admission location (PICU v med-surg) to be made on a case-by-case basis
- Continuous cardiorespiratory monitor
- Begin D5NS w/20 mEq KCl/L at maintenance
- NPO initially; diet advancement per primary team
- Obtain esophagram prior to discharge (timing of study per primary team)
- Consider repeat MRI or CT scan in 5-7 days to assess extension of injury
- Call National Button Battery Ingestion Hotline at 800-498-8666 to report the case

Discharge Criteria:
Tolerating PO without need for IVFs, follow up imaging completed, low risk of acute complication
Discharge Instructions:
Follow up appointment(s) per primary team

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