

Orthopaedic Traumatologist Preference for Use of Regional Anesthesia in Fracture Management: A Survey of OTA Members

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Purpose: The purpose of this study was to evaluate orthopaedic traumatologists' use of regional anesthesia (RA) based on patient age, fracture pattern, location, and injury mechanism. A secondary outcome was to determine the prevalence of morbidity seen as a direct result of RA use—specifically, a missed compartment syndrome.

Methods: A prospective electronic survey was designed and a link placed on the OTA website. 13 clinical scenarios involving lower extremity injuries that detailed patient age, mechanism of injury, and fracture pattern were presented to OTA members. Members were given the option of using RA or forgoing its use. If RA was selected, participants then chose between the use of spinal anesthesia, one shot peripheral nerve injection, or continuous nerve catheter infusion. OTA members were also asked to complete questions pertaining to their clinical experience with RA masking compartment syndrome or delaying a diagnosis.

Results: A total of 30 OTA members completed the survey. There was a subgroup of respondents (6.6%) that do not use RA in their fracture practice regardless of the clinical scenario. The 2 fracture patterns for which >90% off the respondents would not consider any form of RA were high-energy tibial plateau fractures and tibial shaft fractures. The use of RA in other clinical scenarios varied greatly among those surveyed. With regard to the morbidity associated with RA use in fracture care, 65.5% of respondents declared they have seen the signs of compartment syndrome masked by regional blockade. Furthermore, 55.1% said they have been involved with a case where fasciotomies were performed for compartment syndrome in a patient who received RA.

Conclusion: The overwhelming majority of responding OTA members viewed high-energy tibial plateau and shaft fractures as contraindications to the use of RA. Evolving soft-tissue injury and compartment syndrome can be masked by the use of RA and may preclude the use of RA in certain fracture patterns. The results of this study highlight the importance of teamwork and communication necessary between anesthesiologists and orthopaedic surgeons to appropriately risk stratify which patients can safely be administered RA.