Ischemic Gastritis with Gastric Pneumatosis and Portal Venous Gas

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INTRODUCTION

- Gastric ischemia is rare due to extensive collateral blood supply to the stomach, but if it occurs is associated with poor prognosis.
- We present a case of acute severe gastric ischemia in the context of severe hypotension with demonstration of portal venous gas(PVG) and gastric wall pneumatosis.
- The inciting event was a suspected gastric volvulus which had spontaneously resolved by the time of radiologic and endoscopic evaluation.
- This case highlights a successful conservative management of this dreaded clinical condition.

CASE DESCRIPTION

- A 50-year-old African American woman presented to the emergency department with 1-day history of severe lower retrosternal and epigastric pain with persistent nausea, coffee ground emesis and retching.
- Examination revealed an ill-appearing, tachycardic, hypotensive (blood pressure 70/41mmHg) female with epigastric tenderness.
- The rest of vital signs, physical exam, EKG and chest x-ray were normal.
- Basic labs after initial fluid resuscitation noted WBC of $12.5x10^9$/L. Troponin, electrolytes, liver chemistries and lactic acid were normal.
- Chest CT angiogram showed peripheral hepatic PVG (Fig 1a, red arrows) and a thickened gastric wall with pneumatosis (Fig 1a, white arrow) suggestive of gastric ischemia.

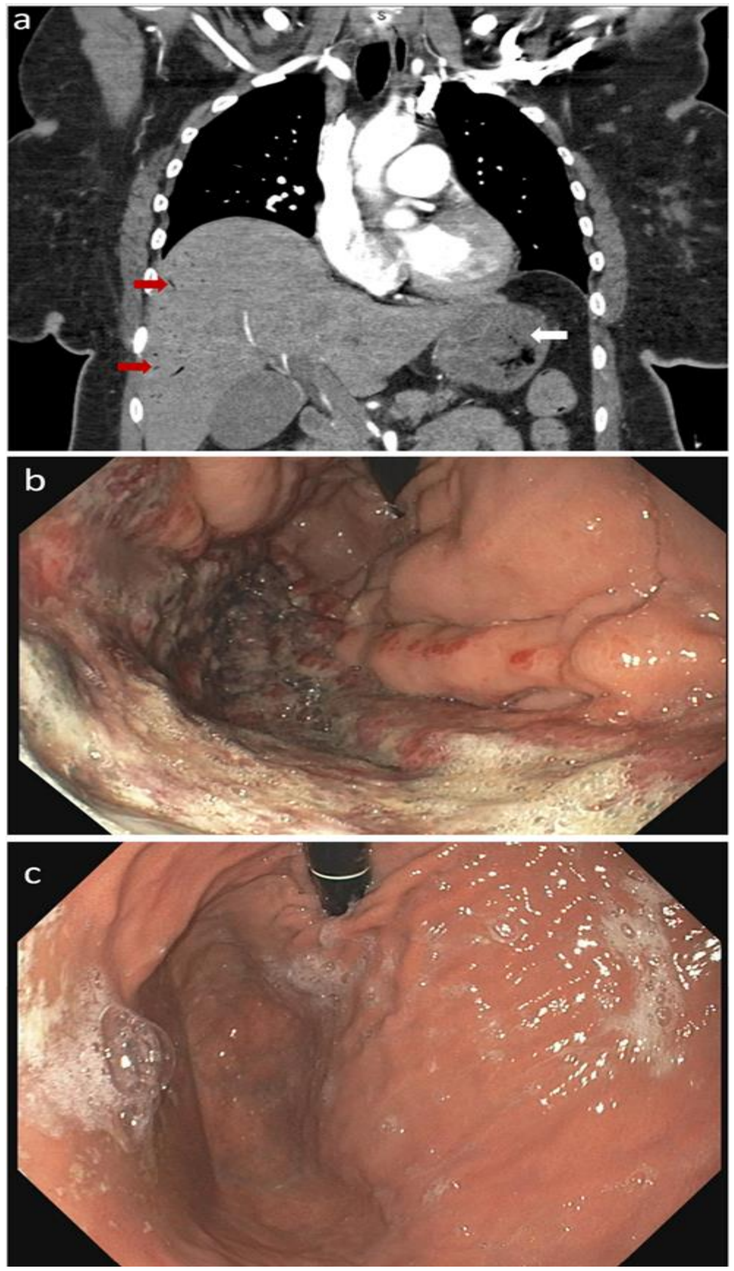

Fig 1a. CTA chest showing portal venous gas (red arrows) and gastric wall thickening with pneumatosis (white arrow).Fig 1b. Upper endoscopy image showing necrotic ulcerative changes along greater curvature. Fig 1c. Repeat upper endoscopy after 12 weeks showing normal gastric mucosa.

- No evidence of pulmonary embolism, bowel perforation or vascular abnormality was found.
- Esophagogastroduodenoscopy (EGD) revealed extensive necrotic ulcerative changes along gastric greater curvature from fundus to body consistent with gastric ischemia (Fig 1b).
- Treatment included intravenous fluids and proton pump inhibitors, analgesics, IV antibiotics (ceftriaxone and metronidazole) and bowel rest.
- She responded well to treatment and was discharged home after six days.
- She remained asymptomatic and a repeat EGD after 12 weeks revealed completely normal appearance of stomach (Fig 1c).

DISCUSSION

- Gastric ischemia may be caused by local vascular abnormalities, systemic hypoperfusion and mechanical obstruction.
- Typical symptoms include abdominal pain, vomiting and gastric bleeding. The mechanism for developing PVG in bowel ischemia is not fully understood but usually suggests an ominous pathology which may require a prompt surgical intervention.
- Transient gastric volvulus was suspected as a possible initial trigger, causing hypotension and gastric ischemia as no other etiology was identified.
- Enhanced provider cognizance of gastric ischemia and appropriate management tailored to each patient's needs should improve clinical outcomes.