Portomesenteric Venous Gas and Pneumatosis Intestinalis

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A 74-year-old man presented to the emergency room with diarrhea and abdominal pain of 3 days’ duration. The abdomen was distended and diffusely tender without rebound, guarding, or masses. Laboratory data showed an inflammatory change and renal dysfunction with metabolic acidosis. Despite emergency hemodialysis and antimicrobial therapy, the patient became septic and deteriorated rapidly, and died the following day. A computed tomographic (CT) scan of the abdomen showed gas within the intrahepatic portal vein and gas collections in the small bowel wall (pneumatosis intestinalis) (Fig. 1).

The clinical course raises the possibility that he died of acute intestinal ischemia. Both CT findings of portomesenteric venous gas and pneumatosis intestinalis are highly associated with transmural bowel infarction (1). Liebman et al postulated that hepatic portal venous gas results from either transmural migration of gas from the intestinal lumen or from gas-producing enteric organisms within the portal venous system (2).

References