Ingestion of Foreign Bodies

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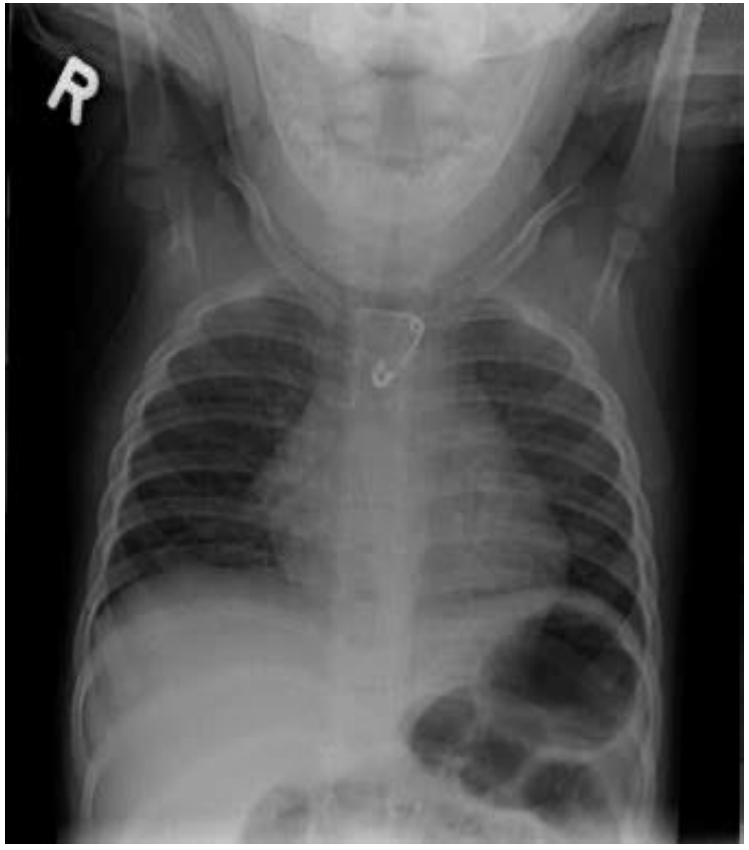
Esophageal foreign body ingestion

- common
- Coin, toys, batteries, needles, straight pins, safety pins screws, earrings, pencils, erasers, glass
- fish and chicken bones, and meat
- asymptomatic
- drooling, neck and throat pain, dysphagia



suspicion of potential complications

- oropharyngeal abrasions,
- crepitus,
- signs of peritonitis

- mediastinitis, aortoenteric fistula, or peritonitis.

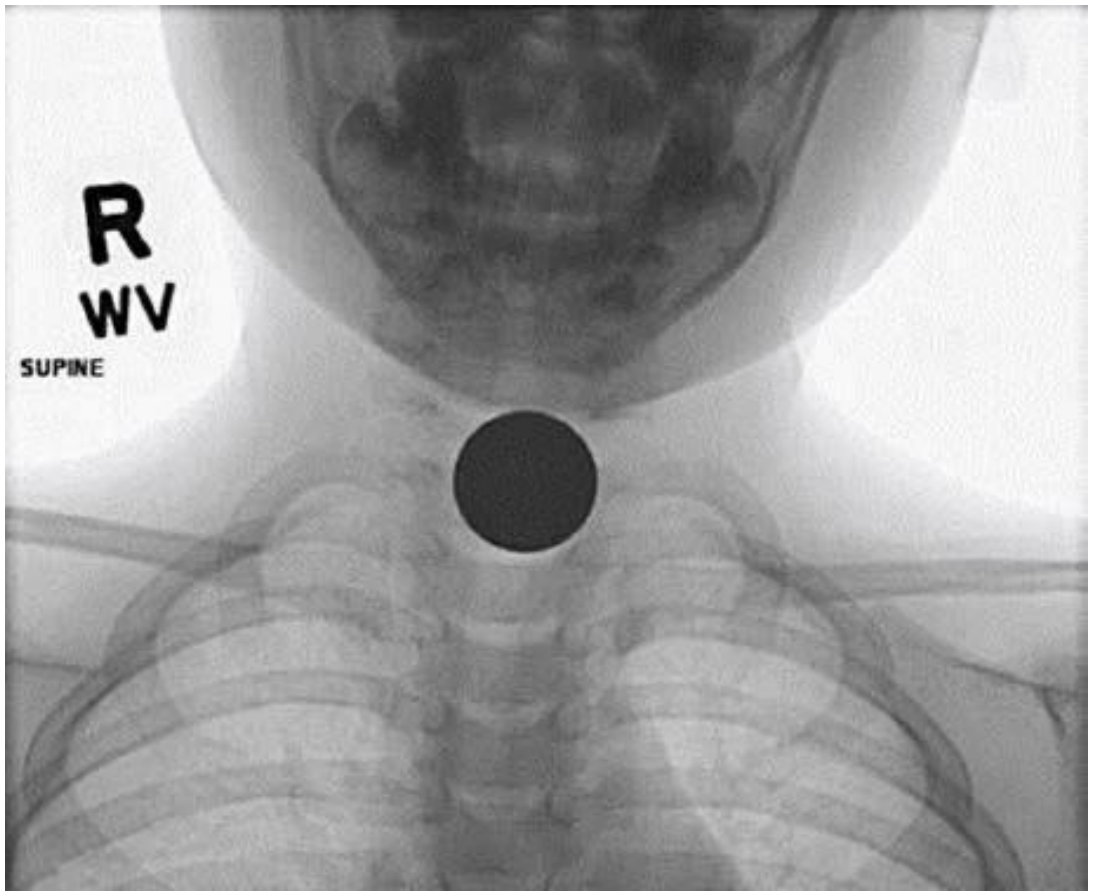
anatomical narrowing

- cricopharyngeus sling (70%),
- the level of the aortic arch in the mid esophagus (15%),
- the lower esophageal sphincter at the gastroesophageal junction (15%),

- esophageal pathology (strictures or eosinophilic esophagitis)
- prior esophageal surgery

Dx

- Radiopaque objects can be detected on anteroposterior (AP) and lateral neck and chest radiographs
- gastrografin esophagram
- esophagoscopy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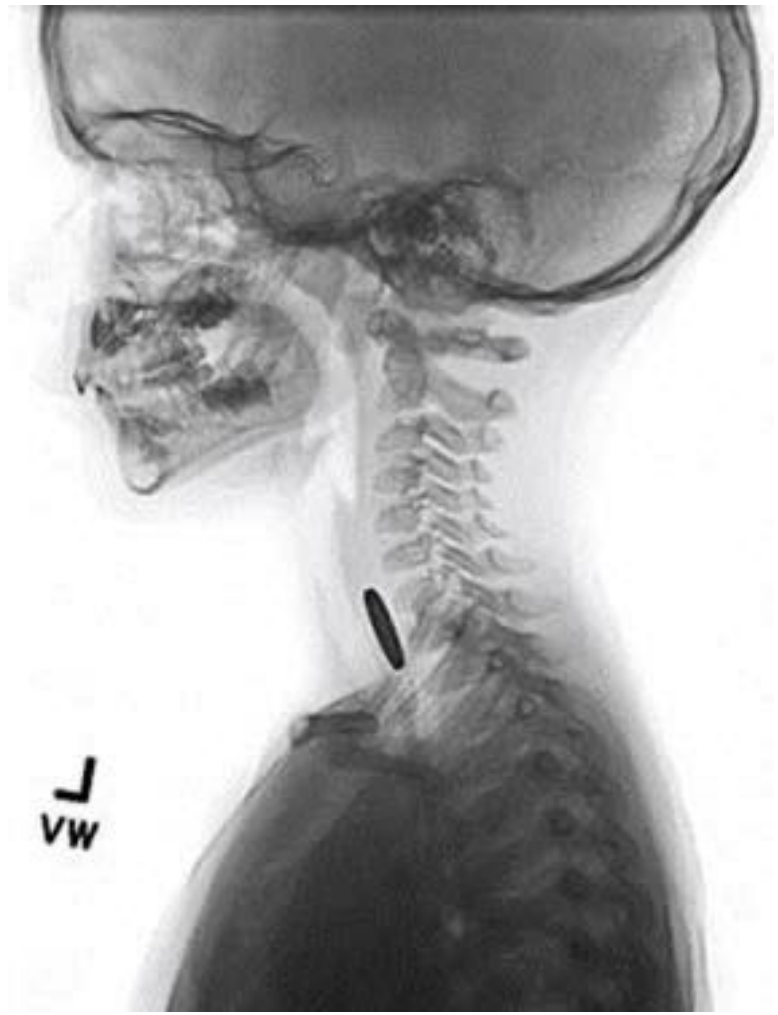
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Rx

- endoscopy (rigid or flexible)
- Foley balloon extraction with fluoroscopy

Gastrointestinal Foreign Bodies

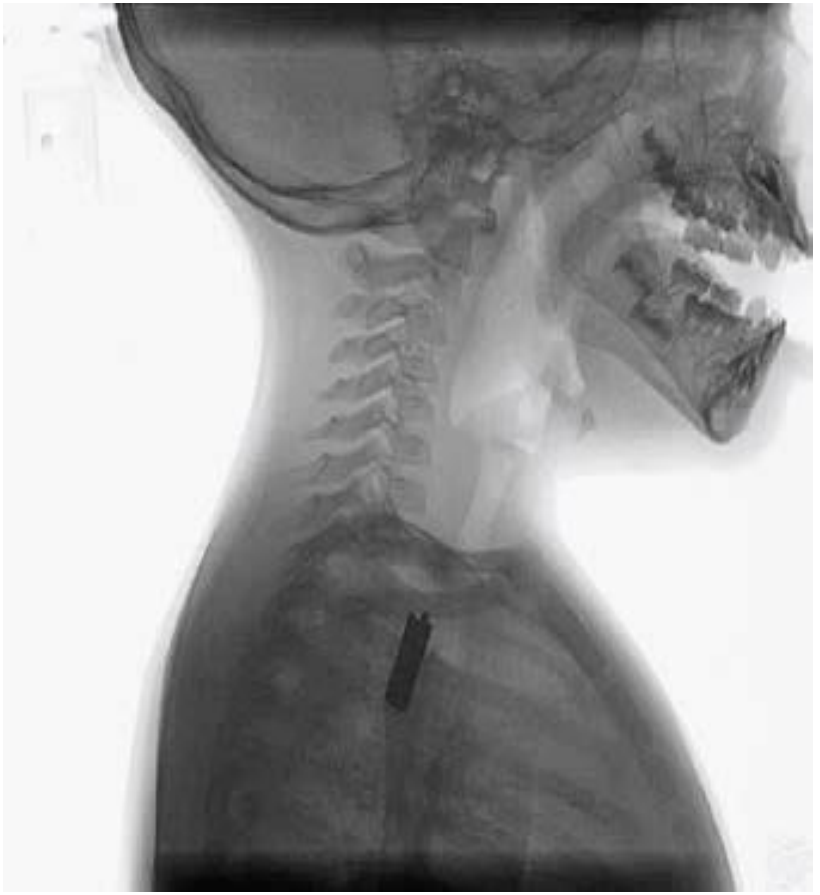
- distal to the esophagus are usually asymptomatic
- Complicated:
  - abdominal pain, nausea, vomiting, fevers, abdominal distention, or peritonitis

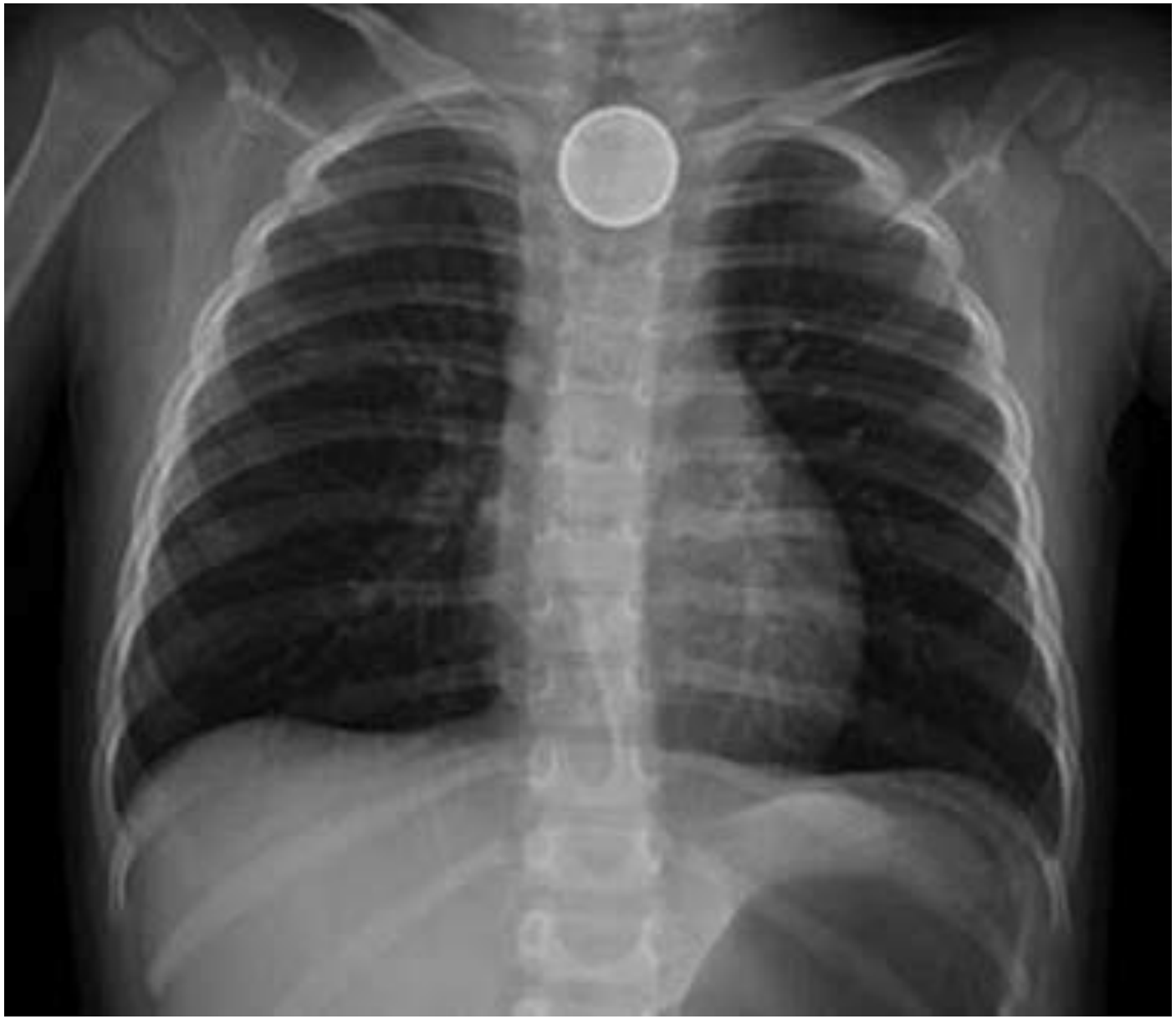
- The majority of FBs that pass into the stomach will usually pass through the remainder of the gastrointestinal (GI) tract uneventfully

- Outpatient
- Prokinetic agents and cathartics have not been found to improve gut transit time and passage of the FB
- repeat abdominal radiograph can be performed at 2- to 3-week intervals.
- Subsequent endoscopy is usually deferred for 4–6 weeks

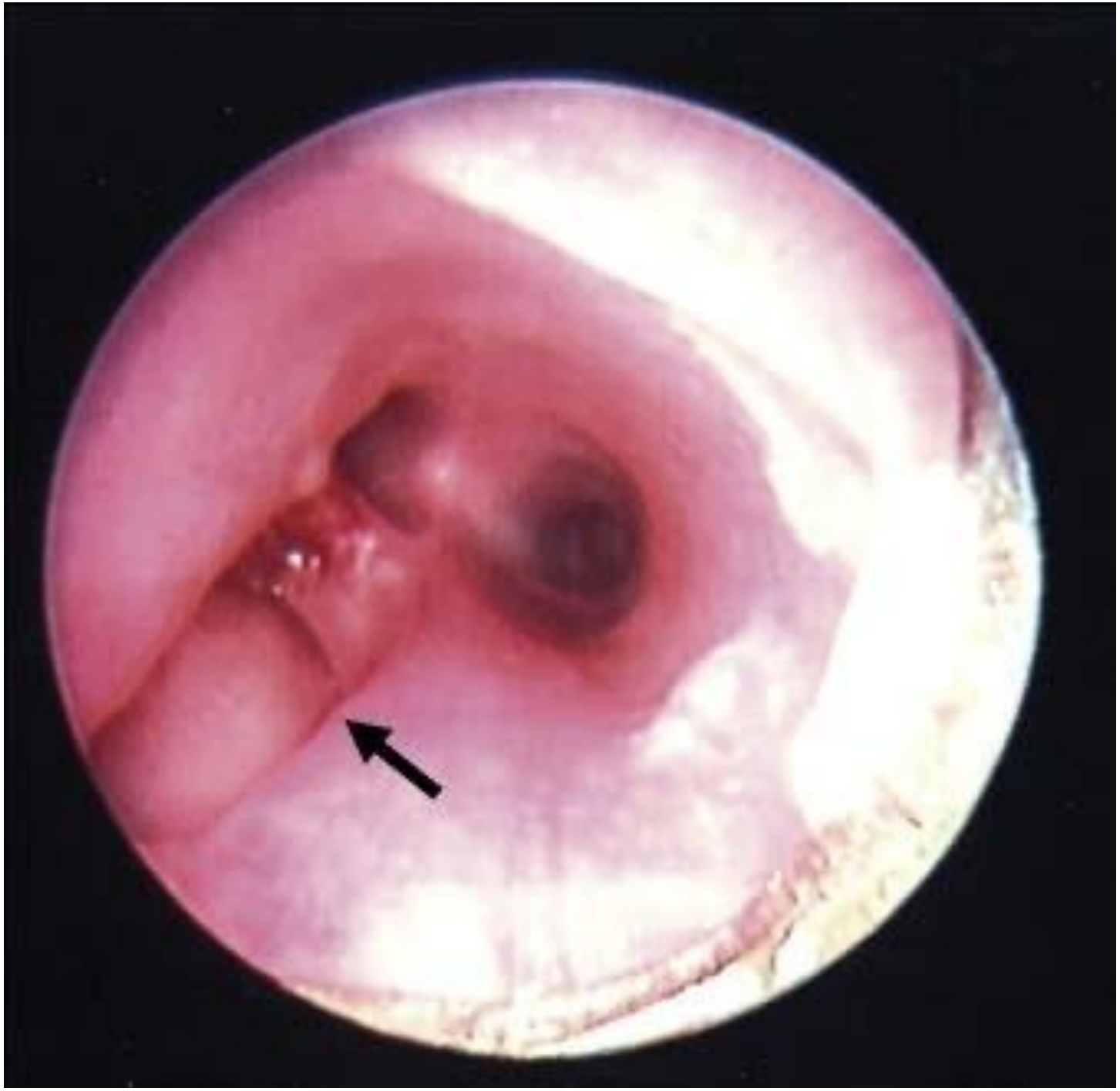
BATTERIES

- Button
- Esophageal batteries increased morbidity
- the tissue injury :
  - pressure necrosis,
  - release of a low-voltage electric current,
  - leakage of alkali solution: liquefaction necrosis
- immediate removal
- diameter >20 mm
  - esophageal impaction and higher grade injury





- Following removal, an intraoperative esophagram may be helpful in identifying a full-thickness injury
- contained perforations can be seen and may necessitate enteral tube feedings
- Early and late complications of esophageal battery impaction include esophageal perforation, tracheoesophageal fistula, stricture and stenosis, and death



Battery

- distal to the esophagus in the GI tract and the patient is asymptomatic, then it can be observed, similar to other GI FB

MAGNETS

- significant morbidity when multiple magnets or a single magnet and a second metallic FB are ingested simultaneously
- 40% of these patients are symptomatic, with the most common symptom being abdominal pain
- Plain radiographs
- multiple magnets may appear to be attached at a single point
- close observation for potential complications

Magnet

- Single magnet ingestion distal to the esophagus can be observed in the outpatient setting similar to other GI foreign bodies
- If multiple magnets in the stomach: endoscopy
- if separated within the GI tract, they may attach to each other and lead to obstruction, volvulus, perforation, or fistula through pressure necrosis
- even if asymptomatic, should be observed as an inpatient with serial abdominal exams and radiographs

- becomes symptomatic: signs of obstruction on the abdominal radiograph, or
- shows failure of the objects to progress in 48 hours,
- then intervention may be warranted.
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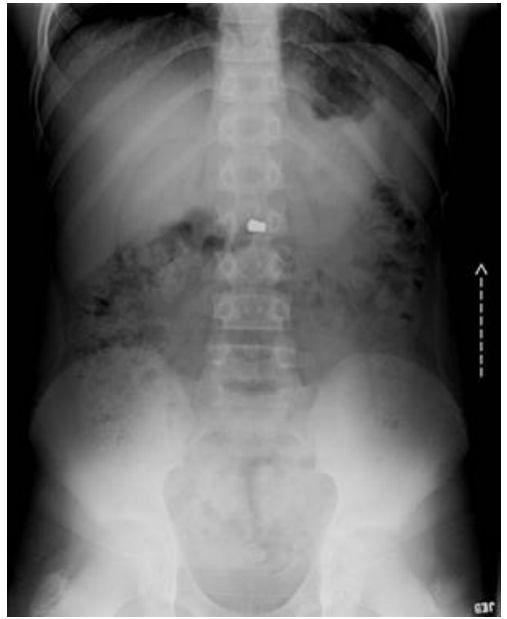
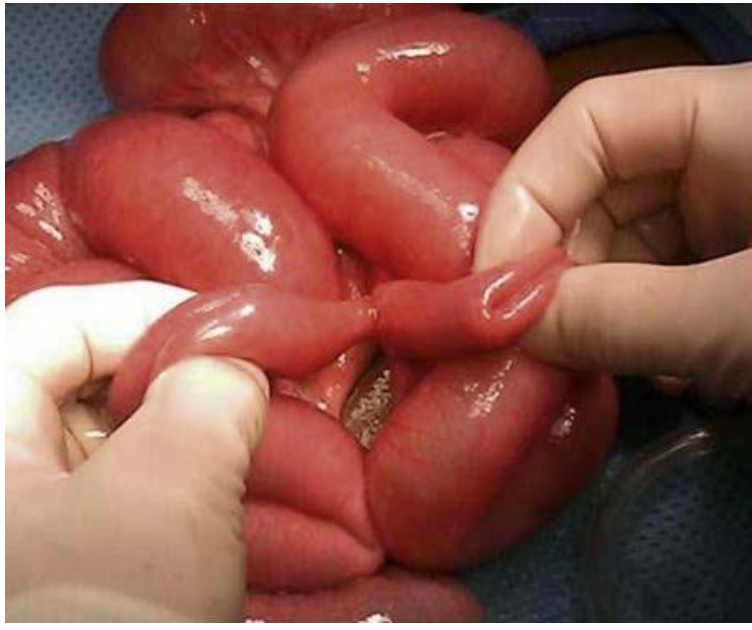
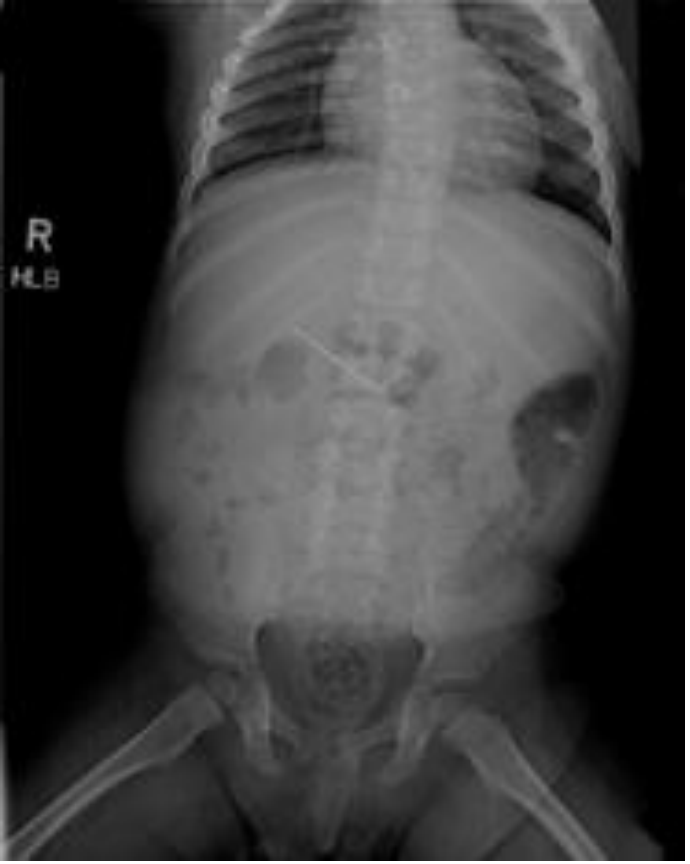




SHARP FOREIGN BODIES

- can cause significant morbidity with an associated 15–35% risk of perforation
- Perforation: occur in narrowed portions or areas of curvature in the alimentary tract, especially the ileocecal valve.
- Smaller objects and straight pins: lower rates of perforation : conservatively managed
- Other objects: endoscopy or closely observed for potential development of complications.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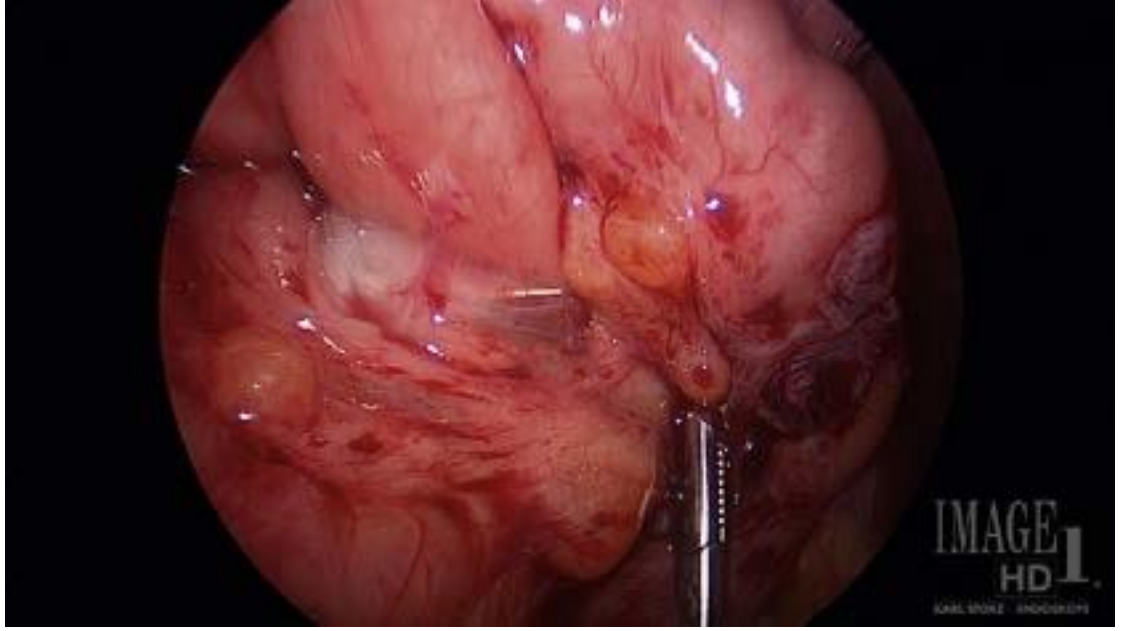
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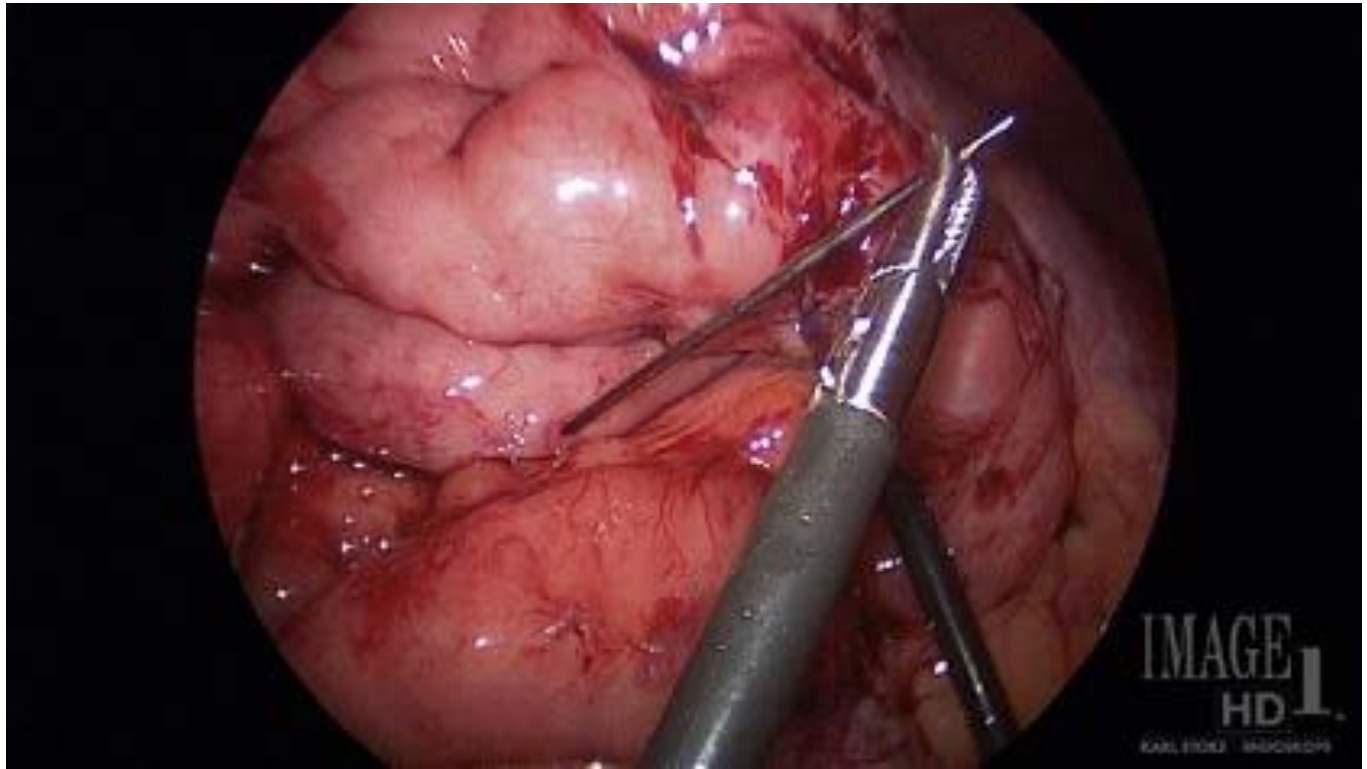
IMAGE1
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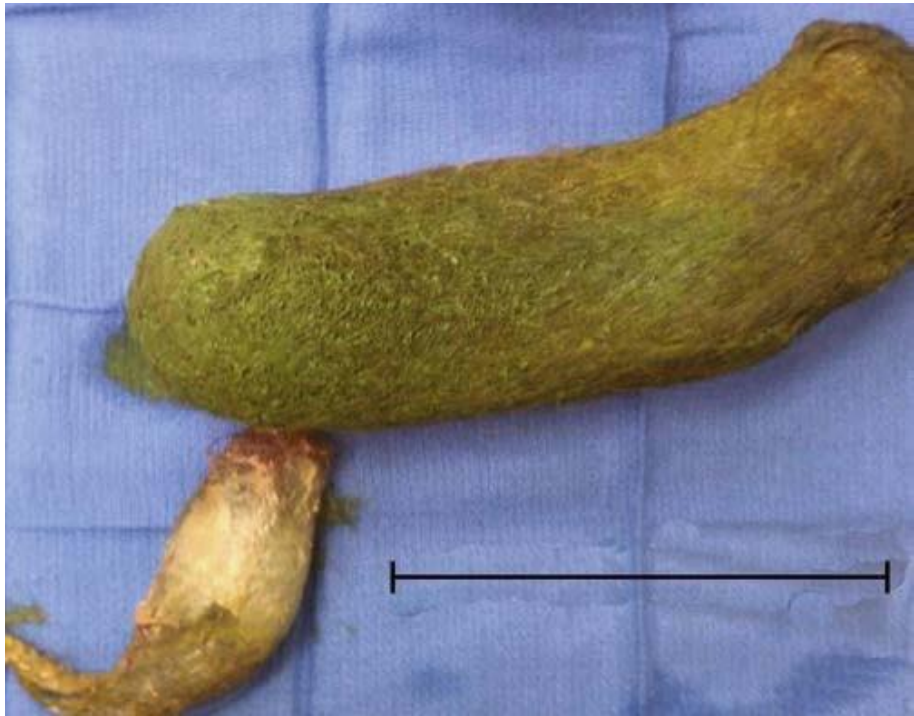
BEZOARS

- gastric outlet or intestinal obstruction.
- lactobezoars (milk),
- phytobezoars (plant),
- trichobezoars (hair)



symptoms

- nausea, vomiting, weight loss, and abdominal distention.

Dx

- plain radiographs, upper GI contrast studies, or endoscopy

- operation is necessary

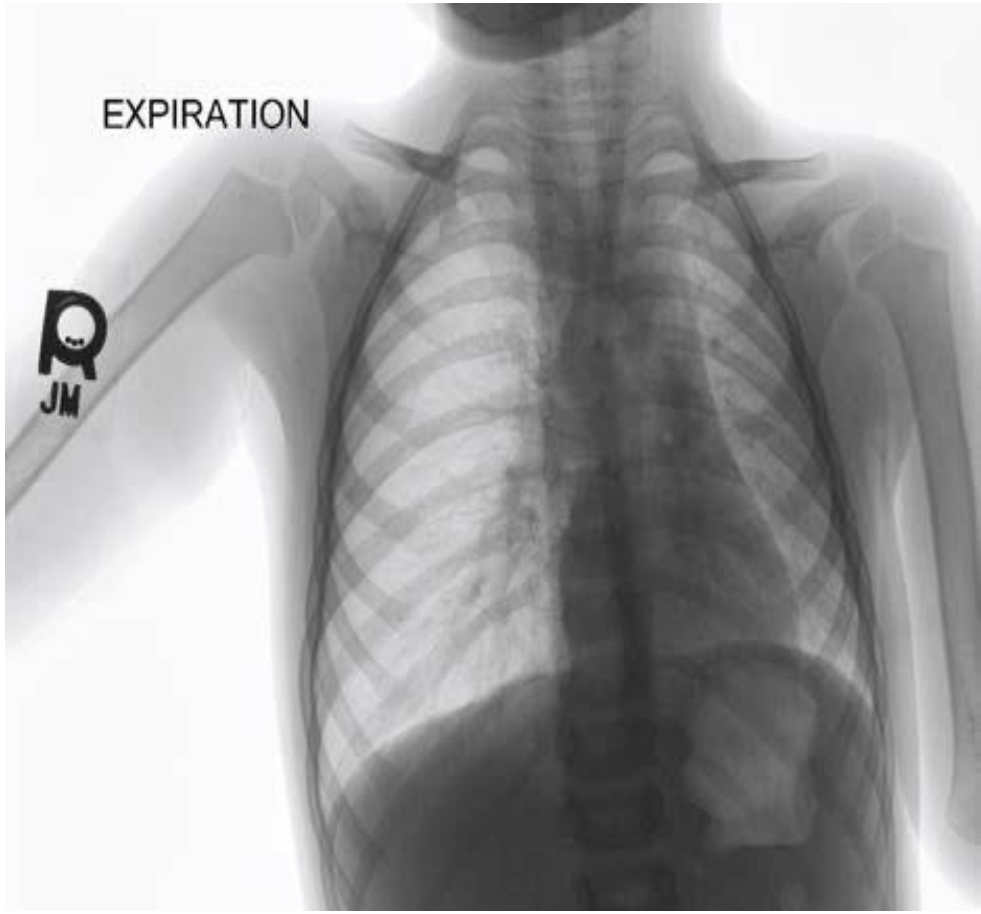
Airway Foreign Bodies

- high index of suspicion
- annual death rates from FB aspiration is significant with estimates ranging from 220 to 2900
- leading cause of mortality from unintentional injury in children younger than 1 year
- sunflower seeds , watermelon seeds

- presenting symptoms include respiratory distress, stridor, and/or wheezing
- FBs may completely obstruct the larynx or trachea producing sudden death
- Chronic FBs often masquerade as respiratory illnesses with persistent cough and atelectasis, recurrent pneumonia, or hoarseness
- strictures, perforation, and bronchiectasis

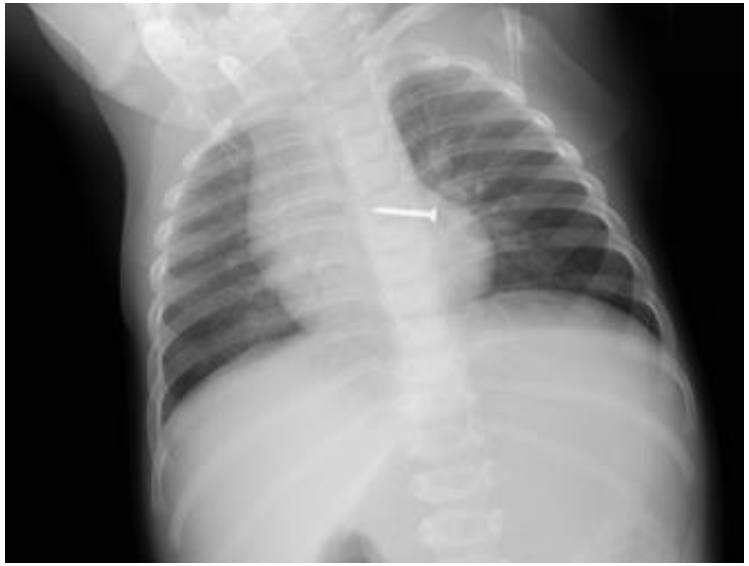
investigation

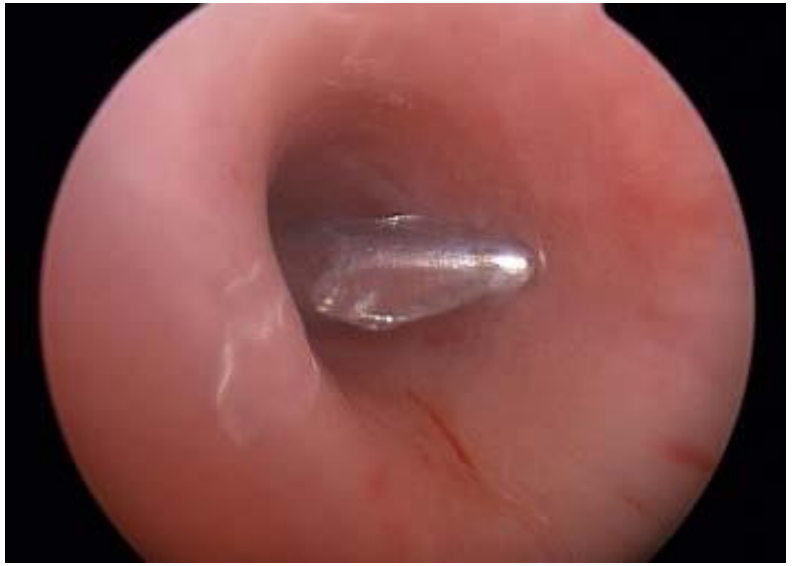
- AP and lateral films of the neck and chest
- inspiratory and expiratory films
- air trapping
- 56% normal chest film within 24 hours
- negative bronchoscopy rate of 10–15%



Rx

- use of the flexible bronchoscope to diagnose a FB followed by a rigid bronchoscopy for removal is a common approach
- **BRONCHOSCOPY**





BRONCHOSCOPY