

PROMs After Two-Stage Knee Revision for PJI are Comparable to Aseptic Knee Revisions

Tianyi David Luo, Evan R Deckard, Leonard T Buller, R Michael Meneghini

INTRODUCTION: There is recent interest in one-stage revision for periprosthetic joint infection (PJI) following total knee arthroplasty (TKA). Proponents of the one-stage approach often cite the morbidity associated with the two-stage procedures; however, limited data exist on patient-reported outcome measures (PROMs) in the early recovery period. This study aimed to evaluate PROMs specifically during the early period of two-stage revision for knee PJI compared to a similar group of aseptic revision TKAs.

METHODS: This was a single-center retrospective review of 400 revision TKAs performed between 2010 and 2023. Sixty-nine patients underwent two-stage revision with articulating spacers for PJI. This group was compared to patients who underwent aseptic revision for instability (N=169), aseptic loosening (N=119), and arthrofibrosis (N=30). PROMs for the PJI group were evaluated during the inter-stage period and at final followup. Prospectively collected PROMs included the UCLA Activity Score, KOOS Jr, and Knee Society Scores, with significance set at $P<0.05$.

RESULTS: At a mean of [2.2 months \[DL1\]](#) following first-stage resection, the PJI group had significantly lower UCLA scores ($P<0.001$), KOOS Jr ($P<0.001$), and Knee Society pain scores for level walking and stair climbing (both $P<0.001$) compared to aseptic revision patients assessed at a mean of 4.0 months postoperatively. However, at mean [final followup of 2 years\[DL2\]](#), UCLA and Knee Society scores were similar between groups, while KOOS Jr scores were significantly higher in the two-stage PJI group ($P<0.001$). Patient satisfaction was also significantly greater in the two-stage TKA PJI group (81.6%) compared to patients revised for arthrofibrosis (68.0%) or instability (61.7%).

DISCUSSION AND CONCLUSION: As might be expected, PROMs during the inter-stage period of two-stage revision for knee PJI are worse than early postoperative PROMs following aseptic revision. However, following reimplantation long-term outcomes and patient satisfaction are comparable or superior, supporting the efficacy of the two-stage approach in achieving functional recovery.