Patients Undergoing Reverse Shoulder Arthroplasty for Proximal Humeral Fracture Continue to Improve Through 2 Years-Postoperatively

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INTRODUCTION:

The literature to-date has demonstrated that patients undergoing reverse shoulder arthroplasty (RSA) for proximal humeral fractures (PHF) have worse outcomes than for other diagnoses. However, the time over which these patients recover has not been clearly established. This information is critical for counseling patients, planning further management during the postoperative course, and return to work evaluations. The authors hypothesized that patients would recover gradually after RSA for PHF, with patients continuing to improve after 6 months and 1 year postoperatively.

METHODS:

A prospective, multicenter registry was queried for all patients that underwent RSA with a diagnosis of proximal humeral fracture. Patients with preoperative, 6 month, 1 year, and 2 year postoperative American Shoulder and Elbow Society (ASES) scores were included. Clinically Significant Outcomes (CSOs) for the ASES score included the patient-acceptable symptom state (PASS) as established by Gowd et al.[1] as well as the percent of maximum possible improvement achieved (%MPI).

RESULTS:

A total of 130 patients had complete data. Mean ASES score was 76.5 at 1 year and 79 at 2 years postoperatively ($p = 0.06$). Change in ASES from preoperatively was 43.7 and 46.2, respectively ($p = 0.06$). Despite no statistically significant change in overall ASES scores, %MPI improved from 62.7% to 67.5% for an average 5% improvement between 1 and 2 years postoperatively ($p = 0.02$) (Figure 1). Out of 70 patients that had not reached the PASS at 1 year, 19 (27%) went on to reach it by 2 years.

DISCUSSION AND CONCLUSION:

Establishing expectations and a clear timeline of recovery is critical for patient counseling and return to work evaluations after proximal humerus fractures. The present study demonstrates that while the mean ASES scores do not change between one and two years postoperatively, in the group of patients that have not reached the PASS threshold in 1 year greater than 1in 4 patients went on to reach it by 2 years. Further study is needed to identify this group of patients that recovers more gradually and determine factors that may contribute to this.