Uncemented Jumbo Acetabular Components in Revision THAs: Excellent 10-Year Survival in 392 Cases

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INTRODUCTION: Jumbo acetabular components are commonly used in revision total hip arthroplasties (THAs). Prior studies included both cemented and uncemented components, often with cages, augments, or early implant designs. This study evaluated survivorship, radiographic results, and clinical outcomes of contemporary uncemented jumbo acetabular components fixed only with screws and press-fit for aseptic revision THAs in the largest series to date.

METHODS:

A total of 392 hips (385 patients) underwent aseptic revision THA using uncemented jumbo hemispherical acetabular components (≥62mm in women, ≥66mm in men) with highly crosslinked polyethylene liners and screw fixation at a single institution between 2005-2020. Patients with pelvic discontinuities or non-screw adjuvant fixation (e.g. augments, cages) were excluded. Mean age was 68 years, mean BMI was 30 kg/m^2, and 50% were female. Paprosky classification was mostly 2C (32%) and 3B (23%). Components were tantalum (75%) and titanium porous-coated (25%) with a median of 5 screws. Mean follow-up was 8 years.

RESULTS: Ten-year survivorships free of acetabular re-revision for aseptic loosening and any acetabular re-revision were 99% and 93%, respectively. There were 22 acetabular re-revisions, mostly for dislocation (n=10) and PJI (n=6). There were 2 acetabular re-revisions for aseptic loosening (one tantalum, one titanium), both occurring within 2 weeks of dislocation/reduction events. Ten-year survivorships free of any re-revision and any reoperation of the THA were 89% and 86%, respectively. At final follow-up, 8 unrevised acetabular components (3%) were radiographically loose. Mean Harris hip score at 10 years was 80.

DISCUSSION AND CONCLUSION:

In the largest series of contemporary uncemented jumbo acetabular components fixed only with screws and press-fit, the 10-year survivorships free of acetabular re-revision for aseptic loosening and any acetabular re-revision were excellent at 99% and 93%, respectively. Acetabular re-revisions were mostly for dislocation and PJI. Only 3% of unrevised patients had radiographic evidence of loosening.