Management of Magnet(s) in GI tract**

"If object is at OR above clavicles consult ENT"

- Obtain history
  - Known magnet ingestion
  - Unexplained GI symptoms with rare earth magnets in environment
- Obtain an abdominal x-ray. If magnets are present on flat plate, obtain lateral x-ray
- Determine single versus multiple magnet ingestion. Consult pediatric GI if symptomatic call pediatric surgery

**Parental education:
- Remove any magnetic objects nearby
- Avoid clothes with metallic buttons or belts with buckles
- Ensure no other metal objects or magnets are in the child environment for accidental ingestion

**Within the stomach or esophagus**

- Option 1: Consider removal if patient at increased risk for further ingestion
  - Follow serial x-rays as outpatient
  - Educate parents
- Option 2: Follow serial x-rays as outpatient and educate parents

**Beyond the stomach**

- Consider removal if possible.
- Follow with serial x-rays as outpatient
- Educate parents
- Confirm passage with serial x-ray
- If delayed progression, may use PEG 3350 or other laxative to aid passage

**Single Magnet**

- Notify ped GI for removal, especially if <12 hours
- If >12 hours until time of procedure, then consult pediatric GI and pediatric surgery prior to endoscopic removal

**Multiple magnet (or single magnet and metallic object)**

- Consult pediatric GI
- Management depends on whether symptomatic or asymptomatic

**Beyond the stomach**

- Symptomatic
  - Refer to surgery for removal
- Asymptomatic
  - If no obstruction or perforation on x-ray, may remove by enteroscopy or colonoscopy or follow with serial x-ray
  - May do serial x-ray in ED to check for progression every 4–6 hours

**No progression of magnets on serial x-rays**

- Admit for further monitoring and serial x-rays or surgical removal
- May use PEG 3350 or other laxative to aid in passage and to help prepare for colonoscopy
- Continue serial x-ray every 8–12 hours. If no symptoms, then proceed with surgical removal or endoscopic removal with surgical backup and GI consultation

**Progression of magnets on serial x-rays**

- Educate parents on precautions and discharge with close follow up
- Confirm passage with serial x-rays
- If at any time magnets do not progress or patient becomes symptomatic, admit to hospital for removal of magnets

1. SSMHealth Cardinal Glennon CPG Home
2. References:
   - Management of Ingested Foreign Bodies in Children: A Clinical Report of the NASPGHAN Endoscopy Committee
3. Key Notes:
   - GI tract Foreign Body (FB) above clavicles: Consult Ear Nose and Throat (ENT) division
   - GI tract FB below the clavicles:
     - Sharp FB in the esophagus: Consult Pediatric Surgery
     - Esophageal food impaction: Consult Pediatric GI
     - Esophageal button battery: Pediatric Surgery (Major Trauma activation)
     - Coins or non-sharp objects in the esophagus: Pediatric Surgery odd date days, Pediatric GI even date days.
     - FB located in stomach or distal including (magnet, sharp, battery): Consult Pediatric GI unless symptomatic, then consult Pediatric Surgery
4. Abbreviations:
   - FB: Foreign Body
   - ENT: Ear Nose and Throat
   - GI: Gastrointestinal
   - PEG: Polyethylene Glycol
   - ED: Emergency Department
   - EPI: Esophageal Food Impaction
   - EOE: Esophagogastroduodenoscopy
   - BB: Button Battery
   - NPO: Nil per oral
   - IV: Intravenous
   - Abx: Antibiotics
   - CT: Computed Tomography
   - MRI: Magnetic Resonance Imaging
5. Guideline Exclusion Criteria:
   - This guideline is not intended for
     (a) Patients with multiple traumas.
     (b) Patients with established SLUCare/SSM Glennon providers (in such a situation - that provider should be notified in addition to following the guidelines)
     (c) Foreign body in the airway or nasal passages.
6. Guideline Inclusion Criteria:
   - This guideline is intended for the pediatric population seen at Cardinal Glennon, SLUCare, contacts from the Access Center or other routes.
7. Background information for Guideline:
   - JPGN. 2015;60: 592-574
8. To see all Foreign Body Algorithms on one page

Owner: CGCH GI
Author: Dr. Jeff Beckman
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