**Clostridium perfringens** liver abscess complicated by bacteremia

A 63-year-old man had previously undergone resection for stage III colon cancer. Liver metastasis had resolved with palliative chemotherapy. The patient was now admitted because of weight loss, obstructive jaundice, and intrahepatic and extrahepatic biliary dilatation due to extrinsic compression of the biliary tree at the porta hepatis.

Endoscopic retrograde cholangiography (ERCP) was performed with placement of a fully covered metal stent in the common bile duct and right hepatic duct, and the patient was discharged with downward-trending bilirubin levels. However, 10 days later, he was readmitted with dyspnea, abdominal pain, and a temperature of 100.1 °F. Physical examination revealed chest pain at the left lower ribs and epigastric tenderness. Laboratory test results were white blood cell count 21.3×10⁹/L, bilirubin 7.6 mg/dL, alkaline phosphatase 212 U/L, and blood cultures positive for **Clostridium perfringens** (Fig. 1). Computed tomography of the abdomen showed a 3.1-cm collection of fluid that contained gas in the left lobe of the liver (Fig. 2). Inadequate drainage of the left hepatic system due to blockage by the stent in the right hepatic duct may have created a nidus for infection. The patient was successfully treated with intravenous antibiotics, abscess drainage, and removal of the metal stent (Fig. 3).

**C. perfringens** is a rapidly growing (doubling time of 7 minutes), spore-forming, Gram-positive bacillus that is often found in the human bowel but rarely causes liver abscess and sepsis. To the best of our knowledge, approximately 22 cases of **C. perfringens** liver abscess resulting in septicemia have been reported, many of which were fatal [1]. The infections that lead to septicemia after ERCP are most commonly caused by *Escherichia coli*, *Pseudomonas aeruginosa*, and *Klebsiella pneumoniae*, but rarely *C. perfringens* [1]. *C. perfringens* infection has a mortality rate of 70% to 100%, often develops in immunosuppressed patients, and presents with fever, abscess, or hemolysis [2]. Liver abscess due to *C. perfringens* is a rare and often fatal event; a high degree of suspicion for the diagnosis and immediate treatment with drainage and antibiotics are required.

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**Competing interests:** None

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**Fig. 1** Culture bottle showing gas bubbles in the direction of a swab stick from a 63-year-old patient presenting with dyspnea, abdominal pain, and a temperature of 100.1 °F following placement of a fully covered metal stent in the common bile duct and right hepatic duct.

**Fig. 2** Computed tomographic scan of the abdomen showing a liver abscess (arrow) containing gas.

**Fig. 3** Computed tomographic scan of the abdomen showing regression of the liver abscess (arrow) after drainage and antibiotic therapy for 3 weeks.