

Francis Bustos – 2021 – RRD - **Regional Anesthesia for Hand and Wrist Fractures: Are We Really Blocking Opioid Prescribing?**

Regional Anesthesia for Hand and Wrist Fractures: Are We Really Blocking Opioid Prescribing?

Abstract:

Purpose: This study aims to evaluate the use of regional anesthesia in the treatment of hand and wrist fractures or dislocations and its impact on opioid prescription filling behavior.

Methods: Patients undergoing procedures for hand and wrist fractures or dislocations (n=4,890) from 2010-2018 were identified by using a national insurance database (PearlDiver Patient Records Database). Procedural groups were stratified based upon those conducted with and without regional anesthesia. Perioperative opioid usage was defined by a filled opioid prescription between 1 month prior to and 2 weeks following surgery. Prolonged post-operative opioid use was defined by a filled opioid prescription between 90 to 180 days following surgery. Patient demographic data, comorbidities, frequencies of postoperative emergency department visits, hospital readmissions, and frequencies of filled opioid prescriptions were analyzed.

Results: 673 patients treated with, and 4,217 patients treated without, a regional nerve block for hand and wrist fractures and dislocations were identified. Regional blockade was associated with greater perioperative opioid usage, but not prolonged postoperative opioid usage, following surgery. There was no difference in all-cause 30-day emergency department visits, but a significant decrease in 30-day hospital readmissions, when patients received a regional nerve block prior to surgery.

Conclusions: In this large-scale, national database study, receiving regional anesthesia prior to surgical intervention upon hand and wrist fractures or dislocations was associated with an

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increased risk of perioperative opioid usage, but not prolonged postoperative opioid usage or subsequent healthcare utilization. Additional investigation is needed to identify and implement non-narcotic multimodal analgesia regimens that may lead to decreased utilization of narcotic medications surrounding these procedures.

Clinical Relevance: This study provides evidence that regional anesthesia for surgery addressing hand and wrist fractures and dislocations may lead to an increase in perioperative opioid utilization.

Level of Evidence: Level III, retrospective cohort study.

Key Words: Hand Fracture; Wrist Fracture; Regional Anesthesia; Opioids