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Paper #152

Postoperative Recovery Comparisons of Total, Reverse, and Revision Reverse Shoulder Arthroplasty

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Summary:
Primary anatomic TSA has superior early pain relief and functional outcomes when compared to primary and revision RSA.

Abstract:

Background

Within the last decade the reverse shoulder arthroplasty (RSA) has been shown to be largely successful at treating a variety of pathologies. With improving technology and surgical technique, the outcomes associated with the reverse arthroplasty have continued to improve. However, there is a paucity of studies comparing the postoperative recovery of primary and revision RSA to anatomic total shoulder arthroplasty (TSA). The purpose of this study is to comparing primary TSA, primary RSA and revision RSA.

Methods

Using the surgical outcomes system (SOS) database (Arthrex Inc., Naples, FL), we assessed the postoperative recovery outcomes for all patients who had outcomes recorded at least 1 year after either a primary or revision RSA, or primary TSA. The time points analyzed included, preoperative and postoperative (2 weeks, 6 weeks, 3 months, 6 months, 1 year, 2 years, and 3 years). The outcomes analyzed included visual analog score (VAS), American shoulder and elbow score (ASES), VR-12 mental and physical, simple shoulder test (SST), and SANE.

Results

Overall, 980 patients underwent primary (n=882) or revision (n=98) RSA and primary TSA (n=959). The mean age for primary TSA, primary RSA and revision RSA was 64.3, 70.6, and 66.8, respectively. The mean BMI for primary TSA, primary RSA and revision RSA was 31 30, and 30, respectively. Patients undergoing primary TSA had improved VAS scores compared to primary and revision RSA at all time points ($p<0.01$), while primary RSA had improved pain levels compared to revision RSA at every time point ($p<0.04$). At the 6 month, 1 year, and 2-year time points, when compared to primary and revision RSA, primary TSA had better VAS pain, ASES function and index, SANE, SST and VR-12 physical scores ($p<0.001$). When compared to revision RSA, primary had improved VAS, ASES function and index, and SANE scores at 6 months, 1 year, and 2 years ($p<0.02$).

Conclusions

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Primary anatomic TSA has superior early pain relief and functional outcomes when compared to primary and revision RSA, while primary RSA has better early function and pain relief compared to revision RSA. This information can be used to educate patient expectations. Although these results when comparing primary TSA to RSA might reflect differences in demographics and pathology, this serves as a foundation for future studies examining early recovery after these common shoulder reconstructions.