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# CE 6049 Intestinal infection leads to hepatic portal venous gas

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Key words: Intestinal infection. Hepatic portal venous gas. Sepsis.

## Dear Editor,

We report the case of a 64-year-old male who presented to our Intensive Care Unit (ICU) due to a sudden cardiac arrest. He had suffered a stomachache and diarrhea for three days, with blood and pus in the stool and no chills or fever nausea or vomiting. He had a medical history of type II diabetes, hypertension and stage V chronic kidney disease. The autonomic heart rate recovered after cardiopulmonary resuscitation for 30 minutes. The computed tomography (CT) scan showed hepatic portal venous gas (HPVG), mesenteric venous gas and pneumocephalus (Fig. 1). A diagnosis of septic shock induced by intestinal infection was suggested. The patient could not be saved and died an hour later.

### Discussion

PVG is a rare imaging feature. HPVG can arise from intestinal ischemia, intestinal necrosis and sepsis, etc. (1,2). HPVG is always accompanied by one or more risk factors such as severe damage of the intestinal barrier function, increased pressure in the gastrovascular cavity and aerogenic bacterium infection (3). HPVG can be correctly diagnosed via a CT scan and angiography, although this is no suitable for patients with unstable hemodynamics. Bedside ultrasound may be helpful for



diagnosis (4). Spontaneous pneumocephalus is rare, except in the case of a brain trauma. In the absence of trauma conditions, aerogenic bacterium infections in the case of intracranial pneumoconiosis should be considered, especially in patients with sepsis (5). Most patients have a poor prognosis and usually die of organ failure within a few hours. Early detection and early intervention remains the key to survival.

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Fig. 1. A. An abdominal CT showing mesenteric meridians gas (arrow). B and C. An abdominal CT showing hepatic portal venous gas. D. A cranial CT showing pneumocephalus.