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Comparative Outcomes between Monitored Anesthesia Care and General Anesthesia on Procedure-Related Complications for Distal Radius Fracture Surgery

Introduction
Understanding the impact of different anesthetic modalities on post-surgical outcomes is critical to maximize patient outcomes. This study compares complications among patients undergoing open reduction and internal fixation (ORIF) for distal radius fracture (DRF) under monitored anesthesia care (MAC) versus general anesthesia.
Methods
A retrospective cohort study was performed using NSQIP data (2012–2021) for patients ≥18 years undergoing ORIF for DRF. The primary exposure was anesthesia type, categorized by MAC or general. The outcome focused on complications, including mechanical complications, periprosthetic infection, myocardial infarction, sepsis, septic shock, pneumonia, pulmonary embolism, death and surgical wound infections. Demographics, baseline health status, and procedure characteristics (Table 1) were potential confounders. Univariate analyses with chi-squared testing were used to evaluate for cohort differences. Multivariable regression adjusting for potential confounders was performed to assess the impact of MAC on complications.
Results
Among 30,688 patients undergoing ORIF for DRF, 3,476 (11.3%) received MAC as their anesthetic modality. Both exposure groups were predominantly aged 60–69 years, female, White, non-Hispanic, with normal BMI, independent functional status, non-smoking habits, and no diabetes [Table 1]. Group procedure characteristics were also similar, where most patients were admitted from home, received an elective procedure, and obtained the surgery in an outpatient setting [Table 1]. Multivariate regression showed MAC was linked to significantly lower odds of complications (OR 0.44, 95% CI 0.21–0.82; p=0.019) compared to general anesthesia.
Conclusion
Patients receiving MAC when undergoing ORIF for DRF had a reduced risk of complications compared to those receiving general anesthesia. Future studies should investigate patient characteristics that favor MAC to further reduce complications and optimize patient outcomes.