

## DIAGNOSIS

CT scan of the abdomen revealed a gas-forming pyogenic liver abscess, indicating an infection with anaerobic bacteria such as *Clostridium perfringens*. The other symptom which was strongly indicative of a *C. perfringens* infection was massive intravascular haemolysis. Our patient was immediately started on piperacillin/tazobactam and within two hours a percutaneous drain was inserted and pus was evacuated. Blood cultures showed both *C. perfringens* and *Enterococcus faecium*. Abscess cultures showed *C. perfringens*, *E. faecium* and *Klebsiella oxytoca*, therefore vancomycin intravenously and locally via the abscess drain were added.

Hyperbilirubinaemia and high serum free haemoglobin suggested haemolysis and possibly bile duct obstruction. The biliary drain became productive again so re-ERCP with stent replacement was performed and successful. Surprisingly, our patient has not been haemodynamically or respiratorily compromised. However, she did develop acute tubular necrosis secondary to the haemolysis and was started on continuous venovenous haemofiltration and eventually intermittent haemodialysis. After one month in hospital, our patient was discharged.

*C. perfringens* bacteraemia is a rare but well-known cause of massive haemolysis and a fulminant – often fatal – infection. Van Bunderen *et al.* reviewed 40 cases; most cases involved immunocompromised patients with underlying malignancy or diabetes and about 80% of these patients did not survive (median survival was only eight hours).<sup>1</sup> However, liver abscesses due to *C. perfringens* infection have only been sparingly described. A patient similar to ours, although without a history of invasive procedures, died within hours.<sup>2</sup> More recently, Kurasawa *et al.* wrote a case report about a diabetic patient with a fatal *C. perfringens* liver abscess and also reviewed 124 cases of *C. perfringens* septicaemia and 30 cases of *C. perfringens* liver abscesses, whereas in the first group 50 patients and in the latter group only three patients survived. All survivors underwent some form of abscess drainage.<sup>3</sup> In conclusion, *C. perfringens* septicaemia is a rare but very serious disease where early recognition is of the utmost importance. In all septic patients with signs of massive haemolysis and/or gas-forming abscesses, *C. perfringens* infection should be considered and treated rapidly with adequate antibiotic coverage and aggressive drainage.

## REFERENCES

1. Van Bunderen CC, Bomers MK, Wesdorp E, et al. *Clostridium perfringens* septicaemia with massive intravascular haemolysis: a case report and review of the literature. *Neth J Med.* 2010;68: 343-6.
2. Imai J, Ichikawa H, Tobita K, Watanabe N. Liver abscess caused by *Clostridium perfringens*. *Intern Med* 2014;53:917-8.
3. Kurasawa M, Nishikido T, Koike J, et al. Gas-forming liver abscess associated with rapid hemolysis in a diabetic patient. *World J Diabetes.* 2014;5:224-9.