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Does Prior Acromioplasty Increase the Incidence of Acromial Fracture Following Reverse Total Shoulder Arthroplasty? A Retrospective Matched Cohort Analysis

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Introduction: Reverse total shoulder arthroplasty (RTSA) is an effective treatment option for multiple shoulder pathologies. Arthroscopic acromioplasty is a treatment for subacromial impingement. RTSA can place excess stress on the acromion. No studies have evaluated outcomes following RTSA among patients with prior acromioplasty. The purpose of this study was to report outcomes in patients following RTSA who have had a prior acromioplasty. The authors hypothesized patients with prior acromioplasty who undergo RTSA will have significant improvements in clinical outcomes with no increased risk of acromial fracture.

Methods: Patients from a single institution who underwent RTSA with a history of acromioplasty from 2009 to 2017 with two-year follow up were identified. Clinical outcome scores were obtained using ASES, SST, VAS, and SANE surveys. X-rays and charts will be reviewed to determine if patients sustained an acromion fracture following RTSA. Patients will be matched to a cohort of patients who underwent RTSA without a prior acromioplasty. These groups will be compared to determine any differences in clinical outcome scores or number of postoperative acromial fractures.

Results: 45 patients were included. Average outcomes scores were: ASES: 70.7%, SST: 62.1%, VAS: 2.4, and a SANE: 60.6%. On average, active external rotation improved from 33.1° to 37.1° and forward elevation improved from 92.2° to 136.1°.

Discussion: While data collection in the matched cohort remains ongoing to compare the outcomes of RTSA with prior acromioplasty to the outcomes of RTSA alone, initial data suggests history of acromioplasty does not negatively impact RTSA outcomes.