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General versus Regional Anesthesia in Acromioclavicular Joint Reconstruction: A NSQIP Analysis between 2008 and 2016

Introduction: Acromioclavicular (AC) joint injuries are common among athletes. Given the high prevalence in both athletic and general populations, it is important to understand the impact of anesthesia technique on postoperative outcomes.

Methods: The American College of Surgeons National Surgical Quality Improvement Program (NSQIP) database was retrospectively queried between 2008 and 2016. 5,275 patients who underwent AC joint reconstructions (CPT codes 23550; 23552; 23120) were isolated and stratified by anesthetic technique, either general or regional anesthesia. These groups were 1:1 propensity score matched by estimated probability of morbidity, age, and gender.

Results: 5,275 patients who underwent AC joint reconstructions between 2008 and 2016 were isolated (3,392 (64.3%) general anesthesia, 111 (2.1%) regional anesthesia). After propensity score matching, there were 71 patients in each general and regional anesthesia cohort. 38.0% (40.8% regional, 35.2% general) patients had hypertension requiring medication, 19.7% (12.7% regional, 26.8% general) were current smokers, 10.6% (12.7% regional, 8.5% general) had diabetes, and 27.5% (29.6% regional, 25.4% general) had ASA III or greater (Table 1). Postoperatively, 2 (1.4%) patients experienced adverse events, including 1 case of thrombophlebitis and 1 readmission. Rates of postoperative complications, readmissions, reoperations, and mortality were comparable between cohorts.

Discussion: Despite the abundance of criticism towards regional anesthesia use in shoulder surgeries, it was shown to have similar lengths of hospital stay and major postoperative complications when compared to general anesthesia in AC joint reconstruction. Therefore, such benefits should be considered when determining which form of anesthesia to use.