

## EP.06.022

# INFLUENCE OF ACROMIOCLAVICULAR JOINT ARTHRITIS ON OUTCOMES AFTER REVERSE TOTAL SHOULDER ARTHROPLASTY

*B. Schneider*<sup>1</sup>, *K. Hao*<sup>1</sup>, *J. Taylor*<sup>2</sup>, *B. Schoch*<sup>3</sup>, *J. Wright*<sup>2</sup>, *T. Wright*<sup>2</sup>, *M. Pazik*<sup>2</sup>, *J. King*<sup>2</sup>

<sup>1</sup> College of Medicine, University of Florida, Gainesville, USA

<sup>2</sup> Department of Orthopaedic Surgery & Sports Medicine, University of Florida, Gainesville, USA

<sup>3</sup> Department of Orthopaedic Surgery, Mayo Clinic, Jacksonville, USA

**Background:** Although substantial motion at the acromioclavicular joint (ACJ) occurs during overhead shoulder motion, the influence of ACJ arthritis on postoperative outcomes of patients undergoing rTSA is unclear. We assessed the influence of the presence and severity of ACJ arthritis on clinical outcomes after primary rTSA.

**Methods:** We conducted a retrospective review of a prospectively-collected shoulder arthroplasty database of patients that underwent primary rTSA with a minimum 2-year clinical follow-up. Imaging studies of included patients were evaluated to assess the ACJ for pathology; severity was based upon size and location of osteophytes. Severe ACJ arthritis was characterized by large osteophytes ( $\geq 2$ mm). When available, computed tomography and magnetic resonance imaging were used to assess the ACJ. Range of motion (ROM) and clinical outcome scores (ASES, Constant, SPADI, SST, UCL scores) were assessed both preoperatively and at latest follow-up and compared between patients with varying severity of ACJ arthritis. Multivariable linear regression models were used to determine whether increasing severity of ACJ arthritis was associated with poorer outcomes.

**Results:** The mean age at surgery was  $70.9 \pm 7.7$  years. 55% were female. The mean follow-up was  $4.1 \pm 3.3$  years. Preoperatively, there were no difference in ROM and scores based on the severity of ACJ pathology. There were no differences in ROM postoperatively based upon the severity of ACJ arthritis, except for greater improvement in active internal rotation in patients with normal or grade 1 ACJ arthritis versus grade 2 and 3 ( $3 \pm 2$  vs.  $1 \pm 2$  and  $1 \pm 3$ ,  $P=0.029$ ). Patients with ACJ arthritis and osteophytes  $\geq 2$ mm had less favorable SPADI scores, which corresponds to greater pain in these patients ( $-49.3 \pm 21.5$  vs  $-41.3 \pm 26.8$ ,  $P=0.015$ ). On multivariable analysis, increased severity of ACJ arthritis was not independently associated with poorer postoperative ROM or outcome scores.

**Conclusions:** Overall, our results demonstrate that greater ACJ arthritis severity is not associated with poorer ROM and outcome scores following primary rTSA. Therefore, patients with high grade ACJ arthritis can safely undergo rTSA and expect similar outcomes to patients without ACJ arthritis. However, patients with large ACJ osteophytes ( $\geq 2$ mm) may have greater pain postoperatively.