

The Double-Edged Sword of Antimicrobials: A Case of Successful PJI Eradication Following Severe Hypersensitivity and Thrombocytopenia

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INTRODUCTION

Periprosthetic joint infection complicates up to 3% of all arthroplasties. *Staphylococcus lugdunensis*, although a coagulase-negative staphylococcus, shares adhesins, biofilm formation and tissue-destructive toxins with *S. aureus* and behaves far more aggressively than other skin commensals, with high relapse rates unless the implant is removed.

What’s more, the cure is harder when the soft-tissue envelope is compromised. Elephantiasis nostras verrucosa is a rare consequence of chronic non-filarial lymphoedema, driven by obesity, venous insufficiency and repeated cellulitis, in which dermal fibrosis and hyperkeratosis leave a fragile limb that both predisposes to infection and hampers wound healing.

Antimicrobial therapy, especially if is a long-term regimen, can be hazardous: adverse events occurred in 73 of 80 patients in a prospective PJI series. Cotrimoxazole is a well-recognised cause of drug-induced immune thrombocytopenia that can lead to life threatening bleeding symptoms.

S. lugdunensis knee PJI eradicated despite two life-threatening antimicrobial reactions

CASE PRESENTATION

82 y, female

BMI 35.8 · type 2 diabetes · hypertension

Right TKA loose since 2018

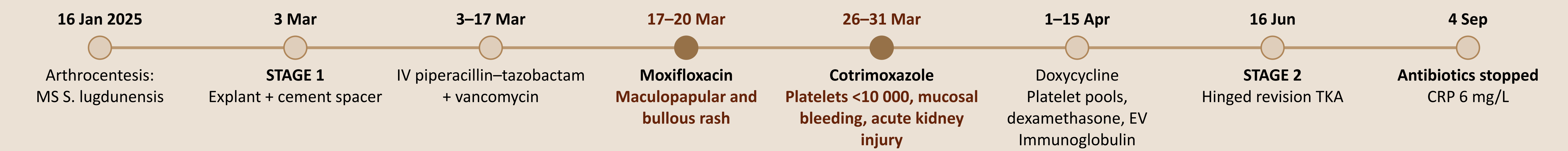
Spontaneously draining sinus

Local status	Elephantiasis nostras verrucosa with severe right lower-limb lymphoedema
Diagnosis	Arthrocentesis: 40 000 cells/μL, 96% neutrophils, ESR 80 mm/h
Pathogen	Methicillin-susceptible <i>Staphylococcus lugdunensis</i>
Interval	105 days between stages, prolonged by the two drug reactions



Figure 1. Right lower limb — elephantiasis nostras verrucosa

CLINICAL COURSE



RADIOGRAPHIC COURSE

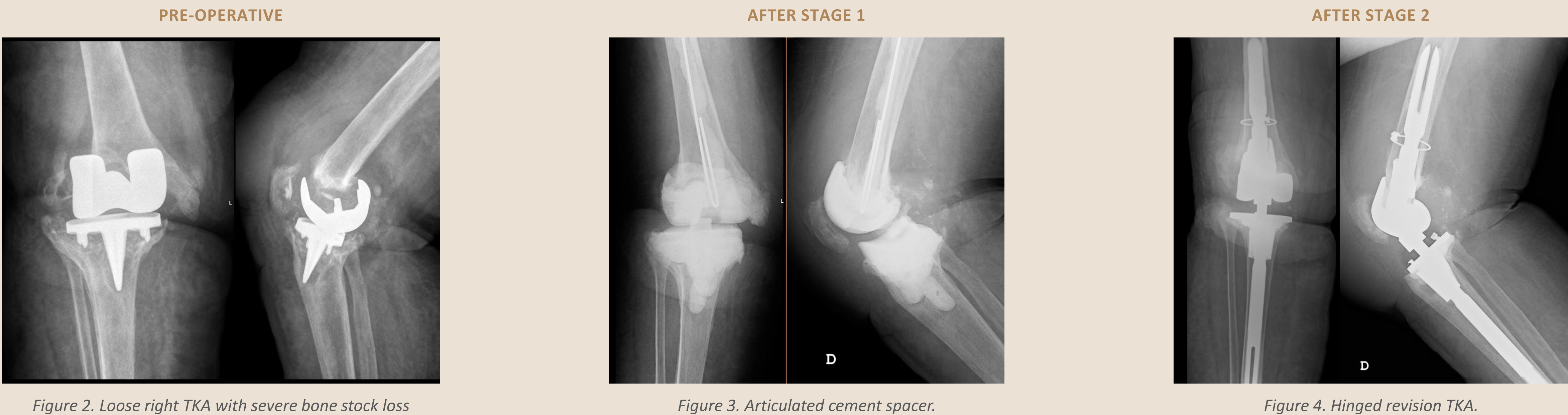
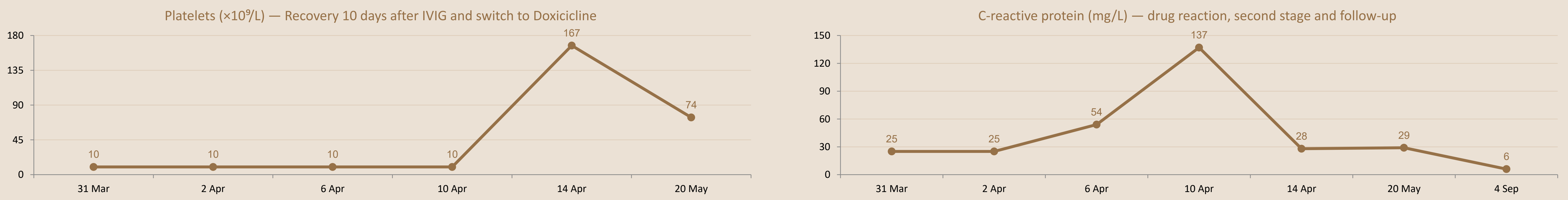


Figure 2. Loose right TKA with severe bone stock loss

Figure 3. Articulated cement spacer.

Figure 4. Hinged revision TKA.

RESULTS



	Stage 1 — 3 Mar 2025	Stage 2 — 16 Jun 2025
Surgery	Implant removal + articulated cement spacer	Hinged revision total knee arthroplasty
Microbiology	Cultures, sonication and PCR negative	All intra-operative cultures negative
Antimicrobials	Pip/tazo + vancomycin for X weeks, then two failed oral agents	Vancomycin, then doxycycline + rifampicin for X weeks
Follow-up (4 Sep 2025): afebrile, no local inflammatory signs, normal white cell count, CRP 6 mg/L, antibiotics stopped, favourable radiographs, patient walking		

CONCLUSIONS

- A two-stage revision TKA eradicated a *S. lugdunensis* knee PJI in an 82-year-old with elephantiasis nostras verrucosa and multiple comorbidities.
- Antimicrobials cut both ways: a bullous rash and then immune thrombocytopenia with platelets <10 000 interrupted a standard-duration course.
- Prompt withdrawal and a switch to doxycycline and rifampicin allowed cure without compromising the surgical plan and any long-term consequences for the patient.