

General Anesthesia Versus Regional Anesthesia in Acromioclavicular Joint Reconstructions: An ACS NSQIP Analysis 2008-2016

Introduction: Acromioclavicular (AC) joint injuries are common amongst athletes, with serious injuries requiring reconstruction. It is important to understand the demographics of patients with such injuries and which anesthesia techniques produce better postoperative outcomes.

Methods: Using the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) database, patients undergoing AC joint reconstructions (CPT codes 23550 23552 23120) from 2008 to 2016 were isolated and grouped by anesthesia type. 1:1 propensity score matching (PSM) was performed with regards to estimated probability of morbidity, age, and gender. Patient demographics, comorbidities, and 30-day postoperative outcomes were compared.

Results: 5,275 patients with AC joint reconstructions were isolated (64.3% general anesthesia, 2.1% regional anesthesia). 1:1 PSM yielded two groups of 71 patients each with general or regional anesthesia. Mean patient age was 52.0 years. 54 (38.0%) patients had hypertension requiring medication, 28 (19.7%) were current smokers, 15 (10.6%) had diabetes, and 39 (27.5%) had an ASA \geq 3. Apart from smoking status (12.7% v 26.8%, $p=0.035$), patient demographics and comorbidities were similar between cohorts. Patients with regional anesthesia had shorter operative times (58.13 v 81.17 min, $p<0.001$). Postoperative complications, readmissions, reoperations, and mortality were comparable between groups.

Conclusion: Despite substantial criticism surrounding regional anesthesia use in shoulder surgeries, similar lengths of stay and major postoperative complications were identified between regional and general anesthesia use in AC joint reconstructions. Regional anesthesia allows for additional benefits, such as decreased operative times, which should be considered when determining optimal anesthesia use.