

GASTROINTESTINAL BEZOARS

Definition

- Collections or concretions of indigestible foreign material that accumulate and coalesce in the GI tract, usually the stomach

Classification (4 types)

- Phytobezoar: Vegetable matter
- Trichobezoar: Hair or hair-like fibers
- Pharmacobezoar: Medication or medication vehicles
- Lactobezoar: Milk curd
 - Most commonly from infant formula

Epidemiology

- Most common type: phytobezoar
 - **Persimmon**, celery, pumpkin, grapes, prunes, raisins, leeks, beets
 - Large amount of non-digestible dietary fiber
- Trichobezoar
 - Most common in children and young women
 - Associated with mental retardation, psychiatric disorders, and pica
- Pharmacobezoar
 - Antacids, bulk-forming laxatives, vitamin/mineral supplements, extended-release medications, enteric coated medications
 - May result in:
 - Reduced efficacy: active agent is trapped in bezoar
 - Toxicity: Bound agent released in high concentrations

Etiology

- Ingestion of large amounts of indigestible material: Not sole requirement
- Predisposing factors
 - Most common: altered GI anatomy from previous surgery
 - Most common: prior gastric surgery (70-94% of patients)
 - Altered gastric motility
 - Delayed gastric emptying
 - Poor gastric mixing
 - Reduced acid activity
 - Gastroparesis
 - Diabetes mellitus
 - ESRD on hemodialysis
 - Mechanical ventilation

Clinical Presentation

- Most common symptom: vague epigastric discomfort (up to 80%)
- Nausea/vomiting, anorexia, early satiety, weight loss
- Many are asymptomatic

- Large bezoars may result in gastric ulcers from pressure necrosis (up to 25%)
 - Bleeding, pain, or gastric outlet obstruction
- Small bowel bezoars: Mechanical obstruction
 - Most common cause: Trichobezoar (Rapunzel syndrome)
 - May cause jaundice and pancreatitis from obstruction of the ampulla of Vater

Diagnosis

- Physical exam is rarely diagnostic
 - Palpable mass or distension
 - Patchy baldness in patients with trichobezoars
- Plain X-rays
 - Outline of bezoar or obstruction
- UGI series with barium
 - Gastric filling defect
- Endoscopy
 - Gold standard for diagnosis

Treatment

- Conservative management
 - Clear liquid diet
 - Prokinetic agent (metoclopramide)
 - Nasogastric lavage
 - Chemical dissolution (cellulase)
 - Up to 85% successful in small series
- Endoscopic therapy
 - Fragmentation and retrieval via fiberoptic endoscopy
 - Up to 90% success rate
 - Large phytobezoars and trichobezoars may require specialized endoscopic tools for dissolution
 - Electrohydraulic lithotripsy
 - Mechanical lithotripsy
 - Pulsed water jets
 - Laser
- Surgical Removal
 - Indications
 - Failure of conservative and endoscopic therapy
 - Complications
 - Bleeding
 - Obstruction
 - Perforation
 - Gastric bezoars: gastrotomy and removal
 - Small bowel bezoars: enterotomy and removal or resection
 - Bezoars in multiple locations have been reported, so evaluation of the stomach and entire small may be indicated

Outcome

- Recurrence is common unless predisposing factors are changed
 - Avoid etiologic agent
 - Prokinetic agents
 - Psychiatric therapy
 - Periodic endoscopy

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