

Knee spacer translation with peroneal nerve injury during two-stage knee revision arthroplasty: a rare and major complication

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INTRODUCTION

Periprosthetic infection after total knee arthroplasty is a devastating complication. A two-stage protocol revision with temporary insertion of an antibiotic-laden cement spacer is currently used.

The main functions of an antibiotic-laden cement spacer are to maintain the tension of the soft tissues, the local release of antibiotics, obviate bone loss and prevent haematoma formation.

Although cement spacers are frequently used, there is a lack of data about mechanical complications, incidence and type of related problems in these patients.

AIM

We are reporting a case of a 74-year-old female, with knee spacer dislocation and peroneal nerve injury during two phases knee revision.

METHOD

We describe the clinical, radiological and treatment option during the follow-up of an infected total knee arthroplasty complication. We also show the images and describe the procedure.

RESULTS

A 74-year-old female developed a periprosthetic infection following total knee arthroplasty. She was treated by the current standard of care for late chronic infection, including removal of the prosthesis and cement, thorough debridement, placement of an antibiotic impregnated cement spacer, a course of intravenous antibiotics, and a delayed second stage revision arthroplasty. During de follow-up to the second stage revision, she sudden started to complain about worsening knee pain, with motor and sensitive dysfunction related to peroneal nerve palsy. The x-ray showed a spacer tilting and mediolateral translation. Therefore, 16 months after the previous procedure, we performed a knee intramedullary arthrodesis and peroneal nerve decompression in July 2017. Six months after surgery ,the patient had an established arthrodesis, without knee pain, but maintained clinical complaint of weakness of the ankle dorsiflexors and evertors, and had to use a drop foot brace and crutches for walking.

CONCLUSIONS

Although two-stage revision currently is the ‘gold standard’ treatment for chronic infections of total knee arthroplasty, the use of antibiotic-laden cement spacers may be associated with severe complications, namely peroneal nerve injury.

There is no consensus in the literature about the ideal timing for the revision, however, it should be as soon as clinically and analytic possible, to avoid complications associated with this intermediate phase, that is not negligible.



Fig. 1 Infected right knee arthroplasty, previous to revision procedure



Fig. 2 Cement spacer following prosthesis removal. Figures above in post surgical procedure, at the right prior to the arthrodesis. Here we can see spacer tilting and varus deformity, leading to peroneal nerve dysfunction



Fig. 3 Images following arthrodesis with endomedular system, with correction of the deformity and length.

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