

Outcomes of the Double DAIR Protocol for Acute PJI: An Updated Series of 131 Cases

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INTRODUCTION:

Recently, the double debridement with implant retention (DAIR) technique for the treatment of acute periprosthetic joint infection (PJI) has gained traction following promising reports in the literature. The purpose of this study was to examine the outcomes of this protocol in a large series of patients that received a double DAIR for the management of acute PJI.

METHODS:

This retrospective study identified all patients that underwent a double DAIR protocol for the management of acute-PJI (<28 days from either index arthroplasty or symptom onset) at a single institution. Acute-PJI was defined using the 2013 Musculoskeletal Infection Society criteria. All patients had a minimum of 1-year follow-up. The primary outcome of this study was treatment failure defined as either reoperation secondary to infection at latest follow-up or mortality within 1-year following surgery.

RESULTS:

131 patients (71 knees, 60 hips) were included in the final analyses. At a mean follow-up time of 4.5 ± 3.8 years, 104 (79.4%) patients were found to have experienced treatment success. There was no difference in demographic data and time from initial to second debridement (5.7 ± 1.9 days vs. 6.1 ± 2.2 days, $p=0.129$) between the two groups. However, patients whose index arthroplasty procedure was a primary ($n=89$) had a higher rate of treatment success (83.1% vs. 71.4%, $p=0.122$), when compared to those whose initial procedure was a revision ($n=42$).

DISCUSSION AND CONCLUSION:

We found that at a mean follow-up time of 4.5 years, four out of every five acute PJI patients treated with a double DAIR protocol remained infection free. When examining only those whose index procedure was a primary, 83.1% of double DAIR patients were found to have experienced treatment success at latest follow-up. The findings of the present study add to the growing body of literature demonstrating favorable outcomes in acute PJI patients managed with a double DAIR.