Isolated splenic abscess due to *Salmonella* Berta in a healthy adult

Takaaki Kobayashi , Fili Bogdanic, Edin Pujagic, Michihiko Goto

**DESCRIPTION**

A 38-year-old man without a significant medical history, sick contacts or recent travel presented with fever, vomiting and diarrhoea. Three weeks prior to admission, he developed nasal congestion and dizziness. He was given amoxicillin/clavulanate for a presumptive diagnosis of sinusitis. A few days later, he developed fever, vomiting and diarrhoea. He was evaluated in the emergency room (ER), where he was thought to have a viral infection. He was instructed to stop taking the antibiotics and was discharged home. However, his fever persisted and he returned to the ER. Initial vital signs were significant for a heart rate of 110 beats/min and a temperature of 38.4°C. Physical examination demonstrated mild tenderness of the left upper quadrant. Laboratory work revealed a white cell count of 7.4×10⁹/L (normal value 3.7–10.5) and a creatinine of 1.5 mg/dL (normal value 0.6–1.2). Testing for HIV was negative. Abdominal ultrasound showed a complex cystic lesion within the spleen. Abdominal CT showed a splenic abscess measuring 7.0×6.8×6.8 cm with splenomegaly (figures 1 and 2). Ultrasound-guided diagnostic needle aspiration showed the abscess content was bloody turbid fluid, and the culture of aspirated fluid grew *Salmonella* Berta. His symptoms resolved with intravenous ceftriaxone and he was discharged with a plan to continue ceftriaxone. At the 3-week follow-up, a repeat CT scan showed an interval decrease in the size of the abscess. Ceftriaxone was stopped, and he completed an additional 2 weeks of oral ciprofloxacin. At his 7-week follow-up over the phone, he reported that he was asymptomatic without fever or abdominal pain.

The usual clinical presentation of non-typhoidal *Salmonella* infection is self-limited gastroenteritis which typically does not require antibiotic treatment. However, 5% of individuals with a gastrointestinal illness caused by non-typhoidal *Salmonella* are known to develop bacteremia and localised infections such as intra-abdominal abscesses. The risk factors for bacteremia and extraintestinal infections are malignancy, HIV, diabetes mellitus and immunosuppressive therapy. While splenic abscesses due to *Salmonella* species are reported to occur in up to 2% of patients with typhoid fever, it is even more rare in non-typhoidal *Salmonella* infections. However, non-typhoidal *Salmonella* has been isolated in about 15% of patients with splenic abscesses.

**Figure 1** Abdominal CT showed a splenic abscess measuring 7.0×6.8×6.8 cm with splenomegaly (axial view).

**Figure 2** Abdominal CT showed a splenic abscess measuring 7.0×6.8×6.8 cm with splenomegaly (coronal view).
Images in reports where conservative management, including percutaneous drainage along with antibiotics or even antibiotics alone, was successful. Given the increased long-term risk of severe overwhelming infection with encapsulated bacteria, and the need for prophylactic antibiotics after splenectomy, non-surgical management might be the more reasonable option for selected patients.

Learning points

► Though splenic abscesses are very rare complications of non-typhoidal Salmonella infections, non-typhoidal Salmonella has been isolated in about 15% of patients with a splenic abscess.
► While splenectomy or percutaneous drainage with antibiotics are considered preferred treatments, there is an increasing number of case reports in which conservative management with antibiotics alone has been successful.

Contributors TK wrote the first draft of the manuscript. FB, EP and MG critically reviewed and revised the manuscript. All authors read and approved the final paper.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

ORCID iD Takaaki Kobayashi http://orcid.org/0000-0003-4643-4798

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