

# Case Presentation: 38 Year Old Man Presents with Rectal Pain and Bleeding Following Foreign Body Insertion

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# History of Present Illness

38 year old man presented with rectal pain and bleeding after inserting a glass vase into his rectum 12 hours prior. The vase entered further than he was expecting and was “sucked in”; he attempted to retrieve it and was able to remove 2 pieces of broken glass, but this resulted in increased rectal pain and bleeding.

The patient had been afraid to void since the incident occurred and had not urinated in the last 12 hours, which contributed to his discomfort. He last ate 5 hours previously, and had not had a bowel movement since the incident.

# Additional History

No past medical history. History of tonsillectomy, no history of abdominal surgeries.

The patient has never smoked cigarettes and does not currently drink alcohol. He lives with his wife and children.

Family history is noncontributory.

# Examination and Initial Work-Up

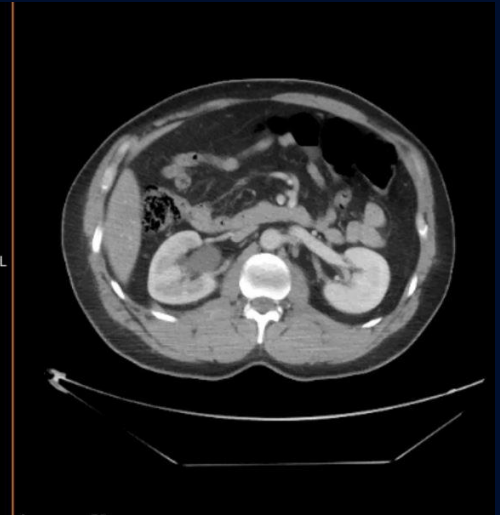
BP 129/66; HR 80; Temp 100.5; RR 16; SpO2 97%

Examination showed abdominal distension and tenderness with guarding and gross blood on rectal exam

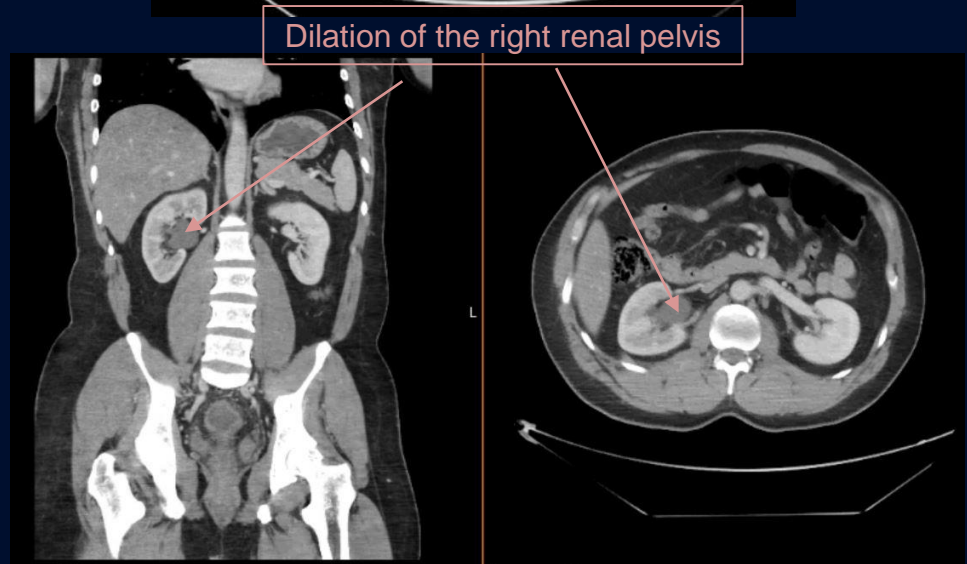
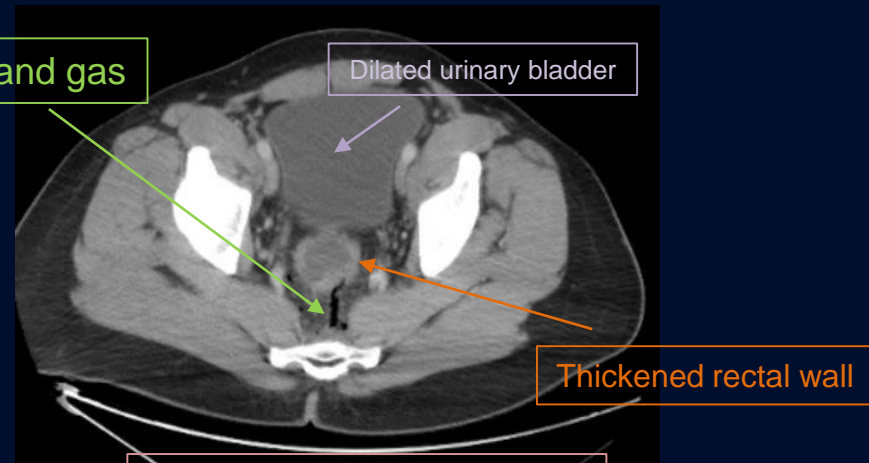
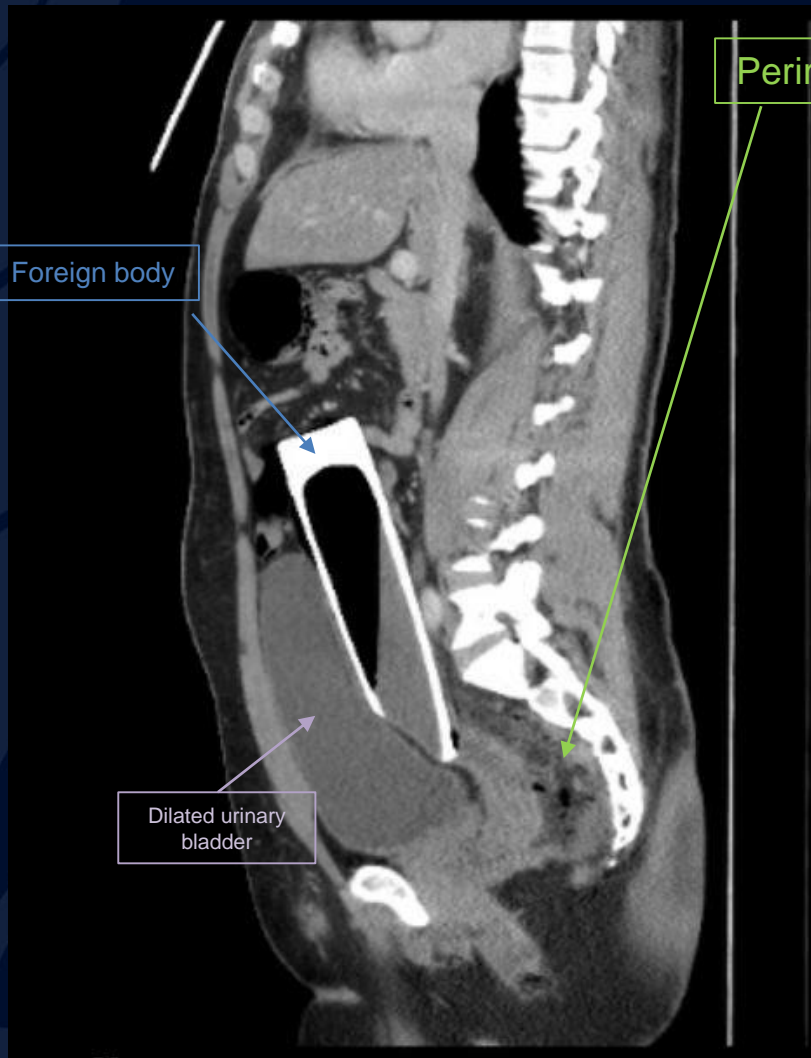
Labs demonstrated slight leukocytosis and lactic acidosis

Patient received empiric antibiotics, pain medication, and was sent for a CT of the abdomen and pelvis to assess for bowel perforation

# Abdominal CT with Intravenous Contrast



# Abdominal CT with IV contrast



# Hospital course

Taken to surgery where the surgeon performed an exploratory laparotomy, removed the rectal foreign body, and created an end colostomy

Patient recovered well and returned for a colostomy reversal 3 months later

# Differential Diagnosis

- Rectal laceration from foreign body
- Rectal perforation from foreign body
- Ischemic colitis



# Diagnosis

- Rectal foreign body with lacerations in the sigmoid colon found with exploratory laparotomy
- No intra abdominal or intra pelvic contamination of succus or blood was found during the surgery
- Pathology:
  - Focal ischemic changes with congestion and mucosal fresh hemorrhage
  - Multiple focal areas of mucosal disruption which do not involve the full thickness of the bowel wall on gross examination

# Rectal Foreign Body

- Epidemiology:
  - Mean age is 44, higher proportion is male
  - Delayed presentation due to embarrassment, patients may not be forthcoming with history
  - Most commonly bottles and glasses, but can be other objects such as toothbrushes, food items, sex toys, wooden rods
- Evaluation
  - Assess for signs of peritonitis
    - Suggests perforation with intraperitoneal contamination
  - Tachycardia, fever, hypotension are worrisome findings
  - Abdominal series or upright abdominal radiograph to look for free air and the location of the object
    - Free air suggests perforation
  - Rectal exam to assess for sphincter damage and palpation of the foreign body
  - Proctosigmoidoscopy for further evaluation if the foreign body is not palpable by rectal exam
- Treatment
  - Peritonitis or vital sign instability-> emergent laparotomy in OR
  - For less emergent, trial least invasive to most invasive
    - Transanal extraction-> endoscopic extraction-> operative extraction

# CT for Assessment of Gastrointestinal Tract Perforation

- Used in assessment of a foreign body if there are peritoneal symptoms or if trans anal removal is not possible
- Findings suggestive of perforation:
  - Direct visualization of discontinuity of bowel
  - Presence of extra luminal air
    - Concentrated free air bubbles tend to be in the vicinity of the perforation site
    - Extra luminal intra or retroperitoneal gas can occur without GI tract perforation
  - Other indirect findings:
    - Segmental bowel wall thickening
    - Abnormal wall enhancement
    - Localized fat stranding and / or free fluid
- Free extra luminal air is the major imaging finding for GI tract perforation
- CT is highly sensitive for free extra luminal gas: greater sensitivity than plain radiograph for extra luminal, intraperitoneal, or retroperitoneal air
  - Can also localize the perforation site based on the location of the free air

# Resources

- Cahalane MJ. Overview of gastrointestinal tract perforation. UpToDate. 2019 Nov 26.
- Cologne KG, Ault GT. Rectal foreign bodies: what is the current standard?. *Clin Colon Rectal Surg*. 2012;25(4):214-218. doi:10.1055/s-0032-1329392
- Kim SH, Shin SS, Jeong YY, Heo SH, Kim JW, Kang HK. Gastrointestinal tract perforation: MDCT findings according to the perforation sites. *Korean J Radiol*. 2009;10(1):63-70. doi:10.3348/kjr.2009.10.1.63
- Pouli S, Kozana A, Papakitsou I, Daskalogiannaki M, Raissaki M. Gastrointestinal perforation: clinical and MDCT clues for identification of aetiology. *Insights Imaging*. 2020 Feb 21;11(1):31. doi: 10.1186/s13244-019-0823-6. PMID: 32086627; PMCID: PMC7035412.