

Conservative management of gastric emphysema with hepatoportals venous gas

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DESCRIPTION

A 43-year-old man with a history of viral hepatitis and active intravenous drug use presented with a 4-day history of severe nausea and coffee-ground emesis, followed by acute onset of colicky abdominal pain and non-bloody diarrhoea. On examination, he was tachycardic, but otherwise haemodynamically stable and afebrile. There was tenderness in the right upper quadrant, with no rebound or guarding and bowel sounds were normoactive. Initial laboratory investigations revealed raised urea of 24 mM/L, normal lactate and no leucocytosis.

A CT of the abdomen and pelvis with contrast revealed gastric pneumatosis (figure 1) with

hepatoportals venous gas (HPVG; figure 2) and signs of parenchymal infarction (figure 3). This prompted a surgical consult, which, on the basis of the patient's stable vitals, unlikelihood of ischaemia (figure 4) and lack of pneumoperitoneum, recommended conservative management with intravenous fluids, ondansetron, ranitidine and ertapenem. He improved rapidly, with an ultrasound 24 h post-presentation demonstrating complete resolution of HPVG. An oesophagogastroduodenoscopy 72 h post-admission showed gastritis (figure 5) and no ulcers or necrosis. He was discharged in stable condition.

Gastric pneumatosis may represent benign gastric emphysema (GE), which resolves spontaneously, or

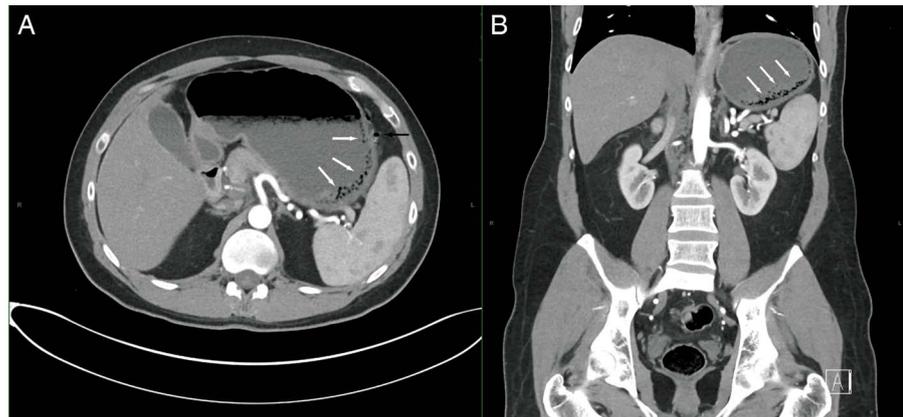


Figure 1 Marked pneumatosis extending from the fundus along the greater curvature of the stomach (white arrows), with gas in the left gastroepiploic veins (black arrow). (A) Transverse; (B) Coronal.

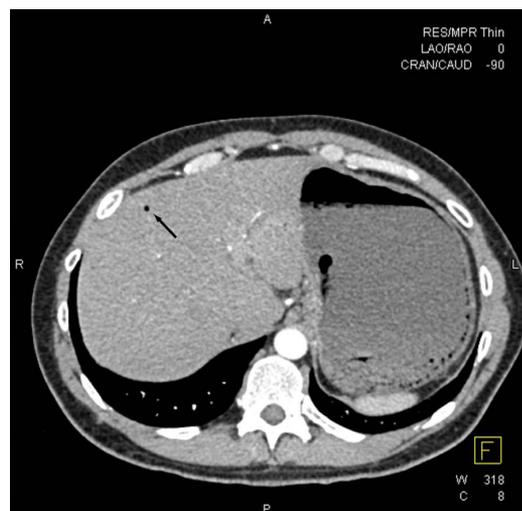


Figure 2 Portal venous gas (black arrow), with additional mesenteric venous gas, is most evident in the left gastric artery and gastroepiploic artery territories.



Figure 3 Small peripheral wedge-like opacities throughout the right hepatic lobe are suspicious for very early parenchymal infarcts.



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Figure 4 Central mesenteric arterial vasculature is patent, making ischaemia unlikely.

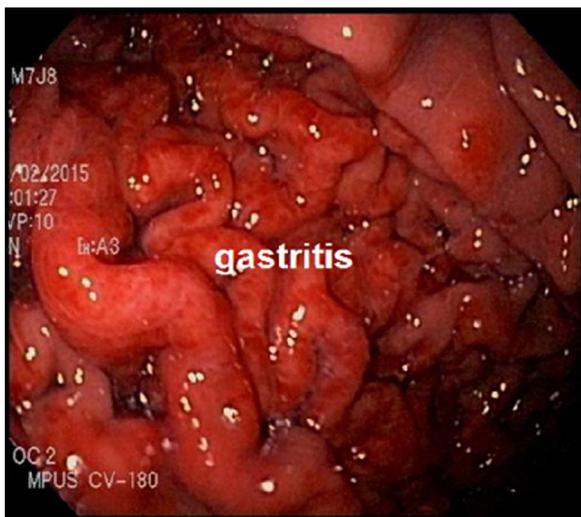


Figure 5 Oesophagogastroduodenoscopy (OGD) showed erythematous gastritis in the stomach, most pronounced in the fundus and proximal body extending to the antrum. Biopsy showed reactive epithelial changes.

emphysematous gastritis, which has a high mortality.¹ While this patient's history of active substance abuse and evidence of HPVG were concerning for emphysematous gastritis, his haemodynamic stability and rapid symptomatic resolution was more consistent with a viral gastroenteritis.² Severe vomiting may cause a mucosal tear, leading to coffee-ground emesis. Subsequent transmural diffusion of air through the defect may result in GE and HPVG.

Learning points

- ▶ Gastric pneumatosis, which refers to the presence of gas within the wall of the stomach, is a rare finding. It represents a spectrum of conditions ranging from benign gastric emphysema, to life-threatening emphysematous gastritis.
- ▶ Hepatoportal venous gas may be seen in benign gastric emphysema and emphysematous gastritis because the left gastroepiploic veins are part of the portal venous system. It is not an indication for surgery on its own, and patients with stable vital signs can be managed conservatively.
- ▶ Benign gastric emphysema may be caused by severe vomiting, and resolves spontaneously with supportive treatment.

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