# Chronic enterococcal spinal implant infection 6 years after instrumentation of a severe scoliosis in a 22-year-old woman

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### DESCRIPTION

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A 22-year-old woman with severe double curve scoliosis was instrumented in 2006 (posterior instrumentation T2-L5). In 2007-2008, the patient had progressive worsening of the scoliosis. In August 2012, she presented with mild oozing matter from the surgery scar in the middle of her back (figure 1A). There was no pain. Her C reactive protein level was 1 mg/L in plasma. There was no reason to consider other sites of infection. Spinal X-rays showed failure of surgery for correction of sagittal imbalance with worsening of the spinal deformity, implant migration and implant loosening at the lower part of the instrumentation (figure 1B). Late postoperative spinal implant infection with fistula was diagnosed. Total explantation of the instrumentation (including the 2 rods and the hooks) with wide debridement was performed, and abscesses, detected close to each hook, were drained. Surgical samples grew Enterococcus faecalis. The patient received high doses of intravenous amoxicillin for 1 month and amoxicillin orally for 4 months thereafter. No pain remained and the spinal deformity has not worsened at 2-year follow-up.

Treatment of spinal implant infection is challenging, and late enterococcal spinal implant-related

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infections are poorly described.<sup>1</sup> Surgical debridement, implant retention and a 3-month antibiotic therapy have been proposed for acute infection (<1 month).<sup>2</sup> However, the duration of antimicrobial therapy for chronic implant infection is unknown. For patients in whom the material has not been totally removed, long-term suppressive antimicrobial therapy is usually proposed.<sup>1</sup> Whereas, for those patients in whom the material has been totally removed, an antibiotic therapy <6 months is probably sufficient, as is proposed for lower limb implant-associated bone and joint infections such as of the prosthetic joint.<sup>3</sup>

## Learning points

- Enterococcus faecalis could be responsible for chronic postoperative spinal implant infection.
- Fistula is often associated with implant migration and loosening.
- The duration of antimicrobial therapy should be <6 months in patients with chronic postoperative spinal implant infection and in whom the material has been completely removed.



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**Figure 1** (A) Fistula in the scar on the middle of the back. (B) X-ray showing loss of correction and implant migration implant loosening at L5 (arrows showing hook loosening).

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# Images in...

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## REFERENCES

- Garg S, LaGreca J, Hotchkiss M, et al. Management of late (>1 y) deep infection after spinal fusion: a retrospective cohort study. J Pediatr Orthop 2015;35:266–70.
   Dubée V, Lenoir T, Leflon-Guibout V, et al. Three-month antibiotic therapy for
- early-onset postoperative spinal implant infections. *Clin Infect Dis* 2012;55:1481–7.
  Osmon DR, Berbari EF, Berendt AR, *et al*, Infectious Diseases Society of America.
- Diagnosis and management of prosthetic joint infection: clinical practice guidelines by the Infectious Diseases Society of America. *Clin Infect Dis* 2013;56:e1–e25.

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