ER-GS COMBINE CONFERENCE

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DISCUSSION

Gastrointestinal Foreign Bodies

- Three categories likely to have GI FB

(1) children(70~80 %, 18-45 months)

(2) psychiatric patients and prisoners

(3) edentulous patients.

- 75% of children having entrapment at the upper esophageal sphincter (UES)
- 70% of adults having entrapment at the lower esophageal sphincter (LES).

Clinical presentation of GI FB

- Oropharyngeal foreign bodies
  - ✓ foreign body sensation
  - ✓ inability to swallow or handle secretions
- Esophageal foreign bodies
  - ✓ Discomfort soon after ingestion
  - ✓ Dysphagia(adult)
  - ✓ tracheal compression and stridor (children)
- Stomach/small intestine foreign bodies
  - ✓ history of swallowing an object
  - ✓ vague symptoms such as fever, abdominal pain, or vomiting.

Diagnostic tool

Table 49-1 Comparison of Imaging Modalities for Detection of Soft Tissue Foreign Bodies

Material	Plain Radiographs	High-Resolution US	CT	MRI
Wood	Poor	Good	Good	Good
Metal	Excellent	Good	Excellent	Poor
Glass	Excellent	Good	Excellent	Good
Organic (most plant thorns and cactus spines)	Poor	Good	Good	Good
Plastic	Moderate	Moderate to good	Good	Good
Palm thorn	Poor	Moderate	Good	Good

Adapted with permission from Chan C, Salam GA: Splinter removal. *Am Fam Physician* 67: 2559, 2003.

MANAGEMENT OF PATIENTS WITH OROPHARYNGEAL FOREIGN BODY SENSATION

Unstable Patients

Airway compromise, drooling, inability to tolerate fluids, evidence of sepsis or perforation, bleeding: Acute interventions and airway management as indicated followed by urgent endoscopy.

Stable Patients

Direct and indirect oropharyngeal examination: If foreign body seen, manual removal.

Fiberoptic nasopharyngoscopy: If foreign body seen, manual removal or consult for endoscopic removal.

Strong history of ingestion of nonopaque foreign body (plastic, toothpick, aluminum) with localizing symptoms: Consider barium swallow. Referral for endoscopy.

If results of the above are negative:

1. Plain films (soft tissue lateral of the neck): If positive, refer for endoscopy.
2. Consider barium or gastrografin swallow: If positive, refer for endoscopy.

If results of the radiographic studies are negative: Discharge with analgesics as needed, and refer for follow-up within 24 hours. At the time of follow-up, endoscopy is indicated for patients who are still symptomatic.

LEVEL OF ESOPHAGEAL FOREIGN BODIES

Level	Pediatrics (%)	Adults (%)
Cricopharyngeus muscle	63-84	24-39
Aortic crossover	10-17	8-10
Lower esophageal sphincter	5-20	63-74

Data from Nandi P, Ong GB: Foreign body in the esophagus: Review of 2394 cases. Br J Surg 65:5-9, 1978; Blair SR, Graeber GM, Cruzzavala JL, et al: Current management of esophageal impactions. Chest 104:1205-1209, 1993; and Schunk JE, Cornell H, Bolte R: Pediatric coin locations: A prospective study of coin location and symptoms. Am J Dis Child 143:546-548, 1989.

complications resulting from esophageal foreign bodies

- Mucosal scratch/abrasion
- Esophageal necrosis (button batteries)
- Retropharyngeal abscess
- Esophageal stricture
- Esophageal perforation, leading to
  - Paraesophageal abscess
  - Mediastinitis
  - Pericarditis/pericardial tamponade
  - Pneumothorax
  - Pneumomediastinum
  - Tracheoesophageal fistula
  - Vascular injuries including aorta-esophageal fistulas

Management of GI FB

- Patients in an unstable condition
- ✓ Treatment includes airway, followed by urgent endoscopy
- ✓ If confirmed perforation → Stabilized patient and OP
- Patients in a stable condition
- ✓ sharp, elongated (>5 cm in esophagus, >6 cm in stomach or small intestine), or multiple in number → refer for endoscopy
- ✓ Most smaller, sharp foreign bodies transit the GI tract without difficulty
- ✓ foreign body is smooth or blunt → endoscope, foley catheter remove, bougienage and sphincter relaxation
- If perforation → OP management

Possibility of penetration

- Less than 1% of ingested foreign bodies cause perforation of the GI tract,15 % to 35% of sharp and pointed objects will cause intestinal perforation.

Foley catheter remove of foreign body

Criteria
- Duration less than 72 hours
- Single, smooth, blunt, radiopaque foreign body
- No history of esophageal disease or surgery
- No respiratory distress
- Availability of fluoroscopy
- Endoscopic backup available

Procedure
1. Barium esophagram to rule out multiple foreign objects, total obstruction, or underlying esophageal disease.
2. Equipment and personnel for airway management in room
3. Patient in head-down position.
4. Pass #12 to #16 Foley catheter nasally or orally under fluoroscopic guidance past foreign body
5. Inflate catheter balloon with 5-10 mL contrast material taking care not to overinflate and compress the esophagus
6. Remove catheter and foreign body under fluoroscopic guidance with steady traction
7. Remove foreign body from hypopharynx with forceps (or by cough reflex)

Complications: vomiting
- Epistaxis
- Foreign body dislodgement into nose
- Laryngospasm
- Hypoxia
- Hyperpyrexia

What we learn form this case

- History taking is important in diagnosing GI FBs
- Abdominal ultrasound may be helpful for some GIFB cases before CT was performed
- Immediate consult GI man or surgeon when GIFBs patients become symptomatic


THANKS FOR YOUR
ATTANTION