

Lesson 2 (A): Barium sulfate (1)

Topics

- Properties and applications
- Administration
- Contraindications
- Excretion
- Appearance in X-ray procedures

Properties and applications

Barium sulfate (sulphate) properties

- A white powder
- It is mixed with some additional materials
- The product is mixed with water → Produce a suspension



Barium sulfate properties

- High density
- Radiopaque
- Non-ionic medium
- Low osmolality

Additives to barium sulfate

- Agents to prevent flocculation
- Sweetening, flavoring and coloring
- Preservatives
- Tannic acid to improve mucosal coating

Various forms of Barium sulfate

- Powder
- Liquid
- Tablet
- Paste
- Cream



Applications

- Barium sulfate suspension is used in the digestive tract.
- It is the preferred positive contrast material for radiography and CT scan of the digestive tract.

Administration

Oral administration

- Esophagus
- Stomach
- And/or small intestine

Rectal administration

- Colon
- and/or small intestine

Contraindications

Contraindications

- Previous allergic reactions to barium products
- Obstruction of the colon
- Obstructing lesions of the small intestine
- Pyloric stenosis
- Gastrointestinal tract perforation

Contraindications ...

- Tracheoesophageal fistula
- Inflammation or neoplastic lesions of the rectum
- Extensive colitis
- Recent rectal biopsy
- Neonates

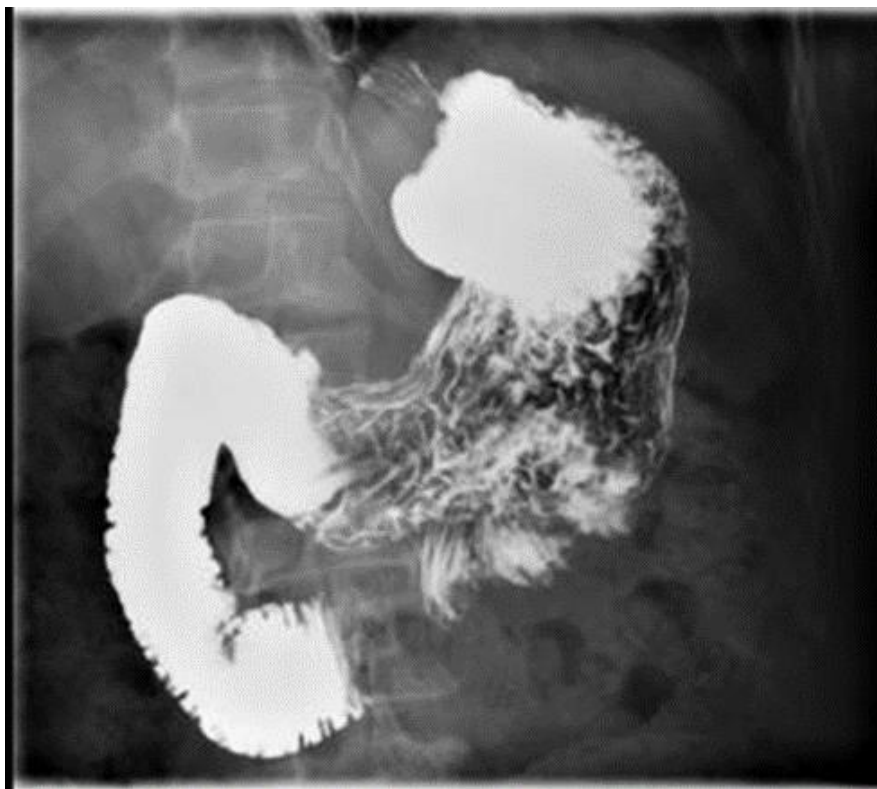
Excretion

Excretion

- Barium sulfate is neither absorbed nor metabolized in patients with a normal gastrointestinal tract and is excreted unchanged in the feces.

Appearance in X-ray procedures

Appearance in X-ray procedures



Appearance in X-ray procedures



Summary

Reference

- Jill M. Widmark, Imaging-related medications: a class overview, Proc (Bayl Univ Med Cent) 2007;20(4):408–417.