Colonic Pseudo-Obstruction (Ogilvie Syndrome)

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RAD 4001

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Clinical History

- 19 yo F with progressively worsening lower abdominal pain radiating to the back with nausea, dysuria, and NBNB emesis for 3 days.
- She did not pass flatus or BM since sx onset.
- Menses are regular, no STI hx. UPT negative.

- The month prior she traveled via caravan from Nicaragua to Houston. She slept outdoors, ingested dirty stagnant water and rotten food.

Vital Signs and Physical

- BP 109/74, SpO2 100%, T 98.1, RR 18, HR 83
- Physical:
  - Abdomen – decreased bowel sounds, tenderness to palpation in periumbilical area, suprapubic area, and LLQ
  - Genitourinary – + cervical discharge, no CMT, L adnexal tenderness
  - Skin – capillary refill time 3 seconds
  - All other systems wnl

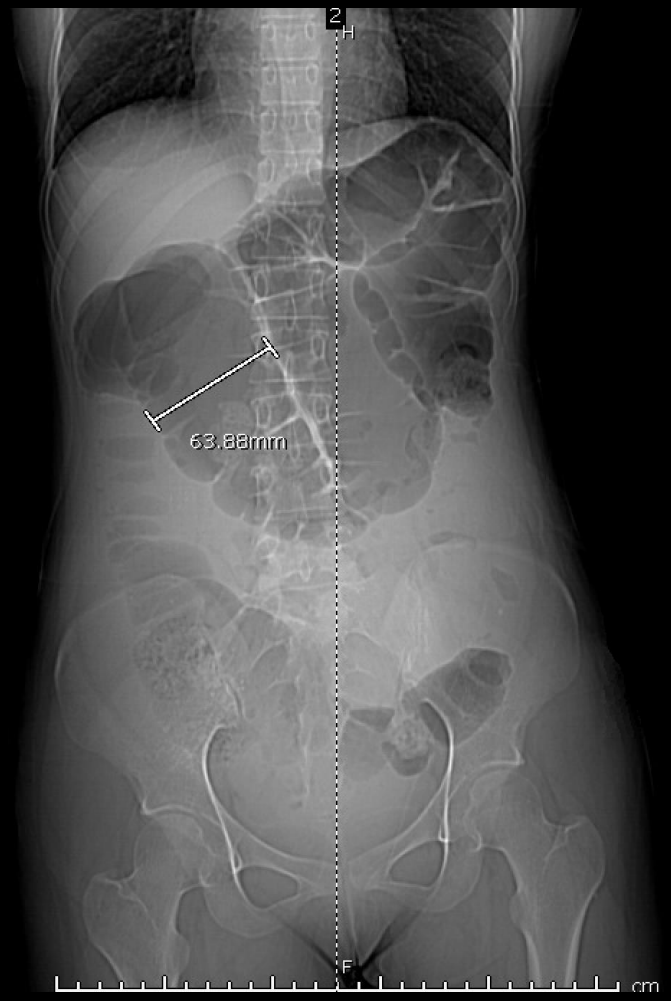
Relevant Labs

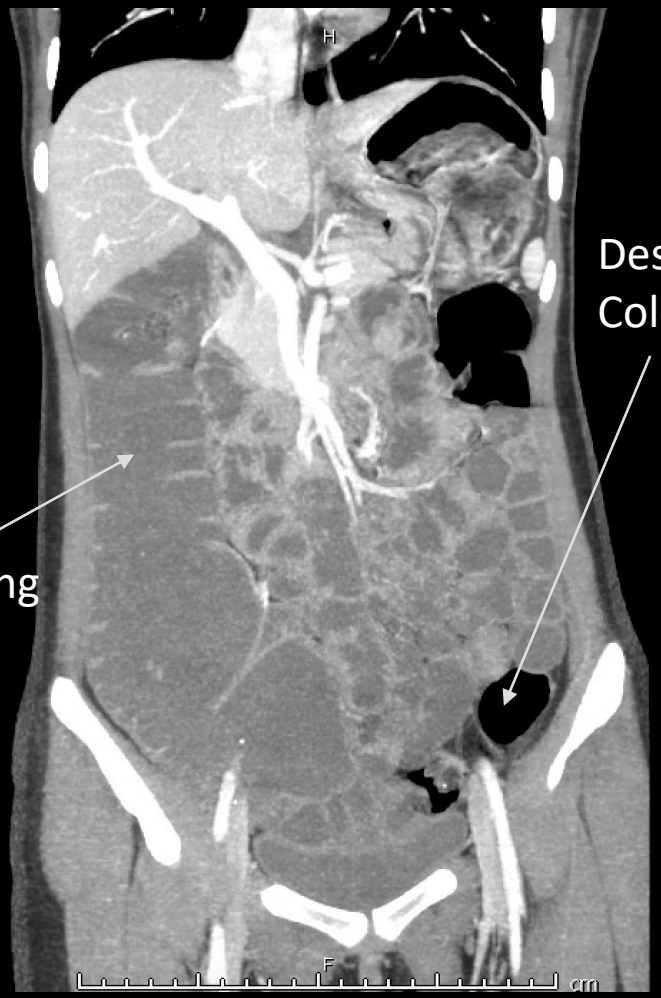
- Infectious Disease:
  - (+) Vibrio and Shiga Toxin 2
  - (+) Trypanosoma cruzi IgM

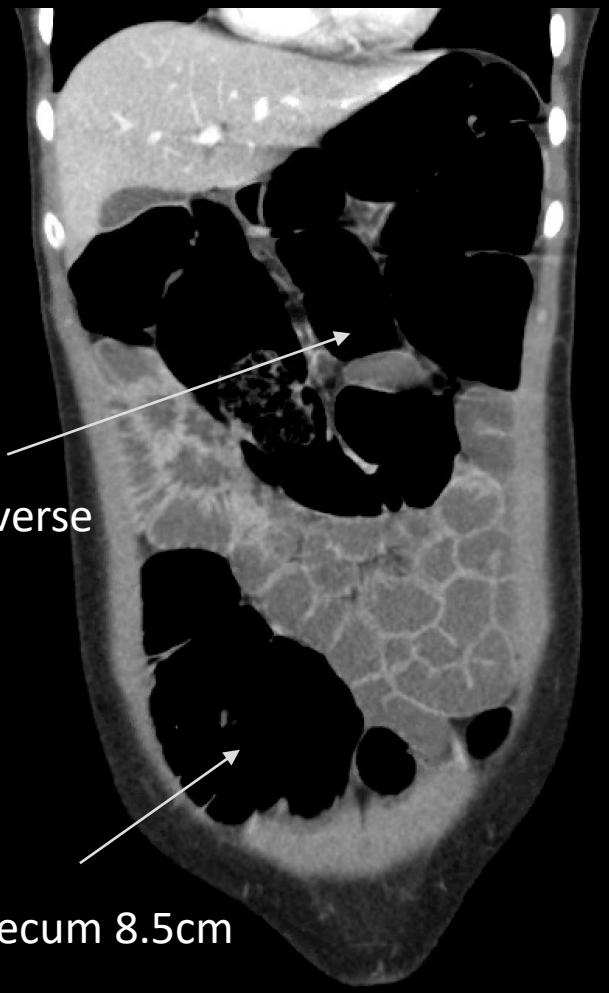
  - (-) Trypanosoma cruzi IgG
  - (-) C diff, Stool O/P, Campylobacter, Giardia, Amebiasis, HIV
  - Blood smear wnl

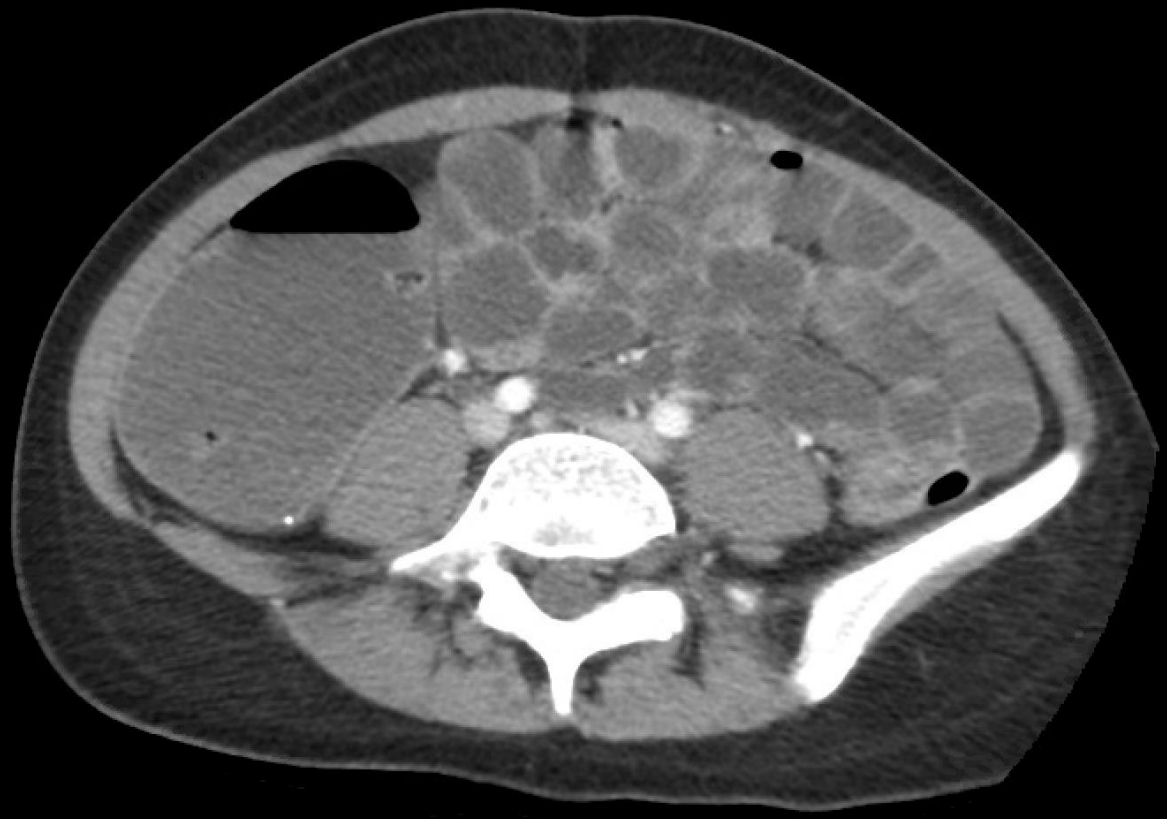
  K 2.8, Chloride 94, Bicarb 32
  LFTs, hCG, TSH, Sed Rate, Lipase, H/H wnl
  No eosinophilia

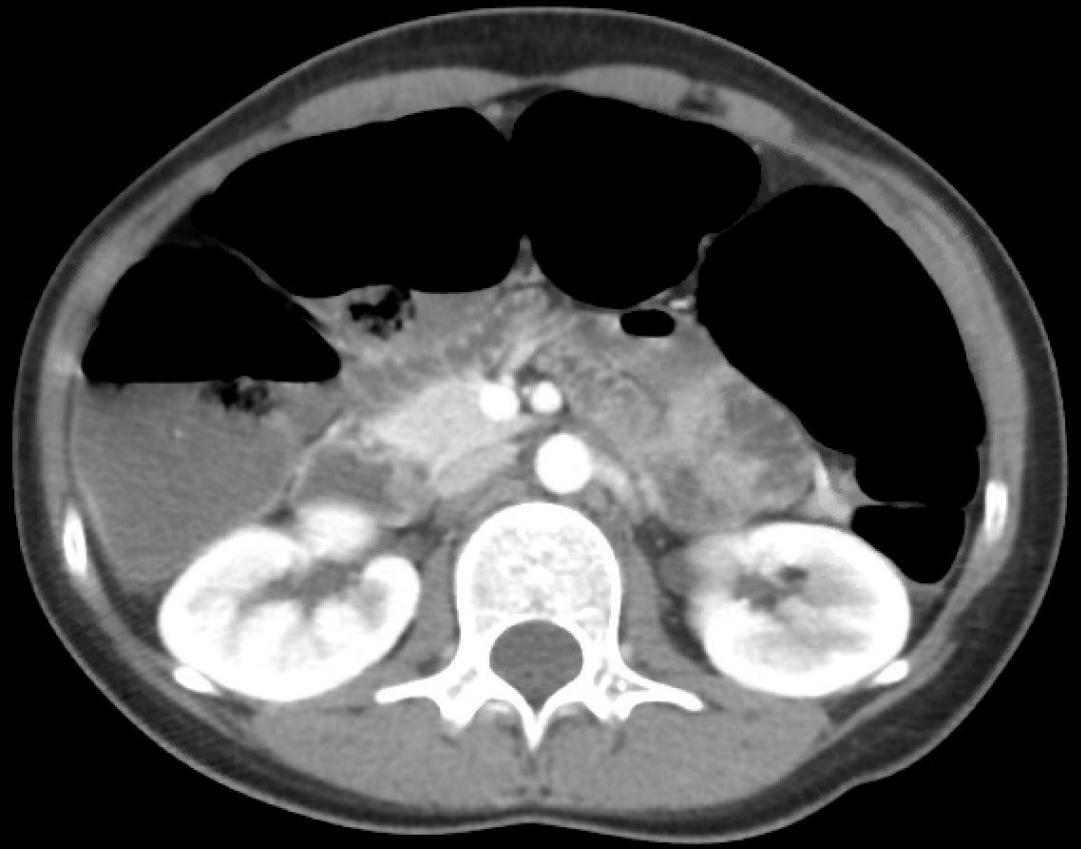
CT Abdomen with IV Contrast

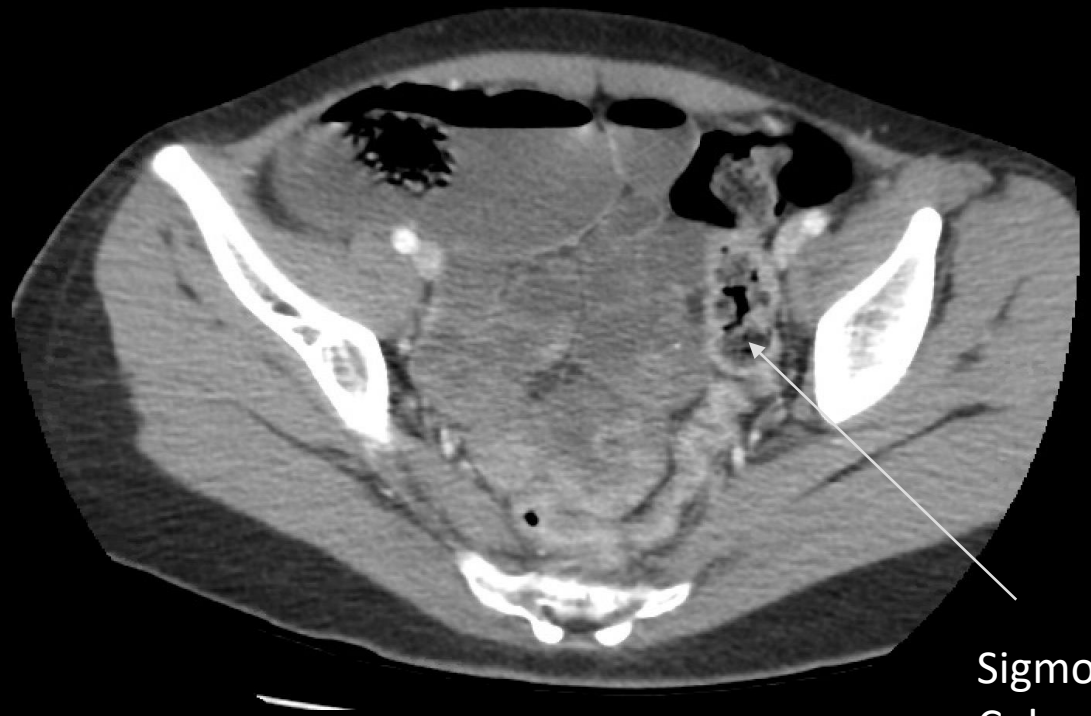




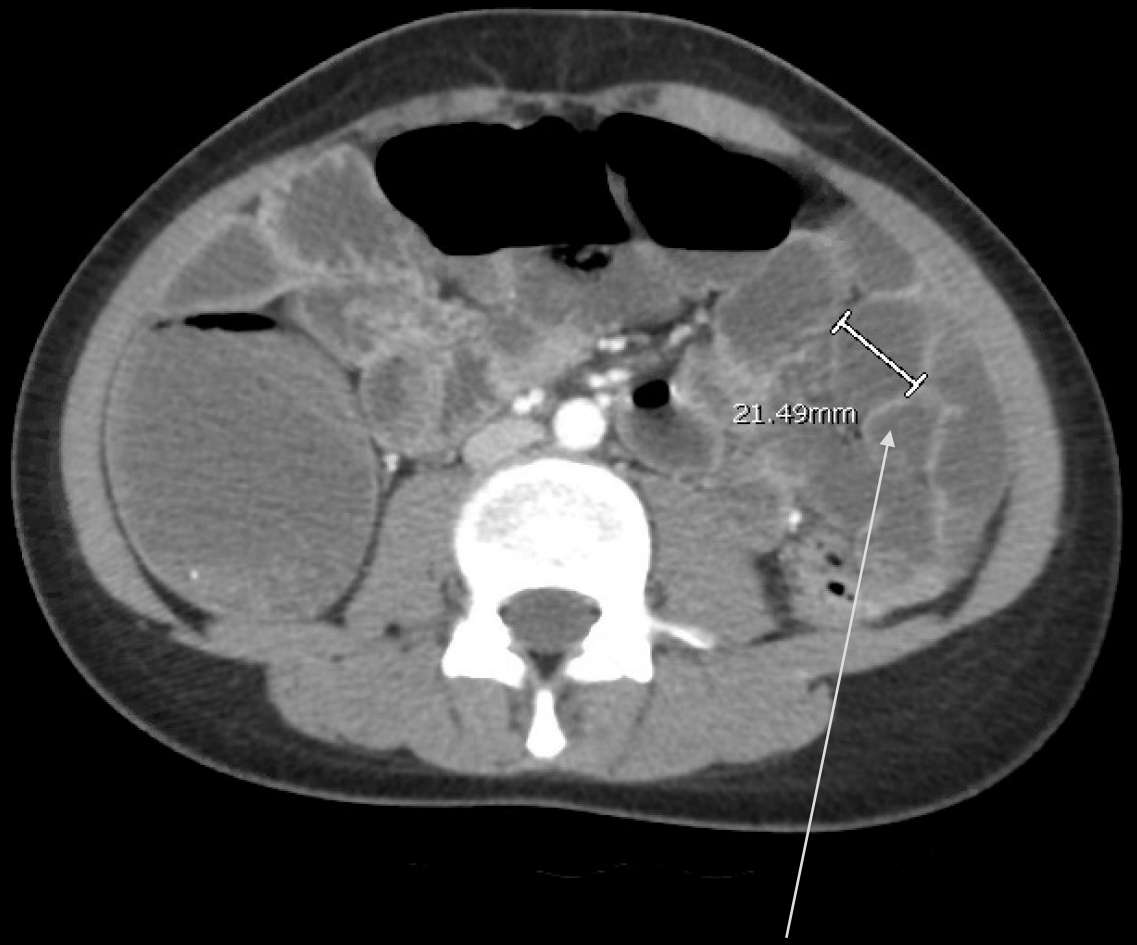








Sigmoid Colon



Small Bowel

3-6-9 Rule

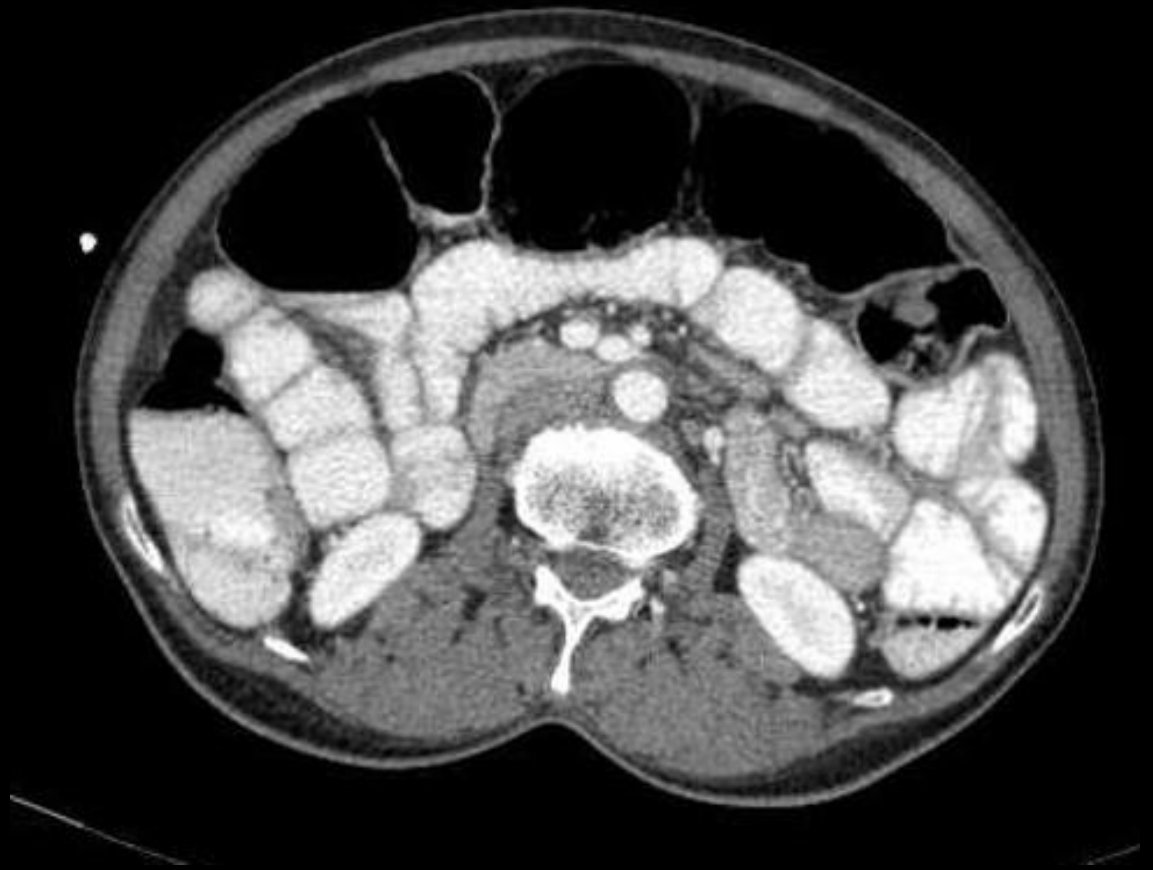
- Memory aid for describing normal bowel caliber

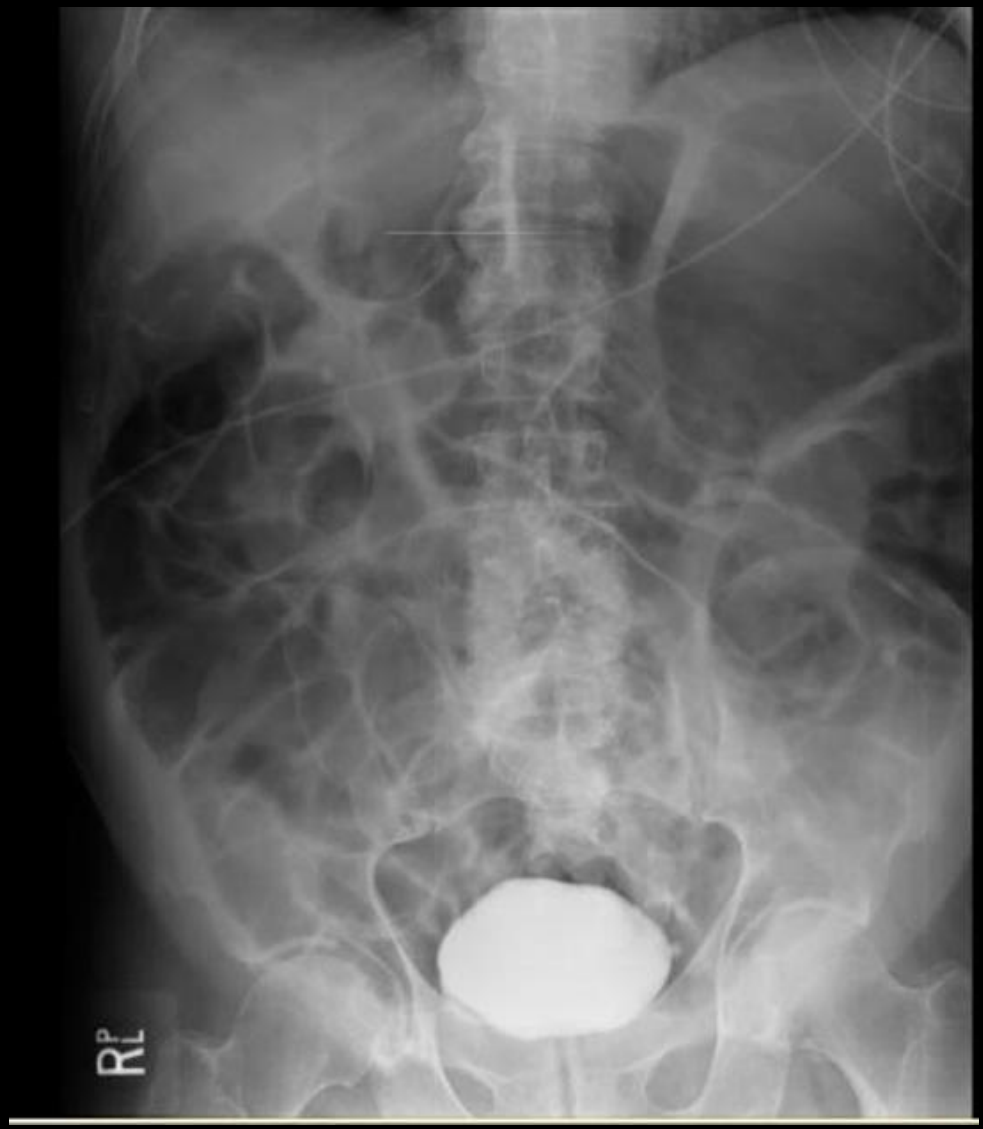
- Small Bowel < 3cm
- Large Bowel < 6cm
- Appendix < 6mm
- Cecum < 9cm

Differential Diagnosis

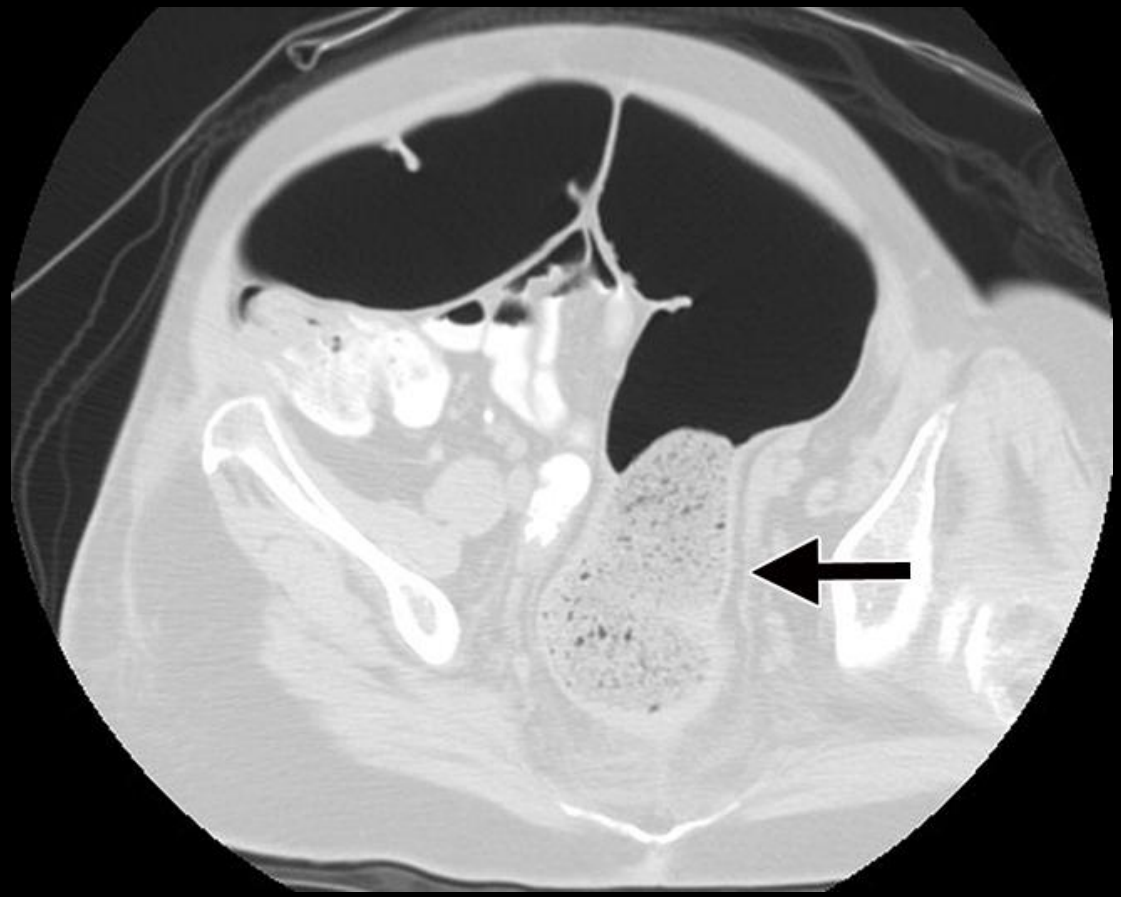
- Ogilvie Syndrome
  - Preserved haustra
  - Smooth inner wall contour
  - Normal colon wall thickness
- Adynamic Ileus
  - Both large and small bowel dilation
- Large Bowel Obstruction
  - Focal tapering/transition present
- Toxic Megacolon
  - Marked bowel wall thickening
  - Loss of haustra

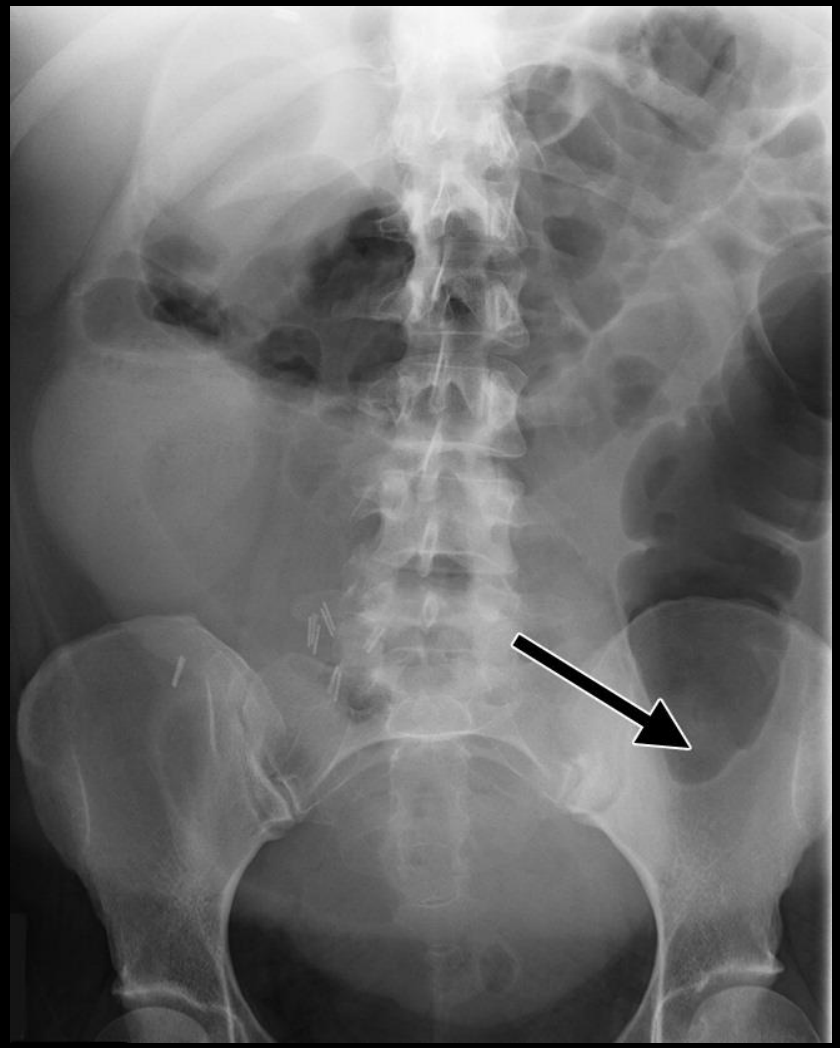
Adynamic Ileus



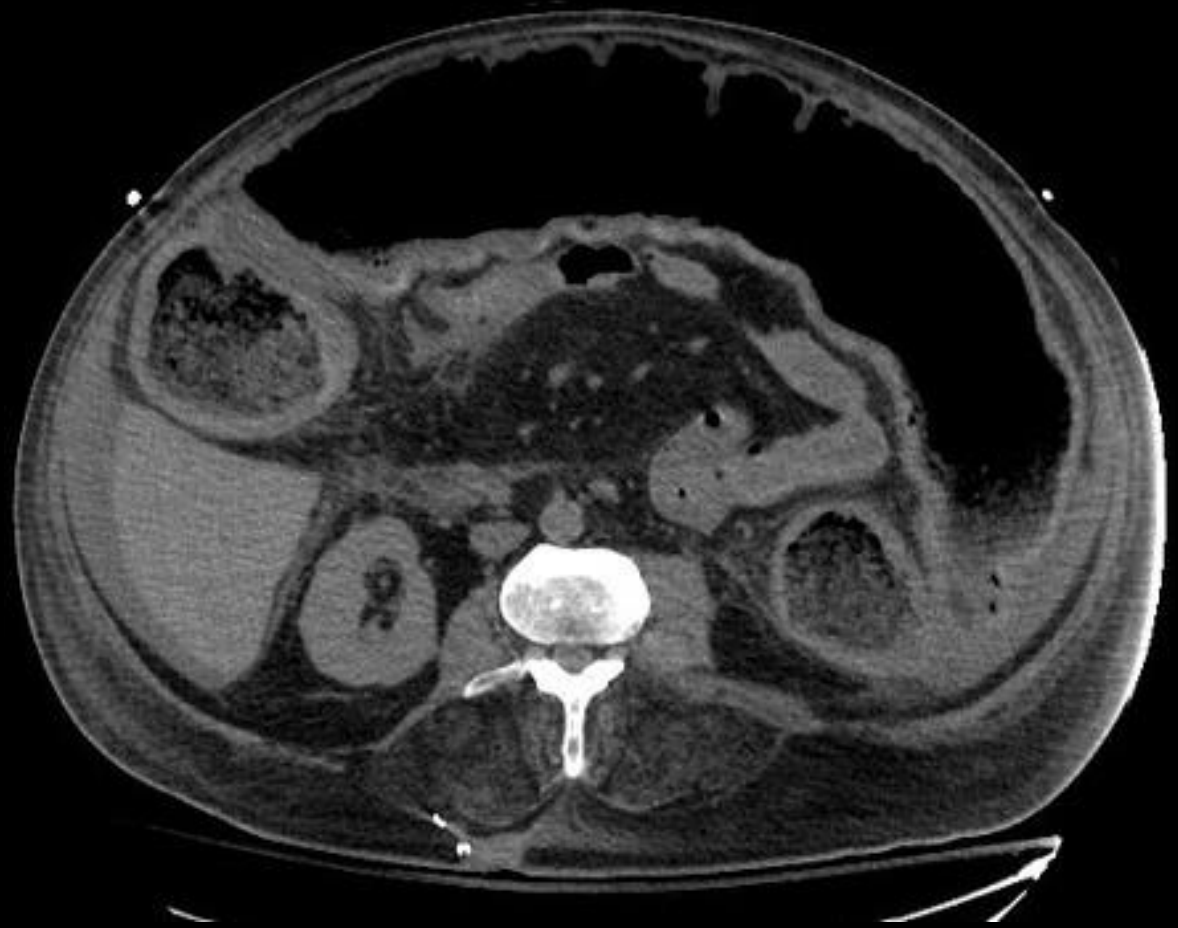


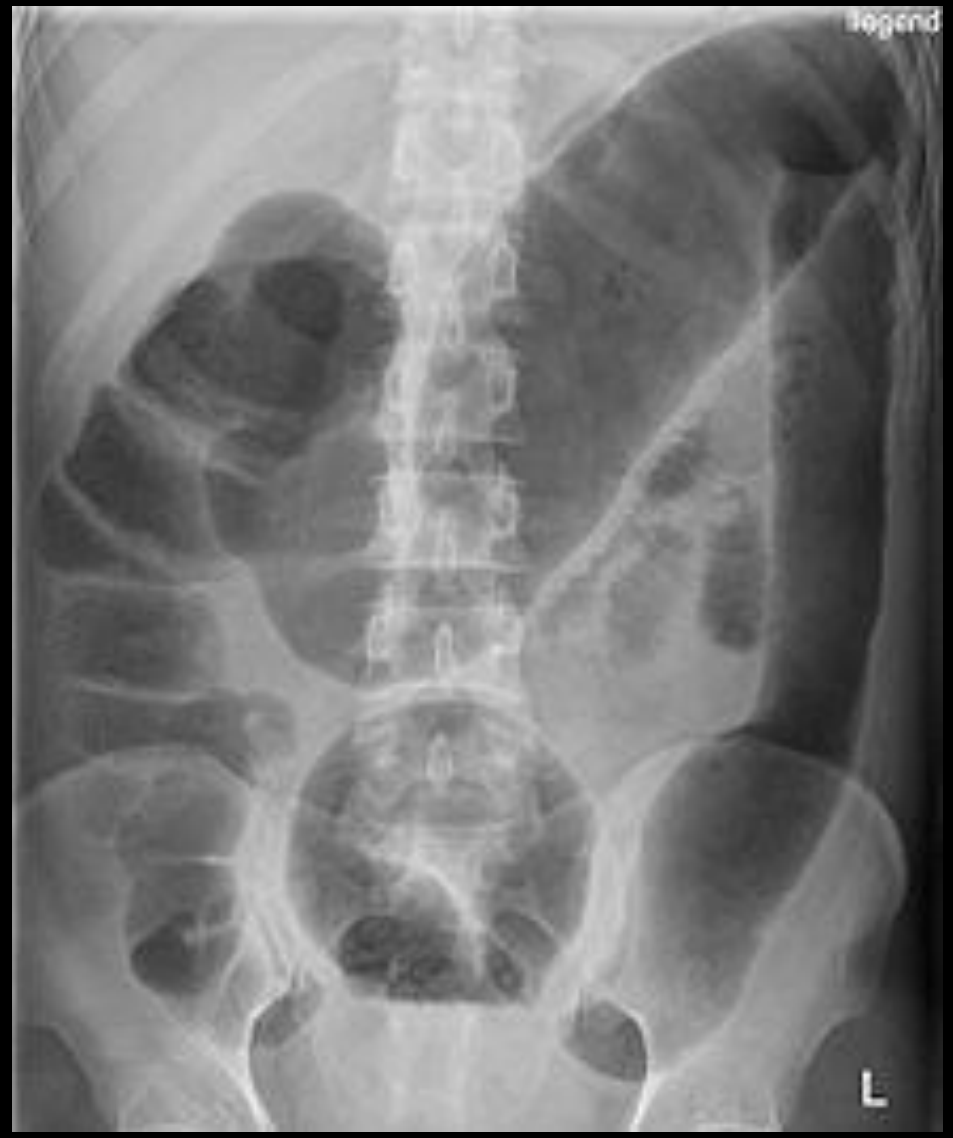
Large Bowel Obstruction





Toxic Megacolon

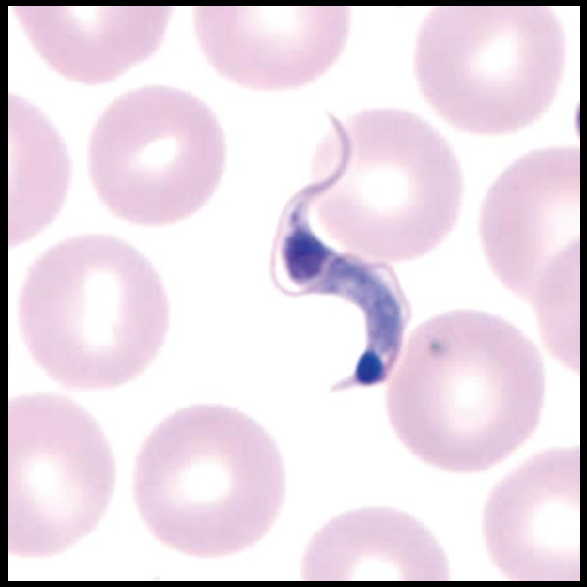




Etiology: Likely Infectious

- Chagas Disease #1
  - South American origin
  - Trypanosoma cruzi neurotoxin effects enteric nervous system
  - Dilated heart, colon, and esophagus
- Vibrio cholerae vs Shigellosis #2
  - Less likely without fever, diarrhea, hematochezia
  - More likely to cause toxic megacolon
  - Rare form ”Cholera Sicca”: massive influx of fluid and electrolytes into dilated bowel loops

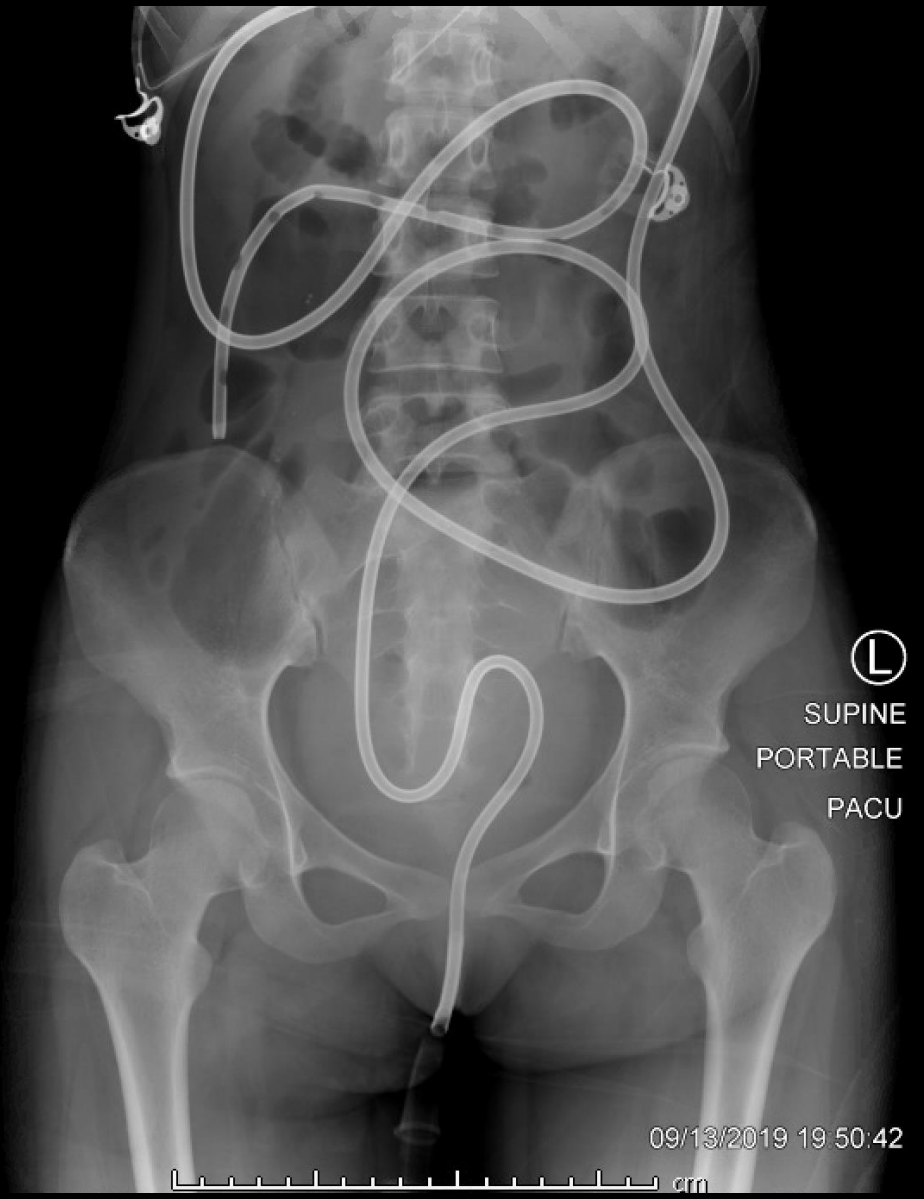
Diagnosis of Chagas Disease



- Acute Phase
  - High parasitemia
  - Blood smear
- Chronic Phase
  - Low parasitemia
  - GI and cardiac manifestations become apparent
  - Requires TWO positive serologic tests: can be challenging due to plethora of assays available and antigenic differences between six T. cruzi genotypes

Treatment

- Flexible sigmoidoscopy performed to r/o obstruction
- Rectal tube and NGT placed for decompression
- Doxycycline for Vibrio
- Shigella tx deferred due to risk of HUS



ACR appropriateness Criteria

Variant 4: **Acute nonlocalized abdominal pain. Not otherwise specified. Initial imaging.**

Procedure	Appropriateness Category	Relative Radiation Level
CT abdomen and pelvis with IV contrast	Usually Appropriate	☢☢☢
CT abdomen and pelvis without IV contrast	Usually Appropriate	☢☢☢
MRI abdomen and pelvis without and with IV contrast	Usually Appropriate	O
US abdomen	May Be Appropriate	O
MRI abdomen and pelvis without IV contrast	May Be Appropriate	O
CT abdomen and pelvis without and with IV contrast	May Be Appropriate	☢☢☢☢
Radiography abdomen	May Be Appropriate	☢☢
FDG-PET/CT skull base to mid-thigh	Usually Not Appropriate	☢☢☢☢
WBC scan abdomen and pelvis	Usually Not Appropriate	☢☢☢☢
Nuclear medicine scan gallbladder	Usually Not Appropriate	☢☢
Fluoroscopy upper GI series with small bowel follow-through	Usually Not Appropriate	☢☢☢
Fluoroscopy contrast enema	Usually Not Appropriate	☢☢☢

- CT Abdomen w/ contrast cost at Harris Health: $2,876

Take Home Points / Teaching points

- Colonic Distention: distinctive radiographic findings for several etiologies
- Understand the GI manifestations of Chagas disease
- Discuss the treatment of Ogilvie syndrome

References

- Surgery: A Case Based Clinical Review (DeVirgilio 2015)
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- https://www.labmedica.com/microbiology/articles/294768758/performance-of-chagas-disease-genotyping-assay-evaluated.html
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Questions?