Gastric Outlet Obstruction Requiring Reconstruction with Incidental Pneumatosis Cystoides Intestinalis: A Case Report

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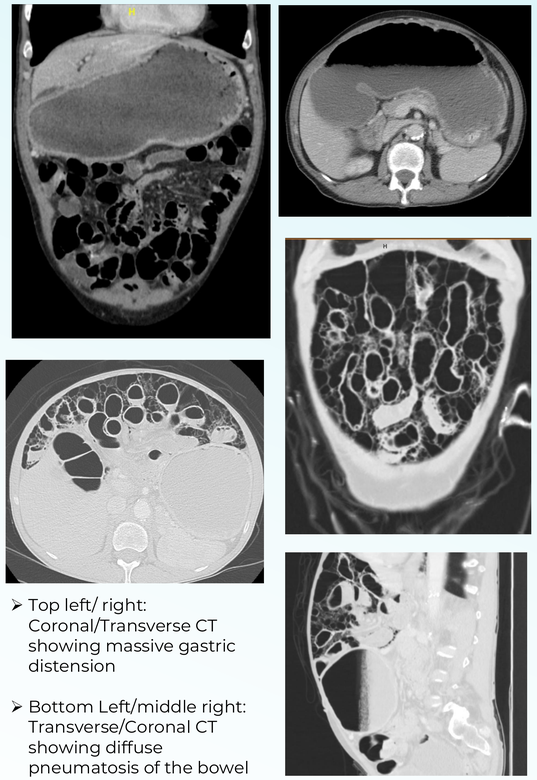
Introduction

- Pneumatosis cystoides intestinalis (PCI) is a rare condition characterized by multiple gas-filled cysts within the intestinal wall, most commonly affecting the small intestine and colon[1].
- Its pathogenesis is thought to be multifactorial but may be primary or secondary to conditions such as chronic obstructive pulmonary disease (COPD), connective tissue disorders, intestinal ischemia, inflammatory bowel disease, or certain medications[2,3].
- Clinical presentation ranges from incidental findings to abdominal pain, diarrhea, sepsis, pneumoperitoneum, or shock[1,3].
- Given the limited visual documentation of extensive PCI in the literature, this case highlights its intraoperative appearance.

Patient Presentation

- 71-year-old male with history of COPD and peptic ulcer disease (2009) complicated by progressive gastric outlet obstruction (GOO), presenting in January 2025 to ED with worsening oral intolerance, nausea, vomiting, and weight loss.
- Patient's clinical history of disease:
  - 2009: EGD showed an 8 mm prepyloric gastric ulcer.
  - 2021: Repeat EGD revealed a deformed pylorus, CT demonstrated a massively dilated stomach consistent with GOO.
  - 2025: EGD confirmed gastric stenosis at the pylorus.
- Routine CT for GOO evaluation in December 2024 showed pneumatosis of the proximal to mid small bowel with extensive mesenteric air cysts, leading to incidental diagnosis of PCI.
- Patient had shown no symptoms of PCI before or after its incidental finding.

Imaging

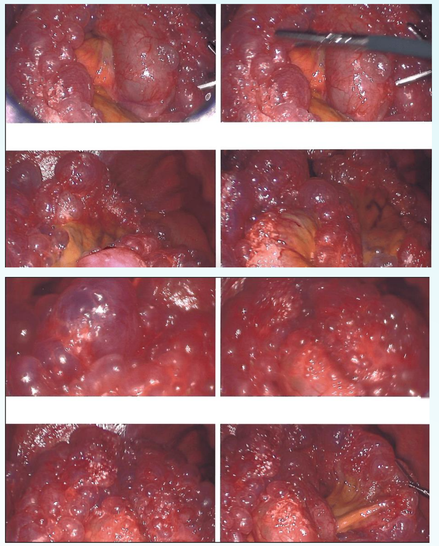


- Top left/ right: Coronal/Transverse CT showing massive gastric distension
- Bottom Left/middle right: Transverse/Coronal CT showing diffuse pneumatosis of the bowel
- Bottom right: Sagittal CT showing both gastric distension and diffuse pneumatosis of the bowel

Clinical Course

- In January 2025, symptomatic massive gastric distention and caloric malnutrition prompted operative management of GOO with planned robotic distal gastrectomy and Roux-en-Y reconstruction. Persistent incidental and asymptomatic PCI created uncertainty regarding safe anastomosis creation due to extremely limited literature on intraoperative findings.
- Intraoperatively, PCI involved the distal small bowel with significant cystic serosal changes, precluding anastomosis in the affected segment. However, fortunately, the proximal small bowel was unaffected, allowing successful completion of distal gastrectomy and Roux-en-Y reconstruction.
- The patient was discharged on postoperative day 4, and one-month follow-up showed advancement to a pureed diet with weight gain.

Intraoperative Photos



Discussion

- With limited literature describing the intraoperative and photographic appearance of PCI, this case provides valuable visual documentation.
- Although PCI did not ultimately alter anastomosis creation, it demonstrated the potential for extensive intraoperative involvement.
- Improved recognition of PCI's operative appearance can aid preoperative planning when radiographic pneumatosis is incidentally present, and the clinical picture is equivocal as in this asymptomatic patient.
- This case expands the visual and descriptive literature to support better surgical recognition and operative management of this uncommon but clinically significant condition.

References/Acknowledgements

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