

Oral Session 13

Research Study

Title: "Total Shoulder Arthroplasty Postsurgical Complications and Inpatient vs. Outpatient Status"

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Introduction and Objective. Healthcare systems seek safe and cost-effective alternatives to procedures that traditionally require inpatient (IP) stay. While total hip and knee arthroplasties have successfully transitioned from IP to outpatient (OP), total shoulder arthroplasty (TSA) continues to be predominantly done in an IP setting. This study compares IP vs. OP postoperative complications in adults undergoing TSA to determine if the transition from IP to OP is feasible.

Methods. This is a historical cohort study. The National Surgical Quality Improvement Program database was queried for all adults who underwent TSA from 2011 to 2016. The primary independent variable was type of patient status (IP, OP). The dependent variable was postoperative complications within 30 days of surgery. Multivariate logistic regression and propensity score matching were used to determine the association between patient status and postoperative complications while controlling for confounding factors.

Results. Of the 13,299 TSA sampled, 94.1% were IP. The IP cohort were significantly older, had more females, and had higher rates of hypertension compared to patients in the outpatient setting. After matching, the frequency of complications was significantly higher in the IP group compared to OP (50.8% vs. 34.6%, respectively; $p=0.004$). The unadjusted odds of postoperative complications in the entire cohort were significantly higher in the IP than in OP (OR 1.70, 95% CI 1.16 – 2.49). After propensity score matching analysis, the adjusted odds ratio (aOR) was similar (aOR = 1.84, 95% CI 1.14 – 2.98).

Conclusions-Implications. Our study suggests that IP TSA has higher post-op complication rates than OP TSA. This finding will be fundamental to implementing any outpatient TSA program as the association between patient status and post-surgical complications can have a significant impact on patients' outcomes and costs. Additionally, there remains a need for the development of criteria for who is best suited for outpatient TSA and a protocol to minimize adverse risks for the IP and OP settings.