

# Hepatic abscess secondary to gastric perforation

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## DESCRIPTION

A 60-year-old woman with lumbar spinal stenosis presented to the emergency department with 2-day history of shivering and worsened lumbar pain. Apart from fever physical examination was unremarkable. Routine blood tests revealed elevated inflammatory parameters but chest radiography and abdominal ultrasound showed no relevant findings. She was hospitalised for 3 days during which she remained afebrile. The hypothesis of spinal infection was excluded by lumbar MRI. Blood cultures were negative. She was discharged without specific treatment but 3 days later she was readmitted with shivering.

The patient remained stable besides intermittent fever. However, 3 days after readmission she developed right costovertebral angle tenderness and blood cultures yielded *Escherichia coli*. Considering these data the hypothesis of renal abscess was considered. Accordingly, ceftriaxone 2g once per day was started and an abdominal CT was performed, revealing a hepatic abscess (42×42×28 mm) associated to a foreign body that had migrated from the stomach (figure 1). *Streptococcus constellatus* was also isolated in blood cultures. The next day a fish bone was extracted by laparoscopic surgery. Given this finding the patient was able to recall an episode of intense epigastric pain after eating codfish a few months earlier. Both *E. coli* and *S. constellatus* were isolated from drained pus.

After surgery the patient became afebrile, inflammatory parameters declined to normal range and follow-up blood cultures were negative. A follow-up CT, 5 days later, revealed only residual hypodense areas. The patient completed 14 days of ceftriaxone postsurgery. On follow-up appointment, 3 months later, she remained asymptomatic.

The diagnosis of hepatic abscess requires a high index of suspicion as the classic triad of fever, jaundice and right upper abdominal pain is present in a minority of cases.<sup>1</sup> Frequently, patients present with fever and non-specific symptoms such as nausea, vomiting and malaise.<sup>1</sup>

Regarding pyogenic abscesses, biliary tract disease is the most frequent cause, followed by

portal seeding in the setting of bowel disease. Other causes include arterial seeding secondary to hepatic artery thrombosis, chemoembolisation or bacteraemia; direct extension from a contiguous focus of infection and lastly, penetrating trauma.<sup>1</sup> Since stomach perforation by fish bone is the most frequent cause of hepatic abscess due to trauma, micro-organisms from normal oropharynx flora are the most common aetiological agents.<sup>2,3</sup> Interestingly, patients rarely recall the episode of ingestion<sup>2,3</sup> and therefore diagnosis is frequently made by imaging showing the foreign body, fistulous tract or thickened gastrointestinal wall in contact with the liver.<sup>3,4</sup> CT is the preferred modality due to its higher accuracy to detect foreign bodies and small posterior abscesses.<sup>3</sup> In most cases foreign body removal is necessary since the success rate of antibiotics alone is 9.5%.<sup>4</sup> Although laparotomy is frequently performed, minimally invasive techniques are increasingly used in this setting<sup>3,4</sup> and there are a few reports of successful foreign body removal percutaneously<sup>5,6</sup> or laparoscopically.<sup>7</sup> Our patient was successfully treated with laparoscopic drainage and foreign body removal followed by 14 days of directed antibiotic therapy.

## Learning points

- ▶ Hepatic abscess diagnosis requires a high index of suspicion. Patients may not have any other symptom besides fever.
- ▶ Migration of a foreign body from the gastrointestinal tract is a rare cause of hepatic abscess.
- ▶ Abscess drainage and foreign body extraction in addition to antibiotics is frequently required.

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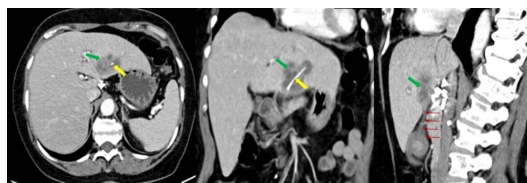
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**Figure 1** CT showing a hepatic abscess (green arrow) associated to a foreign body (yellow arrow) that migrated from the stomach (red arrows).



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