Emergency Department Guideline
Esophageal Foreign Body, Bougienage

Inclusion criteria:
- Patient who presents with:
  - Concern for a swallowed foreign body lodged in the esophagus

Triage considerations:
- If evidence of airway compromise, triage level 1, notify MD immediately
- Keep patient NPO
- If stable patient with credible history of swallowed radio-opaque foreign body, consider ordering x-rays to assess placement:
  - 2 view CXR
  - 1 view abdominal x-ray
- If patient is transferred in from outside facility with diagnosis of esophageal coin, may order 1 view CXR to confirm that the coin is still in place

Laboratory studies:
- Rarely indicated

Imaging:
- Obtain and review CXR and AXR as needed to confirm esophageal location
- If patient was transferred in with diagnosis of esophageal coin, check 1 view CXR to confirm still in place
- At least one x-ray should include a lateral to confirm that the object has a fixed thickness. A narrower rim around the edge on lateral view raises concern for it being a button battery rather than a coin. This requires immediate GI consultation.
- Esophageal foreign bodies are generally oriented with the round face forward. An end-on appearance on PA CXR raises concern for tracheal location, requiring immediate ENT consultation. Discuss with radiology if unsure.

Medications/interventions:
Esophageal bougienage
- Patient must meet ALL of the following criteria:
- Age over 1 year
- Radiographic evidence of a single esophageal coin (contraindicated for foreign bodies other than coins)
- Witnessed ingestion within 24 hours
- No previous esophageal or GI anomalies or surgeries
- No respiratory distress

- There is no absolute age cutoff. However, published reports have shown decreased success in younger patients. Use with caution under 12 months of age.

**Preparation**
- Engage Child Family Life Specialist for preparation and distraction if available
- Obtain informed consent from parents
- May consider anxiolysis with intranasal midazolam (0.4 mg/kg IN, 5 minutes prior to procedure)
  - Deeper sedation is contraindicated, to avoid blunting airway protection
- Gather equipment
  - Appropriately sized Hurst dilator
  - Lubricant gel
  - Tape for marking insertion depth
  - Bite block: may use stack of tongue depressors, or 30 ml syringe top cut to ~2 inches with cut edges taped
  - Chux pads
  - Topical anesthetic spray (Benzocaine/“Hurricane”)
- Spray topical anesthetic in posterior pharynx (if desired)
- Measure insertion depth, from tip of nose, to ears, to subxiphoid space; mark planned depth on dilator with tape

**Procedure**
- Seat child in lap of parent or staff member (if parent unable or unwilling)
- Wrap arms in sheet or blanket if necessary
- Instruct holder to “bear hug” child firmly
- Insert bite block over tongue
- Advance dilator into esophagus to measured depth then quickly withdraw

**Follow-up assessment**
- Obtain x-ray to confirm passage into stomach
- If unsuccessful, may retry once
  - If still unsuccessful, consult GI for endoscopy

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*This UMMC Guideline addresses only key points of care for the specific population; it is not intended to be a comprehensive practice guideline. These recommendations result from review of literature and practices current at the time of their formulation. This Guideline does not preclude using care modalities proven efficacious in studies published subsequent to the current revision of this document. This document is not intended to impose standards of care preventing selective variances from the recommendations to meet the specific and unique requirements of individual patients. Adherence to this Statement is voluntary. The clinician in light of the individual circumstances presented by the patient must make the ultimate judgment regarding the priority of any specific procedure or course of action.*

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Consultations:
- GI for endoscopic removal of esophageal foreign bodies that do not meet all criteria for bougienage, or if bougienage fails
- ENT for removal of intratracheal foreign bodies or those with airway compromise

Reassessments:
- Ongoing monitoring for airway compromise
- Repeat x-ray to confirm passage
- Ability to tolerate PO prior to discharge

Differential diagnosis:
- Esophageal foreign body
- Tracheal foreign body

Discharge or Admission criteria:
- PICU
  - Evidence of perforation or significant airway compromise
- Inpatient floor
  - Severe pain or ongoing inability to tolerate PO
- Discharge home
  - Most cases

Quality measures:
- All criteria met for bougienage cases

References: