

## Are Regional Blocks After Ankle ORIF Effective?

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**Purpose:** Previous reports evaluating the use of regional blocks after open reduction and internal fixation (ORIF) of the ankle have evaluated pain relief and have shown problems with rebound pain, limiting the use of this strategy. We sought to evaluate the effect of regional blocks on the length of stay (LOS), opioid consumption, visual analog scale (VAS) pain scores, and complications in patients undergoing ORIF of the ankle.

**Methods:** A consecutive series of adult community ambulators with isolated unstable ankle fractures undergoing ORIF after the initiation of a regional block protocol that included medication to prevent rebound pain were evaluated. Patients with LOS greater than 36 hours were excluded with the assumption that social factors were related to this extended length of stay. We used propensity score to match patients who did not opt for a block 2:1 to patients who did opt for a block. Matching included age, sex, body mass index (BMI), and American Society of Anesthesiologists (ASA) rating. Outcomes evaluated were length of hospital stay (hours), VAS scores, opioid utilization, return to emergency department (ED) after discharge, and complications after surgery. The highest (worst) VAS pain score and the total narcotic intake were evaluated for each of the first 3 postoperative 8-hour shifts. Narcotic medication was converted to morphine milligram equivalents (MME).

**Results:** 29 patients who opted for a regional block were compared to 58 matched patients who had no block. Propensity matching yielded 2 cohorts with no differences in the referenced matching criteria or in fracture type, race, procedure time, or need for syndesmotomic fixation. The average age of the patients was 33 years and 64% were female. Patients in the regional block group had lower VAS pain and MME use during each of the 8-hour shifts after surgery: 0-8 hours (VAS 1.5 vs 6; MME 6.6 vs 76.3;  $P < 0.001$ ), 8-16 hours (VAS 0.7 vs 6.1; MME 5.2 vs 26;  $P < 0.001$ ), 16-24 hours (VAS 3.4 vs 5.5; MME 7.6 vs 25.8;  $P = 0.003$  and  $0.005$ ). Patients who received regional blocks also had a shorter LOS (average 14.4 hours vs 26.3 hours;  $P < 0.001$ ). There was no difference found in rate of ED presentations after discharge, hospital admissions, or complications. There were no nerve injuries in either group.

**Conclusion:** The use of regional blocks after ankle ORIF resulted in superior pain relief and shorter length of hospital stay without increasing rates of ED visits, hospital readmissions, or complications.