184 Revision THAs with Pelvic Discontinuity: Advancements with Cup-Cage and Custom Triflange Constructs

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INTRODUCTION:
Historic series have demonstrated the importance of construct rigidity in the treatment of pelvic discontinuities, but there remains limited data comparing different constructs, especially contemporary cup-cages and custom triflange components. The aim of this study was to evaluate reconstructive constructs with emphasis on implant survivorship, radiographic results, complications, and clinical outcomes.
METHODS: We reviewed 184 revision THAs with unilateral pelvic discontinuity at a single institution between 1998-2022. Mean age was 66 years, 83% were female, and mean BMI was 29 kg/m^2. Constructs included uncemented cup and plating (n=66, 36%), cup-cages (n=59, 32%), jumbo uncemented acetabular components (n=30, 16%), conventional anti-protrusio cages (n=16, 9%), and custom triflanges (n=13, 7%). Since 2013, 73% of cases were treated with either a cup-cage or custom triflange. Acetabular distraction (n=36, 20%) and porous augments (n=33, 18%) were used as adjuncts. Mean follow-up was 8 years.
RESULTS: The 5-year survivorships free of revision for aseptic loosening, any revision, and any reoperation were 92%, 79%, and 75%. Of 43 revisions, the most common indications were aseptic loosening (n=15) and dislocation (n=15). For each construct, the 5-year survivorships free of revision for aseptic loosening were 100% (triflange), 94% (cup-cage), 92% (uncemented jumbo acetabular component), 90% (plating), and 86% (conventional anti-protrusio cage). Radiographic analysis demonstrated discontinuity healing in 85% of unrevised patients. Of the 15 re-revisions for aseptic loosening, 92% involved loss of fixation from inferior hemipelvis. There were 63 complications with dislocation (n=32), nerve palsy (n=10), and wound problems (n=9) most common. Mean Harris hip scores improved from 51 to 70 at 5 years.
DISCUSSION AND CONCLUSION: In this series, the 5-year survivorship free from aseptic loosening was very good (92%), especially with contemporary techniques like custom triflange (100%) and cup-cage constructs (94%). Survivorship free from any revision (79%) and reoperation (75%) remain lower due to dislocation and infection.