

**Name**

Scott Edwards

**Email**

scott.edwards@bannerhealth.com

**Title**

Comparison of Postoperative Complications Associated With Anesthetic Choice for Surgery of the Hand

**Purpose**

There is a recent trend toward performing most hand surgery procedures under local and/or regional anesthesia without sedation. However, little evidence exists regarding the postoperative complications associated with local/regional anesthesia without sedation, especially compared with local/regional anesthesia with sedation or general anesthesia.

**Methods**

Patients who underwent hand procedures as part of the American College of Surgeons National Surgical Quality Improvement Program were identified. Thirty-day postoperative complications were compared among patients who received local/regional anesthesia without sedation, local/regional anesthesia with sedation, and general anesthesia with adjustment for patient and procedural factors.

**Results**

We identified 27,041 patients as having undergone hand surgery from 2005 to 2013. A total of 4,614 underwent local/regional anesthesia without sedation (17.1%), 3,527 underwent local/regional anesthesia with sedation (13.0%), and 18,900 underwent general anesthesia (69.9%). Overall, both local/regional anesthesia with and without sedation were associated with fewer postoperative complications compared with general anesthesia. In patients aged over 65 years, there was an additional benefit of avoiding all forms of sedation; these data showed that treatment with local/regional anesthesia without sedation decreased the odds of sustaining a postoperative complication compared with sedation and general anesthesia.

**Conclusion**

Although the overall risk of postoperative complications remains small in hand surgery, these data suggest that avoiding general anesthesia may decrease the overall risk of sustaining postoperative complications. In addition, for patients aged over 65 years, avoiding any form of sedation may decrease the risk of postoperative complications.