a statistically significant difference in any of the outcome measures. However, at latest follow-up rTSA patients with scapula notching had significantly worse outcome scores according to all 5 metrics as well as forward flexion and abduction (Table 1). Evaluation of the pre- to post- operative improvement also demonstrated statistically significant differences in clinical outcomes between the notching and no notching cohorts as depicted in Table 2.

Discussion and Conclusion: This study identifies a 16% notching rate after a minimum of five years follow up. Based on our analysis, inferior scapular notching is associated with a statistically significant degradation of clinical outcomes and range of motion compared to patients with an absence of scapular notching. Based on this, it is advisable to limit the risk of inferior scapular notching through patient selection, technique variation and implant choice.

Reference

1. Mollon B, Mahure SA, Roche CP, Zuckerman JD. Impact of scapular notching on clinical outcomes after reverse total shoulder arthroplasty: an analysis of 476 shoulders. J Shoulder Elbow Surg 2017;26:1253-61. http://dx.doi.org/10.1016/j.jse.2016.11.043

Paper #14 CHARACTERISTICS OF PATIENTS WHO RATE THEIR SUBJECTIVE SATISFACTION AS UNCHANGED OR WORSE AFTER REVERSE TOTAL SHOULDER ARTHROPLASTY

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Introduction: Patient reported outcome measures are an important determinant of surgical results as objective measures of function may not correlate with patient satisfaction. The prevalence of reverse total shoulder arthroplasty (rTSA) has increased over the past several years and for many surgeons now represents a majority of arthroplasty cases. It is important to understand who is at risk for unsatisfactory outcomes after rTSA so that surgeons can appropriately counsel patients as part of a shared decision-making process. The purpose of this study was to compare characteristics of patients who reported to be unchanged or worse to those who reported to be better or much better after rTSA.

Methods: Data was derived from a prospective registry of patients who underwent primary rTSA with a minimum 2-year follow-up. The same implant was used in all cases (Equinoxe, Exactech, Inc.). This registry collects information on demographics, diagnosis, comorbidities, implant information, preoperative pain and function and postoperative pain and function. Patients are also asked to rate their subjective satisfaction from which patients were divided into 2 groups: those who rated themselves as worse or unchanged (Unimproved Group, UG) and those who rated themselves as better or much better (Improved Group, IG). Groups were compared for differences using a 2-tailed t-test with significant set at $P < .05$.

Results: There were 851 patients overall including 768 (90%) in IG and 83 (10%) in UG. There were no differences in age, gender, ethnicity or BMI between groups. Patients in IG were more likely to report no comorbidities (43% vs 25%, $P = .001$), while those in UG were more likely to report a history of coronary artery disease (22% vs 10%, $P = .03$) and diabetes (17% vs 10%, $P = .04$). Patients in IG were more likely to have a diagnosis of osteoarthritis (56% VS 41%, $P = .03$). Patients in UG were more likely to have rheumatoid arthritis (10% vs 3%, $P = .03$). There were no differences between groups for diagnoses of rotator cuff tear or cuff tear arthropathy. Patients in UG were significantly more like to have undergone prior surgery (42% vs 24%, $P = .0001$). There were no differences in any implant configuration between groups. Patients in UG were much more likely to report residual moderate to severe pain (48% vs 6%, $P < .001$) and 25% of patients in UG reported pain that was unchanged or worse after rTSA. Outcome scores were significantly worse for all measures for patients in the UG.

Discussion: This study demonstrates that up to 10% of patients rate themselves as unchanged or worse after surgery. These patients are more likely to have had prior surgery and more likely to have certain comorbidities. Patients with a diagnosis of osteoarthritis are more likely to rate themselves as better. While subjective function scores and abduction did not differ between groups preoperatively, those in UG did have significantly lower scores on all other preoperative measures. Interestingly, while outcomes were significantly worse for all measures in WG, there was improvement in all measures despite patients subjectively being worse or unchanged (Table 1).

Paper #15 PRIMARY REVERSE SHOULDER ARTHROPLASTY USING CONTEMPORARY IMPLANTS IS ASSOCIATED WITH VERY LOW REOPERATION RATES

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Introduction: The early results of reverse shoulder arthroplasty (RSA) were influenced to some extent by the use of first generation implants as well as surgeons' learning curves, resulting in relatively high reoperation rates. As experience has been gained with the procedure and new implants have been introduced, reasons for reoperation and complication rates may have changed. The purpose of this study was to quantify the burden and identify the indications for reoperation after primary RSA using contemporary implants and techniques.

Methods: A retrospective review of 1,649 primary RSAs implanted consecutively during a 7-year period (2009-2015) at a single institution was conducted. Study dates were chosen to minimize learning curve associated bias and to have a minimum follow-up of 2 years. All arthroplasties were performed by five fellowship trained shoulder

Table 1

	UG Preop	IG Preop	*P*	UG Postop	IG Postop	*P*
Abduction	66 + 31	70 + 33	NS	91 + 31	114 + 27	.0001
Forward Elevation	79 + 35	88 + 38	NS	109 + 36	141 + 24	.0001
External Rotation	11 + 20	16 + 22	.02	26 +20	35 + 17	.0001
Pain Score	6.7 + 2.2	5.8 + 2.2	.003	4.1 + 3.0	0.9 + 1.7	.0001
Function Score	3.4 + 2.1	3.7 + 2.0	NS	5.5 + 2.8	8.2 + 1.7	.0001
SST	2.7 + 2.4	3.6 + 2.7	.003	6.1 + 3.8	10.3 + 2.2	.0001
ASES	31 + 15	37 + 15	.001	54 + 27	85 + 15	.0001