A Case of Hepatic Portal Venous Gas associated with Ischemia related Large Necrotic Gastric Ulcer

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Introduction: Hepatic portal venous gas (HPVG) is a rare radiological sign that typically indicates an acute intra-abdominal process. Although the presence of HPVG is often viewed as a potentially life-threatening condition requiring immediate management, modern use of abdominal computed tomography (CT) imaging has led to detection of HPVG in more benign conditions. Therefore, HPVG rather serves as a diagnostic clue in patients with underlying acute abdominal pathology. Previous cases have found successful outcomes with conservative treatments depending on the associated abdominal pathology. Similarly, we present a case of patient with necrotic gastric ulcer associated HPVG who was successfully treated with conservative management.

Case: A 44-year-old male with history significant for ischemic cardiomyopathy and atrial fibrillation was admitted for tachycardia. On the fourth day of hospitalization, he reported mid-abdominal pain accompanied by nausea and vomiting. He was also noted to be hypotensive, with laboratory tests revealing leukocytosis and transaminitis. Abdominal CT scan showed intrahepatic portal venous gas, with

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gas present in the superior mesenteric vein, gastroepiploic veins, and mild colic veins, along with cholelithiasis and extensive gastric mural thickening. Endoscopy identified a large ulcer with black eschar on the anterior wall of the stomach body, extending into the antrum. Biopsies of the necrotic tissue were negative for malignancy. The gastric ulcer was suspected to result from poor perfusion due to ischemic cardiomyopathy. Given the resolution of symptoms, he did not undergo surgical intervention and was managed with antibiotics and pantoprazole, with plans for outpatient repeat endoscopy. He showed clinical improvement and was discharged in stable condition.

Conclusion: Our case contributes to existing literature that suggest prognosis is more closely related to the primary pathology rather than the presence of HPVG itself. This underscores the importance of considering a conservative approach to managing HPVG, based on the specific underlying abdominal pathology.

Keywords: Hepatic Portal Venous Gas, Necrosis, Gastric Ulcer

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