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Medical Imagery

Chronic tibial pandiaphysitis with Brodie abscess due to *Salmonella saprophyticus* in a 29-year-old healthy man

Figure 1. A Standard X-ray showing metaphyseal osteolysis without cortical defect (limits are encircled by arrows). (B) Computed tomography scan and (C) magnetic resonance imaging, highlighting the Brodie abscess (arrows) and pandiaphysitis (asterisks). (D) Postoperative standard X-ray showing the tibial osteotomy (arrows).

A healthy 29-year-old man presented with unexplained acute left tibial pain with a rapid and spontaneously favourable evolution. One year later, he experienced symptom relapse, with a 5-kg weight loss and night sweats for 2 months. His C-reactive protein was 14 mg/l. Radiological assessment revealed a centromedullary metaphyseal bone defect ($3 \times 3 \times 4$ cm) associated with tibial pandiaphysitis, but no cortical lysis (Figure 1A–C). A surgical bone biopsy was performed, which exhibited haemorrhagic and purulent fluid with no malignant cells. Microbiological cultures yielded *Salmonella saprophyticus*, leading to the final diagnosis of chronic tibial pandiaphysitis with metaphyseal Brodie abscess. No history of dysenteric syndrome was reported.

The patient underwent a surgical osteotomy for excision of the abscess cavity (Figure 1D) after a preoperative course of

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ceftriaxone (2 g/day, body weight 65 kg, minimum inhibitory concentration (MIC) ≤1 mg/l), followed by oral ofloxacin (200 mg twice daily, MIC ≤0.25 mg/l) for a total duration extended to 6 months due to a 3-month delay in surgical management and the large size of the abscess. The outcome was favourable after 2 years of follow-up.

Osteomyelitis is a rare but classic complication of Salmonella infection, typically affecting the long bones of patients with haemoglobinopathies or immunosuppression.[1] The ability of most Salmonella isolates to form a biofilm reinforces the importance of surgical debridement in large Brodie abscesses (>3 cm), in addition to a prolonged antimicrobial course, if possible based on a fluoroquinolone.[2,3]

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References

1. Ortiz-Neu C, Marr J, Cherubin CE, Neu HC. Bone and joint infections due to Salmonella. *J Infect Dis* 1978;**138**:820–8.
2. Nair A, Rawool DB, Doijad S, Poharkar K, Mohan V, Barbuddhe SB, et al. Biofilm formation and genetic diversity of Salmonella isolates recovered from clinical, food, poultry and environmental sources. *Infect Genet Evol* 2015;**36**:424–33.
3. Stephens MM, MacAuley P. Brodie's abscess. A long-term review. *Clin Orthop Relat Res* 1988;**234**:211–6.

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