

Gas-forming liver abscess caused by *Clostridium perfringens* after ERCP: a rapidly fatal case

Yuko Okui^{1*}, Yuka Saeki¹, Yuka Nakajima¹, Masahiko Kambe¹

1. Saitama Sekishinkai Hospital, Sayama, Japan

Correspondence to: Yuko Okui

*Saitama Sekishinkai Hospital, Sayama, Japan.

Email: red.jg12@gmail.com

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Background: Gas-forming liver abscess caused by *Clostridium perfringens* is extremely rare but carries a high mortality rate. Early recognition of hemolysis and hepatic gas formation is critical for prompt management.

Case Presentation: An 80-year-old man with type 2 diabetes mellitus and a history of gastrectomy for gastric ulcer presented with fever, headache, abdominal discomfort, and nausea. He had undergone endoscopic retrograde cholangiopancreatography (ERCP) four times over the previous 10 months, most recently 3 weeks before admission. On arrival, he was alert but appeared ill, with fever, tachypnea, jaundice, and an oxygen requirement of 2 l/minute via nasal cannula. His abdomen was distended and tender. Laboratory tests showed leukocytosis, anemia, elevated liver enzymes, and severe hemolysis. A plain CT scan obtained at presentation revealed a 2.3-cm gas-forming lesion in hepatic segment 6. Two hours later, contrast-enhanced CT showed enlargement to 4.6 cm. Empirical broad-spectrum antibiotics (sulbactam/ampicillin) were started, and percutaneous drainage was planned. Despite treatment, the patient developed cardiac arrest 7 hours after arrival and died 9 hours after presentation. Blood cultures later identified *C. perfringens*.

Discussion: *Clostridium perfringens* liver abscess is rare but extremely aggressive. Reported risk factors include diabetes mellitus, advanced age, earlier gastrointestinal surgery, and recent hepatobiliary procedures such as ERCP. Characteristic findings are hemolysis and gas formation within the liver. When suspected, prompt initiation of broad-spectrum antimicrobial therapy and urgent drainage are essential to improve outcomes.

Conclusion: This case illustrates the fulminant course of *C. perfringens* liver abscess following ERCP in a diabetic patient. Early recognition, rapid antibiotic administration, and immediate drainage are critical steps to improve survival in this life-threatening condition.

Keywords: *Clostridium perfringens*, sepsis, liver abscess, hemolysis, case report.