

## **Prior Shoulder Arthroscopic Rotator Cuff Repair Is Associated with Worse Outcomes following Primary Reverse Total Shoulder Arthroplasty at a Minimum Two-Year Follow Up**

Garrett Jackson<sup>1</sup>, Daniel J Kaplan<sup>2</sup>, Christopher Brusalis<sup>3</sup>, Sachin Allahabadi, Nikhil N Verma<sup>4</sup>

<sup>1</sup>Palm Beach Shoulder Service At Atlantis Orthopaedi, <sup>2</sup>New York University Langone Medical Center, <sup>3</sup>Rush University,

<sup>4</sup>Midwest Orthopedics At Rush

**INTRODUCTION:** This investigation aimed to compare patient-reported outcomes following reverse total shoulder arthroplasty (RTSA) in patients with and without previous ipsilateral arthroscopic rotator cuff repair (RCR) at a minimum 2-year follow up.

**METHODS:** All patients who underwent RTSA for either glenohumeral osteoarthritis or rotator cuff arthropathy from June 2007 to July 2018 by a single institution were retrospectively identified through a prospectively collected database. Patients were separated into two cohorts: 1) patients who underwent RTSA following prior ipsilateral arthroscopic RCR and 2) control patients who underwent RTSA without previous shoulder surgery. Both groups were propensity-matched based on sex. Patient-reported outcomes (PROs), including the Visual Analog pain Scale (VAS), Simple Shoulder Test (SST), American Shoulder and Elbow Surgeons score (ASES), and Functional outcome score were measured preoperatively and at a minimum of two years postoperatively.

**RESULTS:** One-hundred (n=50 RTSA with prior arthroscopic RCR, n=50 control RTSA) were analyzed (Table 1). Mean duration of follow up for patients with prior ipsilateral arthroscopic RCR and control patients was  $51.7 \pm 18.7$  months (range, 51.7 – 99.4 months) and  $40.3 \pm 20.8$  months (range, 25.7 – 110.2 months), respectively ( $p = 0.394$ ). All PROs improved postoperatively in both groups (Table 2). Improvements in PROs among patients with prior ipsilateral arthroscopic RCR were diminished relative to patients without prior shoulder arthroscopy, including SST ( $p < 0.0001$ ), ASES ( $p < 0.0001$ ), Functional outcome score ( $p < 0.0001$ ), and VAS ( $p = 0.001$ ) scores (Table 3). Four patients with prior ipsilateral arthroscopic RCR required revision RTSA compared to no patients without prior shoulder arthroscopy ( $p = 0.038$ ).

**DISCUSSION AND CONCLUSION:** Patients who underwent RTSA following prior ipsilateral arthroscopic RCR had inferior two-year postoperative clinical outcomes scores and a higher rate of revision RTSA compared to patients who underwent RTSA without prior arthroscopic RCR.