

Reverse Shoulder Arthroplasty for Proximal Humerus Fractures and Reverse Shoulder Arthroplasty for Elective Indications Should Have Separate Current Procedural Terminology Codes

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INTRODUCTION: Reverse total shoulder arthroplasty (RSA) for fracture and arthropathy indications share a current procedural terminology (CPT) code and 90-day Centers for Medicare and Medicaid Services (CMS) bundled payment. However, RSA for fracture compared to arthropathy indications often require a different level of urgency, technical demands on surgeons, and hospital systems resource utilization. We seek to compare 90-day perioperative resource utilization and short-term functional and pain outcomes between RSA for fractures and arthropathy indications. We hypothesize that patients treated with RSA for arthropathy have improved postoperative functional outcomes, lower complication rates, and less resource utilization compared to RSA for fracture.

METHODS:

A total of 383 RSA were retrospectively reviewed from January 2011 to 2020. Demographics, operative time, length of stay (LOS), discharge disposition, early (within 90 days) and late (after 90 days) all-cause revisions were investigated. In addition, active forward flexion (aFF) and active adducted external rotation (aER) range of motion (ROM) at 2, 6, and 12 months were compared.

RESULTS:

In total, 197 RSA were included with 28 for fracture and 169 for arthropathy indications after exclusions and at least 1-year follow up. Age and BMI did not significantly differ between groups ($p > 0.05$). The average RSA operative time was longer for fracture with 143.2 ± 33.7 vs. 108.2 ± 33.9 ($p < 0.01$). LOS was longer for RSA for fracture compared to arthropathy with a mean of 4.0 ± 3.6 days vs. 1.8 ± 2.3 days ($p < 0.01$). The fracture group was more likely to be discharged to a skilled nursing facility or an inpatient rehab ($p < 0.01$). All-cause revision < 90 days was 18% versus 4% ($p = .079$) for fracture and arthropathy respectively. All-cause revision within 2 years was 32% and 9% respectively ($p = .02$). Differences in postoperative ROM for fracture versus arthropathy were significant for aFF at 2 months ($95.5 \pm 36.7^\circ$, $117.0 \pm 32.3^\circ$) and 6 months ($110.9 \pm 35.2^\circ$, $129.2 \pm 28.3^\circ$), aER at 6 months ($20.0 \pm 20.9^\circ$, $33.1 \pm 12.3^\circ$), and aER at 12 months ($23.3 \pm 18.1^\circ$, $34.5 \pm 13.8^\circ$) ($p < 0.05$). No difference in VAS pain score was noted between groups.

DISCUSSION AND CONCLUSION: RSA for fractures and arthropathy indications share a CPT code, but have an unequal increase in surgical complexity, hospital resource utilization, and trend toward higher early revision rate within the 90-day period. This may be important to consider when determining future reimbursement models or revised CPT codes.