

Double DAIR Technique for Chronic Periprosthetic Joint Infection: A Reasonable Salvage Option?

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INTRODUCTION:

Recently, the double debridement and implant retention (dDAIR) technique for the treatment of acute periprosthetic joint infection (PJI) has gained traction following promising reports in the literature. However, there remains a paucity of data in the literature on the efficacy of this protocol in patients with chronic PJI. The purpose of this study was to examine the outcomes of patients that received a dDAIR for the management of chronic PJI.

METHODS:

This retrospective study identified all patients that underwent a dDAIR for chronic PJI (>28 days from symptom onset or index arthroplasty) at a single institution. PJI was defined as per the 2013 Musculoskeletal Infection Society criteria. The primary outcome of this study was treatment failure defined as reoperation secondary to infection at a minimum of 1-year follow-up.

RESULTS:

28 patients (14 knees, 14 hips) were included in the final analyses. Of these, 9 (32.1%) patients had a documented history of a failed two-stage exchange for chronic PJI. At a mean follow-up time of 5.4 ± 3.3 years, 20 (71.4%) patients were found to have experienced treatment success. Of the 9 patients that failed treatment, 5 (62.5%) underwent a subsequent two-stage exchange arthroplasty and 3 (37.5%) went on to have a repeat DAIR procedure. There was no difference in demographics or duration between the first debridement and second debridement (6.9 ± 1.4 days vs. 6.2 ± 1.8 days, $p=0.322$) between the two groups.

DISCUSSION AND CONCLUSION:

Based on our preliminary findings, it appears that the double DAIR technique can be a suitable salvage option and may allow for more effective suppression in chronic PJI patients that are not suitable for an exchange arthroplasty procedure. Notwithstanding, future studies with larger sample sizes are needed in order to validate our findings.