Regional or General? Anesthesia‐Related Outcomes in Fracture‐Indicated Reverse Shoulder Arthroplasty

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INTRODUCTION: The use of reverse shoulder arthroplasty (RSA) for proximal humerus fractures is becoming more common. Any potential differences in outcomes in those patients undergoing surgery under regional anesthesia compared with general anesthesia remain unknown.

METHODS: This single-institution, retrospective study evaluated 292 RSA cases performed for a proximal humerus fracture. Patients were grouped into one of two cohorts: 'Regional' or 'General', based on the anesthesia type used in their operation. Patients in the regional cohort underwent RSA under sedation with regional anesthesia only. Patients in the general cohort underwent RSA under general anesthesia with or without additional regional anesthesia. Outcomes included: intraoperative complications, postoperative pain levels, postoperative nausea and vomiting, post-anesthesia complications, length of surgery, length of admission, need for readmission, and revision surgery.

RESULTS:

All regional anesthesia cases were completed successfully without conversion to general. There were no significant differences across general and regional groups regarding intraoperative complications (1.11% vs 1.47%, $p>0.99$), postoperative pain as measured on the Visual Analogue Scale (0.7/10 vs 0.7/10, $p=0.88$), postoperative nausea and vomiting (0% vs 0%, $p=1$), and post-anesthesia complications (1% vs 0%, $p=0.31$).

Average length of surgery was significantly shorter for the regional group (134 min vs 176 min, $p<0.0001$). Similarly, mean length of admission was significantly shorter for the regional group (45 hr vs 90 hr, $p<0.0001$).

There was no significant difference in readmission rates across the general and regional groups (5.6% vs 4.0%, $p=0.548$). The general group experienced a higher need for revision operations (10% vs 2.5%, $p=0.014$).

DISCUSSION AND CONCLUSION: This study found that the use of regional anesthesia in RSA is safe and confers outcomes similar to general anesthesia. Additionally, we found that RSA performed under regional anesthesia had decreased length of surgery, decreased length of admission, and decreased reoperation rates within xxx days. These results may be interpreted as a higher quality approach.