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Comparative Clinical Outcomes of Reverse Shoulder Arthroplasty in Rotator Cuff Arthropathy vs. Shoulder Osteoarthritis with Intact Rotator Cuff, A Retrospective Comparative Study

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Introduction and Background

Shoulder pain is a leading musculoskeletal complaint, with many patients experiencing persistent issues. Reverse total shoulder arthroplasty (RTSA) is increasingly used to treat severe osteoarthritis (OA) and rotator cuff tear arthropathy (CTA), yet comparative outcomes remain unclear. The purpose of this study was to evaluate the hypothesis that individuals with glenohumeral OA and those with CTA would have similar clinical results after RTSA.

Material and Method

A retrospective study compared two patient groups: one with OA and intact rotator cuffs, and another with chronic, massive rotator cuff tears. Patients with prior surgery or other severe pathologies were excluded. Thirty-four patients (17 per group) were analysed for demographics, surgical details, and functional outcomes, including Constant-Murley (CMS) and ASES scores.

Results

Baseline demographics were comparable. At three months, both groups improved, but the OA group reported significantly lower pain scores (VAS, $p=0.026$). By six months, the OA group demonstrated superior Constant scores (76.53 vs. 66.15, $p=0.020$) and lower VAS pain ($p=0.044$). At nine and twelve months, functional scores (ASES, Constant, SPADI) were comparable. However, external rotation remained significantly better in the OA group at twelve months ($p=0.013$). No complications occurred in either group.

Conclusions

Reverse total shoulder arthroplasty enhances functionality in both osteoarthritis (OA) and cuff tear arthropathy (CTA), demonstrating excellent short-term safety profiles with zero complications. While OA patients showed earlier pain relief and superior midterm function, along with better external rotation, most functional outcomes equilibrated by one year. These findings support RTSA as a reliable option for both conditions, with rotator cuff integrity possibly affecting the recovery process and particular functional results. Larger studies with extended follow-up are needed to assess long-term durability.

