Case Report # []

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Case History

46 year old male presents with acute onset abdominal pain.

- Abrupt onset two days prior.
- Constant, dull, 7/10 pain.
- Worsened by eating.
- No nausea or vomiting.
- Tenderness on exam, distention.
- WBC count 14.8
Radiological Presentations
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Which one of the following is your choice for the appropriate diagnosis?

- Free intraperitoneal air
- Portal venous air +/- pneumatosis intestinalis
- Abscess
Findings and Differentials

Findings:

1. Fat stranding within the small bowel mesentery in the upper central abdomen with multiple tiny foci of extra luminal gas.
2. Mild prominence of the adjacent small bowel loops demonstrating mild wall thickening.

Differentials:

• Portal venous air from ischemic bowel.
• Free intraperitoneal air from perforation.
  — Multiple etiologies
• Perforation with abscess formation.
Patient went for exploratory laparotomy for suspected perforation and peritonitis

Operative note:

“...Omental adhesions....and inter-loop adhesions were taken down with sharp dissection until all bowel were free for examination. The stomach and duodenum were examined without evidence of perforated ulcer disease. The small bowel was examined from the terminal ileum to the proximal jejunum. An inflammatory mass was encountered in the distal ileum. After dissection of the inflammatory adhesions a perforated diverticulum was encountered. A small bowel resection was performed.”

Pathology report:

- SMALL INTESTINE, ILEUM, ENTERECTOMY:
- MECKEL'S DIVERTICULITIS WITH TRANSMURAL ACUTE INFLAMMATION,
- PERFORATION AND SEROSITIS
- FOCAL GASTRIC HETEROTOPIA IS PRESENT WITHIN DIVERTICULUM
- SEROSITIS INVOLVES ONE MUCOSAL MARGIN (CLOSEST TO DIVERTICULUM)
- OPPOSING MUCOSAL MARGIN IS UNREMARKABLE

In retrospect, diverticulum can be identified on the CT images.
Meckel’s Diverticulum

- Remnant of the omphalomesenteric duct occurring at the antimesenteric border of the ileum. Typically found within 100 cm of the ileocecal valve.
- Incidence of 1-4% at autopsy, majority of patients are asymptomatic.
- Associated with vitelline artery, a long artery without anastomosis to other ileal branches and ending in a series of irregular small branches distally.
- Can contain heterotopic gastric mucosa, which can damage the opposing ileal wall and result in ulceration. Also can contain ectopic pancreatic tissue or brunner’s glands.
- Tumors can arise from the mucosa, both benign and malignant.
- Gastrointestinal bleeding can be seen in infants or adults. Perforation or obstruction can also be presenting symptom for adults.
  - Intussusception, volvulus or ileal narrowing (secondary to adhesion formation after ulceration)

Imaging

- Technetium pertechnetate scintigraphy can detect 85% of ectopic gastric mucosa in patients with acute or chronic bleeding.
- Enterocolysis only reliable method, detects 50-75%.
- Rarely, plain films can suggest presence by detecting a enterolith or gas filled dilated diverticulum.
- Small bowel follow-through rarely can detect.
References
