

## INTRODUCTION

Exebacase, a recombinantly-produced lysin has recently: (i) reported Proof of Concept data from a phase II study in *S. aureus* bacteremia; and (ii) demonstrated antibiofilm activity in vitro against *S. epidermidis*. In patients with relapsing MDR *S. epidermidis* prosthetic knee infection (PKI), the only surgical option is prosthesis exchange. In elderly patients who have undergone several revisions, prosthesis explantation could be associated with definitive loss of function and mortality.

## MATERIALS- METHODS

We proposed in our BJI reference regional center "CRIOAc Lyon" to perform arthroscopic DAIR with local administration of exebacase (LysinDAIR) followed by suppressive tedizolid as salvage therapy in elderly patients with recurrent MDR *S. epidermidis* PKI with no therapeutic option ou therapeutic dead-end (for whom revision or transfemoral amputation was not feasible, and for whom no other oral option was available).

Each use was decided in agreement with French health authority and in accordance with the local ethics committee. A written consent was obtained for each patient. Exebacase (75 mg/mL; 30 mL) was administered directly into the joint during arthroscopy.

## RESULTS

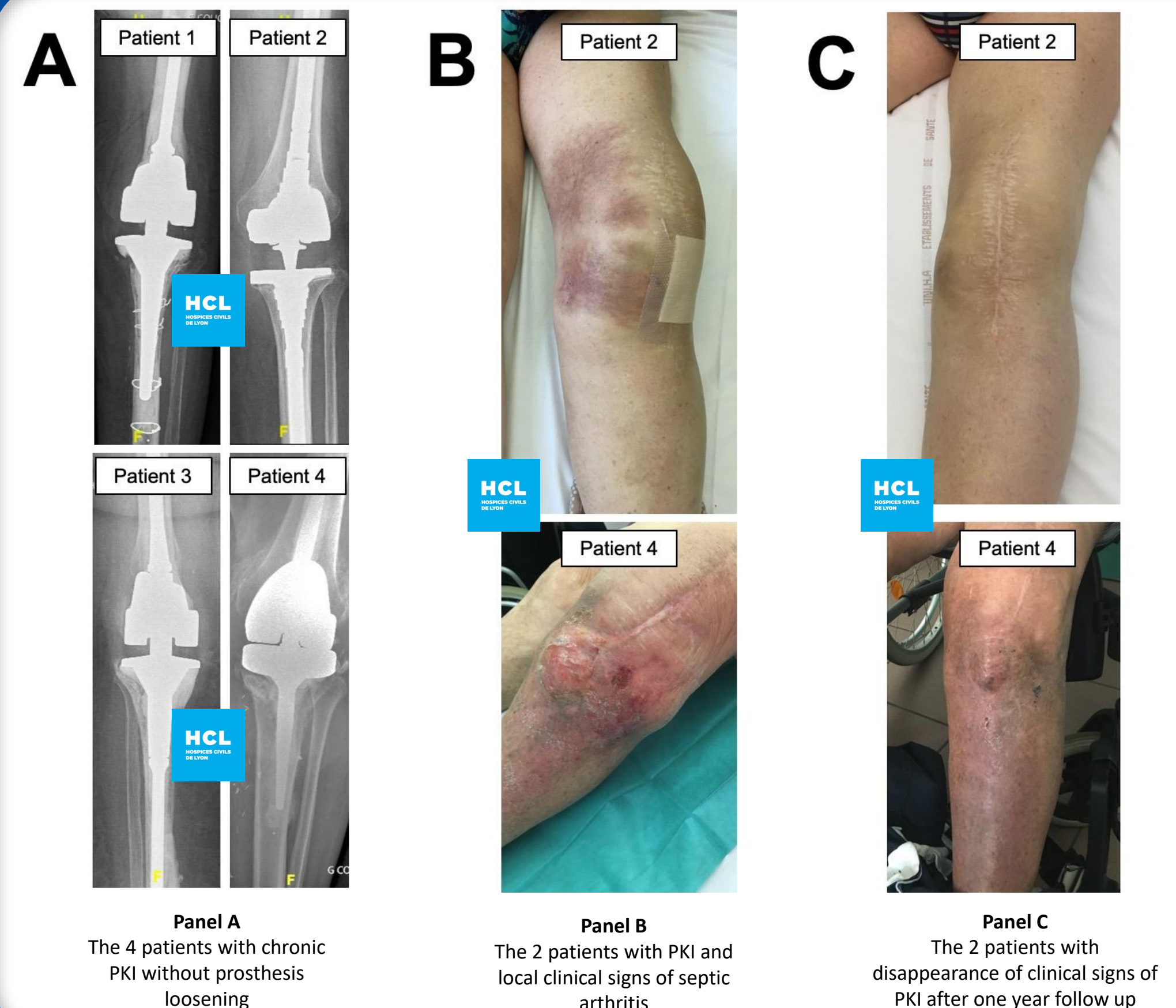
Four patients (79 to 89 yo) were treated with the LysinDAIR procedure. All had several previous prosthetic knee revisions, without prosthesis loosening (**panel A**). Three had relapsing PKI despite suppressive antibiotics following open DAIR. Two had clinical signs of septic arthritis (**panel B**); the two others had fistula.

No adverse events occurred during arthroscopy; all patients received daptomycin 8 mg/kg and linezolid (600 mg bid; 4 to 6 weeks), followed by tedizolid 200 mg/day as suppressive therapy.

At 6 months, recurrence of the fistula occurred in the two patients with fistula at baseline. After 1 year follow up, the outcome was favorable in the two last patients, with disappearance of clinical signs of septic arthritis (**panel C**).

## CONCLUSIONS

Exebacase has the potential to be used as salvage therapy during arthroscopic DAIR in patients with relapsing MDR *Staphylococcus epidermidis* PKI, to improve the efficacy of suppressive antibiotics, and to avoid considerable loss of function.



**Panel A**  
The 4 patients with chronic PKI without prosthesis loosening

**Panel B**  
The 2 patients with PKI and local clinical signs of septic arthritis

**Panel C**  
The 2 patients with disappearance of clinical signs of PKI after one year follow up