

A 6-year-old boy with Down syndrome is brought to the emergency department with dry cough, vomiting, and dysphagia. The symptoms have been present for the past 5 days and are becoming progressively worse. His medical history includes intellectual disability, complete atrioventricular canal defect repair, and gastrostomy tube placement. His temperature is 36.7° C (98° F), blood pressure is 100/60 mm Hg, pulse is 88/min, and respirations are 22/min. Pulse oximetry is 97% on room air. Examination shows clear lung fields, normal first and second heart sounds, and grade 2/6 holosystolic murmur at the left sternal border. The abdomen is soft and nontender. Bowel sounds are present. There is no rebound tenderness or rigidity. Chest-x ray findings are shown in the photograph.





Which of the following is the most appropriate next step in management of this patient?

- ☐ A. Computed tomography scan
- ☐ B. Flexible endoscopy
- ☐ C. Laparotomy
- ☐ D. Observation for 24 hours
- ☐ E. Rigid bronchoscopy
- ☐ F. Upper gastrointestinal series

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A. Computed tomography scan [2%]

B. Flexible endoscopy [67%]

C. Laparotomy [1%]

D. Observation for 24 hours [4%]

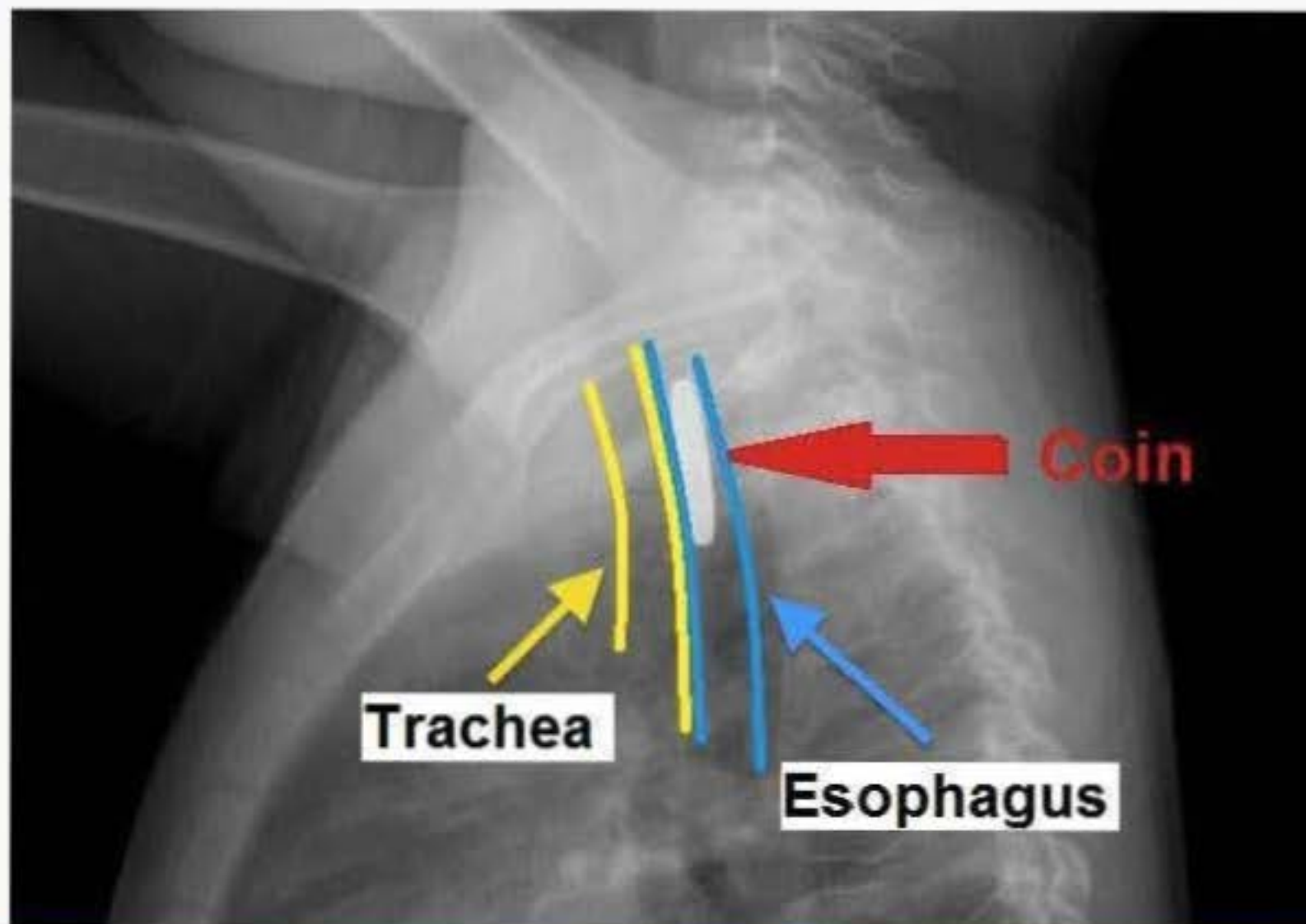
E. Rigid bronchoscopy [21%]

F. Upper gastrointestinal series [5%]

Proceed to Next Item

Explanation:

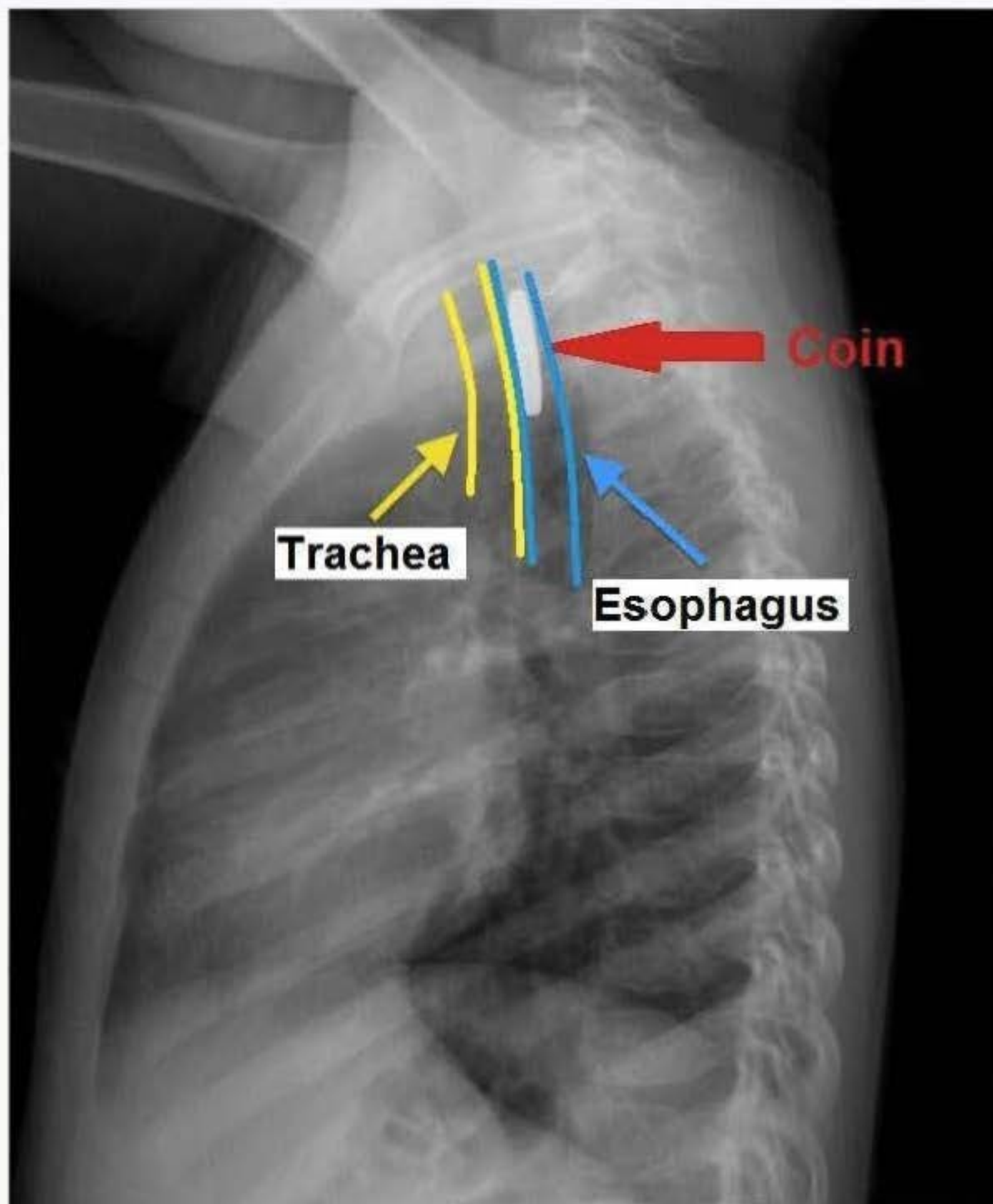
User Id: [REDACTED]



Proceed to Next Item

Explanation:

User Id: [redacted]



Infants and toddlers put almost everything into their mouths and children with intellectual disability are also at risk of this behavior. **Difficulty swallowing, feeding refusal, and**

Infants and toddlers put almost everything into their mouths and children with intellectual disability are also at risk of this behavior. **Difficulty swallowing, feeding refusal, and vomiting** should raise concern for **foreign body ingestion**. Management depends on the object's material, location in the gastrointestinal tract, timing of ingestion, and symptoms. This patient's x-ray reveals a flat, homogenous, radio-opaque object, most likely a swallowed coin, in the upper esophagus. **Coins** are the most common foreign body ingested by children. If a coin is visualized in the esophagus and the patient is symptomatic or if the time of ingestion is unknown, the coin should be removed promptly. **Flexible endoscopy** is the diagnostic and treatment method of choice because the foreign body can be directly visualized and manipulated, and the surrounding gastrointestinal tract can be examined for complications. Rigid endoscopy has a higher risk of esophageal abrasion and perforation and is usually reserved for impacted sharp objects in the proximal esophagus.

(Choice A) When a radiolucent foreign body is suspected and not visualized on x-ray, computed tomography can be considered as the next diagnostic procedure.

(Choice C) Patients who have ingested **batteries**, sharp objects, or multiple **magnets** are at high risk of perforation, obstruction, or ischemia and require preemptive removal. Immediate endoscopy is required if these objects are visualized in the esophagus. Dangerous symptoms such as hematochezia, melena, and severe abdominal pain are indications for surgical removal.

(Choice D) If a coin is visualized in the esophagus and the patient is asymptomatic, the child can be observed for up to 24 hours after ingestion. Because coins lack sharp edges and the metal is not toxic, those that reach the stomach can be allowed to pass spontaneously.

(Choice E) Tracheobronchial foreign body aspiration should be suspected in toddlers with sudden-onset stridor, wheeze, coughing, or dyspnea. Rigid bronchoscopy is the procedure of choice for foreign body aspiration. This patient does not have a foreign body in his airway and bronchoscopy is not warranted.

(Choice F) Upper gastrointestinal series are to be avoided if possible as barium contrast may obscure visualization on subsequent endoscopy. There is also the risk of contrast aspiration.

Educational objective:

Esophageal coins in asymptomatic patients can be observed for up to 24 hours after ingestion. If the patient is symptomatic or the time of ingestion is unknown, the coin should be removed promptly by flexible endoscopy.

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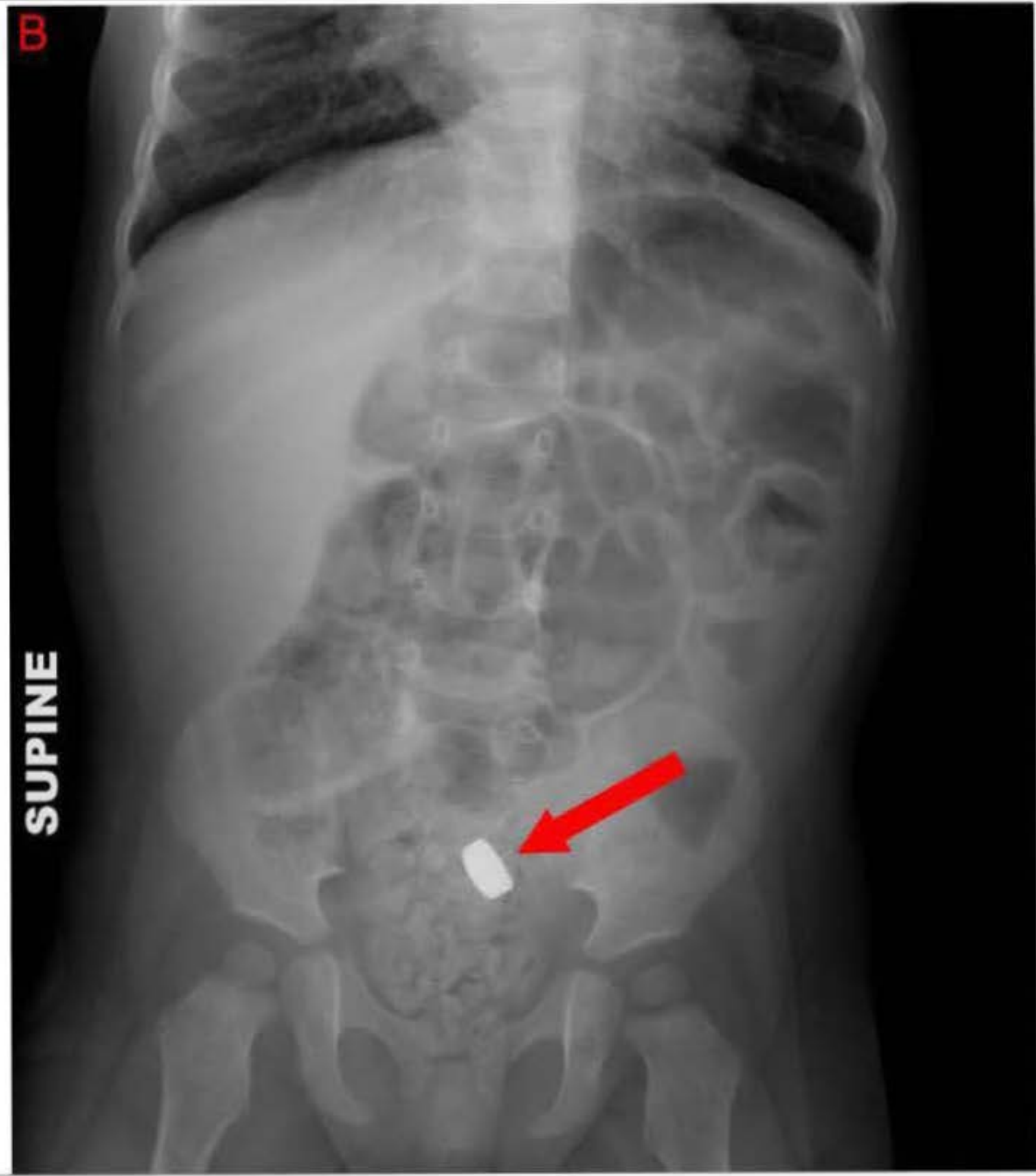
Esophageal coins in asymptomatic patients can be observed for up to 24 hours after ingestion. If the patient is symptomatic or the time of ingestion is unknown, the coin should be removed promptly by flexible endoscopy.

References:

1. [A randomized clinical trial of the management of esophageal coins in children.](#)
2. [Flexible versus rigid endoscopy for treatment of foreign body impaction in the esophagus.](#)
3. [Foreign body ingestion in children.](#)

Media Exhibit

d button battery



Media Exhibit

ingestion

