

**Regional Anesthesia Is Safe and Effective for Patella Fracture Repair**

**Alexander M. Lashgari, BA;** David L. Furgiuele, MD; Abhishek Ganta, MD; Sanjit R. Konda, MD; Kenneth A. Egol, MD

**Purpose:** Previous studies have demonstrated that regional anesthesia in orthopaedic fracture surgery is associated with decreased postoperative pain and decreased need for post-anesthesia care unit (PACU) analgesics when compared to general anesthesia. However, there is no evidence-based consensus on the optimal anesthesia modality for patella fracture repair. The purpose of this study was to evaluate the short-term postoperative outcomes of patients undergoing patella open reduction and internal fixation (ORIF) procedures based on the type of anesthesia administered.

**Methods:** A retrospective review was conducted of patients who were surgically treated for displaced patella fractures from 2012 to 2024 at a single multi-site urban academic institution. Fractures were classified according to the OTA system. Patients were included if they were older than age 18 years, sustained an isolated patella fracture, and had a minimum of 6-month follow up. Patients were divided into groups based on the anesthetic modality used during their surgery: regional anesthesia (RA) only, general/neuraxial anesthesia (NR), and a combination of these methods (CA). Data were retrospectively collected at regular follow-up intervals.

Comparisons of statistics were performed using Pearson  $\chi^2$  tests and multivariate linear regression tests as appropriate. Statistical testing was performed using SPSS, version 29 (Armonk, NY).

**Results:** Of the 263 patients that met inclusion criteria, 84 patients were in the RA group, 55 patients in the NR group, and 124 patients in the CA group. There were no complications associated with the administration of anesthesia within each cohort. There was no significant difference in fracture healing rates ( $p = 0.210$ ) or complication rates between the anesthesia groups ( $p = 0.088$ ). The RA and CA groups had significantly shorter operating room times than the NR group ( $p < 0.001$ ), significantly greater 3-month ( $p = 0.001$ ) and 6-month ( $p = 0.016$ ) knee range of motion (ROM) than the NR group when controlling for age, fracture pattern, and repair method.

**Conclusion:** This study demonstrates the efficacy of the use of regional anesthesia only for repair of a patella fracture. This technique is associated with greater early knee ROM in patients after surgery and a shorter surgical time with no increase in intra- or postoperative complications.