

Acetabular Distraction for Chronic Pelvic Discontinuities: A Mid-term Follow-Up

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INTRODUCTION:

Pelvic discontinuity after total hip arthroplasty (THA) is a challenging complication involving separation of the ilium and ischium. The acetabular distraction technique utilizes pelvic elastic recoil to stabilize acetabular components after which the pelvis is unitized with superior and inferior screws through the cup or attached augments. We previously reported our early experience with this technique in 31 patients. This study evaluated implant survivorship, complications, radiographic results, and clinical outcomes of the technique at mid-term follow-up in the largest single-institution series to date.

METHODS:

We identified 48 THAs (46 patients) that underwent acetabular distraction for chronic pelvic discontinuity at a single institution between 2005-2022. The mean age was 67 years, mean BMI was 31 kg/m², and 79% were female. Bone loss was mostly Paprosky 3B (73%) and 2C (17%). Mean distraction was 6mm and median cup diameter was 68mm. Supplemental cages or augments were used in 62% and 38% of cases, respectively. Constructs included a median of 10 screws, including 2 ischial screws. Mean follow-up was 5 years.

RESULTS: The 5-year survivorships free of re-revision for aseptic loosening of the acetabular component, any acetabular re-revision, any re-revision, and any reoperation were 87%, 83%, 76% and 70%, respectively. There were 9 acetabular re-revisions, mostly for aseptic loosening (n=6). There were 5 partial sciatic nerve palsies, with one undergoing nerve decompression. Three patients dislocated, with one requiring revision. At final radiographic follow-up, acetabular component osteointegration occurred to the ilium in 97% and ischium in 58% with 70% of discontinuities radiographically healed. One unrevised acetabular construct was radiographically loose. Mean Harris hip score was 64 at 5 years.

DISCUSSION AND CONCLUSION: At mid-term follow-up, acetabular distraction for chronic pelvic discontinuities demonstrated durable 5-year survivorship, with 87% of patients free from re-revision for aseptic acetabular loosening and 83% from any acetabular re-revision.