

AMSER Case of the Month: September 2018

61 yo male with abdominal pain,
nausea and vomiting

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AMSER

Patient Presentation

- 61 yo male presents with 3 day history of nausea, vomiting, abdominal pain, and obstipation
 - Began following dinner 3 days prior
- PMH: Crohn's disease status post small bowel resection in 1971 and total abdominal colectomy with end ileostomy in 1996
- PE:
 - VS: BP 94/65 HR 93 T 37C SpO2 93%
 - Abdominal exam: distended, minimal diffuse tenderness, no rebound or guarding, small amount of stool in colostomy bag

Pertinent Labs

- WBC 14.5
- Hgb 14.2
- HCT 41.4
- Na 128
- BUN 89
- Cr 5.34
- Lactic acid 1.9

What Imaging Should We Order?

Select the applicable ACR Appropriateness Criteria

American College of Radiology ACR Appropriateness Criteria®

Clinical Condition: Suspected Small-Bowel Obstruction

Variant 1: Suspected high-grade small-bowel obstruction (SBO), based on clinical evaluation or initial radiography (if performed).

Radiologic Procedure	Rating	Comments	RRL*
CT abdomen and pelvis with IV contrast	9	Oral contrast should not be used if high-grade SBO is known or suspected. Oral contrast will not reach the site of obstruction, wastes time, adds expense, can induce further patient discomfort, will not add to diagnostic accuracy, and can lead to complications, particularly vomiting and aspiration.	☼ ☼ ☼ ☼
CT abdomen and pelvis without IV contrast	7	Perform this procedure in patients who have known or suspected high-grade SBO when IV contrast is contraindicated.	☼ ☼ ☼ ☼
MRI abdomen and pelvis without and with IV contrast (routine)	6	MRI is most appropriate in children and younger adult patients who have had multiple prior CT examinations.	○
X-ray abdomen and pelvis	5	Perform this procedure if it has not already been performed.	☼ ☼ ☼
CT abdomen and pelvis without and with IV contrast	4		☼ ☼ ☼ ☼

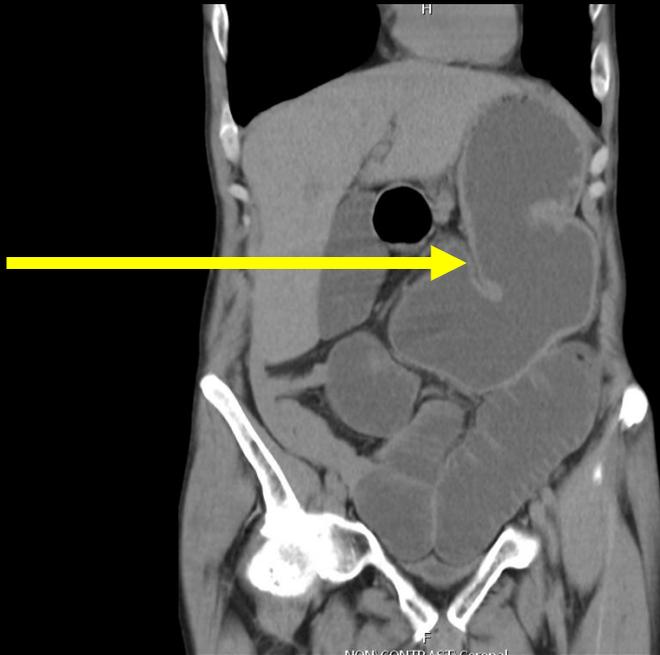
This imaging modality was ordered by the ER physician

Findings (unlabeled)

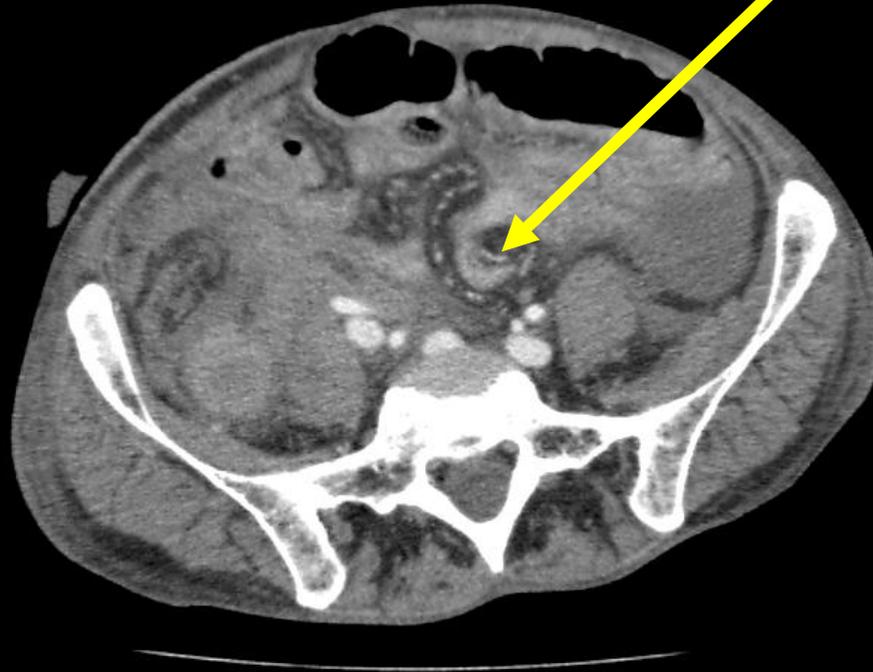


Findings: (labeled)

Dilated loops of small bowel



Swirling of the mesentery



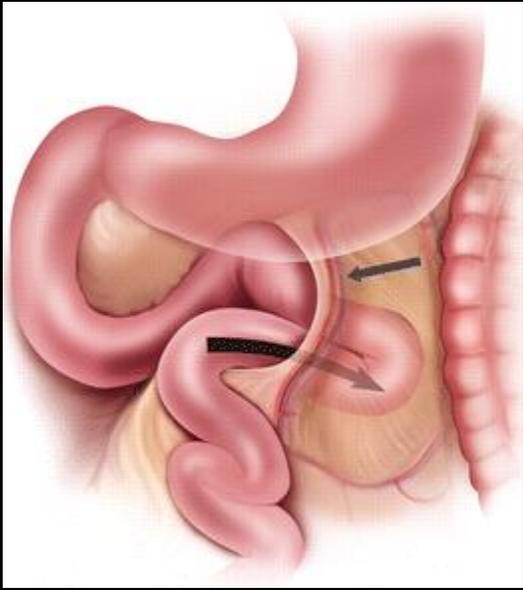
Final Dx:

Small bowel obstruction secondary to internal hernia

Case Discussion (1-3 slides)

- Internal hernias cause 0.6-6.0% of small bowel obstructions
- Occur through defects in the mesentery
 - Such defects can be either congenital or acquired
- Acquired defects
 - Can be secondary to adhesions
 - Can be result of opening in the mesentery created during the course of an operation
 - I.e. Roux-en-Y gastric bypass, pancreaticoduodenectomy

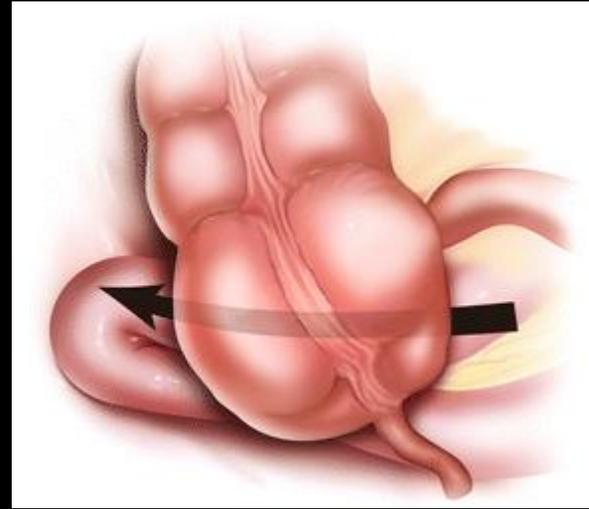
- Types of internal hernias
 - Paraduodenal
 - Most common
 - Foramen of Winslow
 - Intersigmoid
 - Pericecal
 - Second most common
 - Transmesenteric
 - Result of Roux-en-Y
 - Retroanastomotic
- CT findings
 - Distended small bowel loops
 - Crowding of small bowel loops in a hernia sac
 - Mesenteric twisting



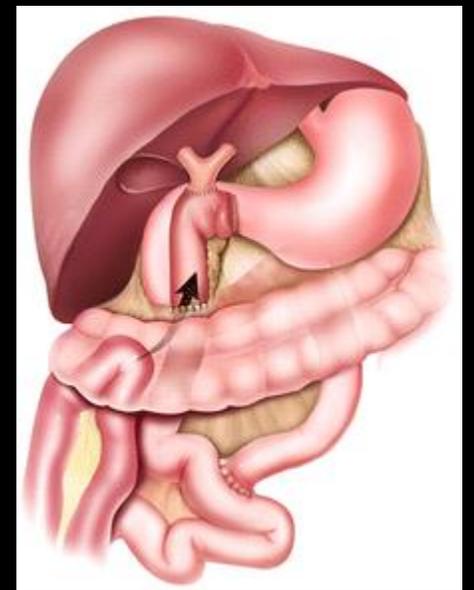
Left paraduodenal hernia



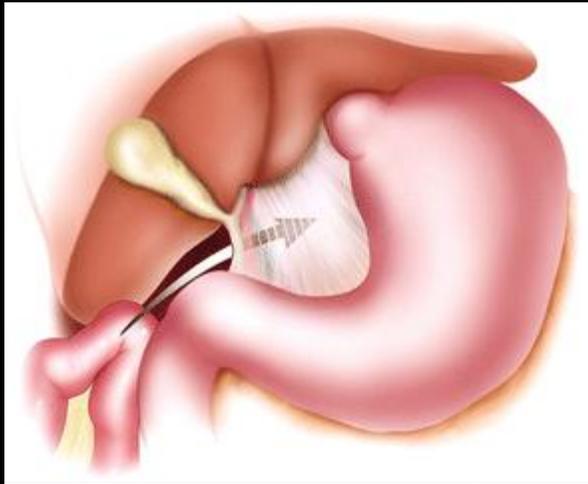
Right paraduodenal hernia



Pericecal hernia



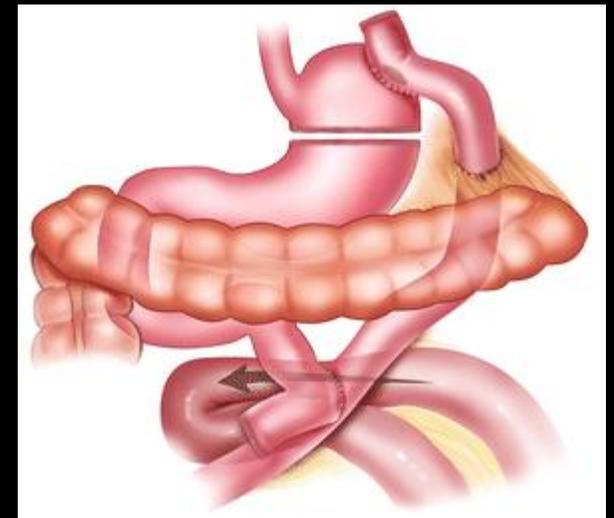
Transmesocolic hernia
(secondary to Roux-en-Y)



Foramen of Winslow hernia



Intersigmoid hernia



Retroanastomotic hernia

References:

- Bordeianou, Liliana, and Daniel Dante Yeh. “Epidemiology, Clinical Features, and Diagnosis of Mechanical Small Bowel Obstruction in Adults.” *UpToDate*, 2017, www.uptodate.com/contents/epidemiology-clinical-features-and-diagnosis-of-mechanical-small-bowel-obstruction-in-adults.
- Martin, Lucie C., et al. “Review of Internal Hernias: Radiographic and Clinical Findings.” *American Journal of Roentgenology*, vol. 186, no. 3, 2006, pp. 703–717., doi:10.2214/ajr.05.0644.