

Narcotics Are Unnecessary for Pain Control in Patients With Tibial Plateau or Pilon Fractures

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Purpose: The purpose of this study was to determine if a multimodal pain regimen without a schedule II narcotic effectively controls postoperative pain for trauma patients with a tibial plateau or pilon fracture.

Methods: The trauma registry at our Level-I trauma center was queried for patients with a diagnosis of tibial plateau (OTA/AO 41B and 41 C) and/or pilon fractures (OTA/AO 43B and 43C) between October 2016 and October 2018. Patients between the ages of 18 and 95 years whose fractures were managed operatively were included in the study. Our standard postoperative pain regimen at discharge included Tylenol #3, tramadol, gabapentin, and a nonsteroidal anti-inflammatory drug (NSAID). If pain was not controlled, then a schedule II narcotic (eg, hydrocodone, oxycodone, or Dilaudid) was utilized in place of Tylenol #3 or tramadol. Patients without postoperative follow-up were excluded from the study. Discharge medications, analgesics, and visual analog scale (VAS) during follow-up appointments were recorded.

Results: This study included 133 patients with 143 operative fractures including n= 57 pilon (OTA/AO 43B and 43C) and n = 86 tibial plateau (OTA/AO 41B and 41C). The mean age was 44.4 ± 16.5 years and 36.8% (n = 49) were female. Open fractures occurred in 14.3% (19) and multiple fractures of interest were present in 10 patients (7.5%). High-energy mechanisms accounted for 70.7% of injuries. External fixation was used as a bridge to open reduction in 54 patients and as definitive treatment in 9 patients. 4% of patients had chronic pain diagnoses and 16% endorsed smoking. 15 patients (11.3%) were discharged with a schedule II narcotic. The remaining 118 patients were discharged with the standard multimodal non-narcotic regimen and 8 (6.0%) required delayed prescription of a schedule II narcotic. Opioid prescription for pain control was more frequent in patients with multiple injuries ($P = 0.032$). Overall, tobacco use ($P = 0.75$), alcohol use ($P = 0.83$), illicit substance use ($P = 0.48$), chronic pain ($P = 1.0$), open fractures ($P = 0.26$), and high-energy mechanism ($P = 0.38$) were not associated with new injury-related opioid prescriptions. There were 11 (8.3%) emergency department (ED) presentations for pain control with no statistically significant difference in the rate of those who were discharged on narcotics (2, 13.3%) and those who were not (9, 7.6%). Of the 9 patients who were discharged without narcotics and presented to the ED for pain control, 5 (56%) were prescribed narcotics. There were no readmissions for pain. The mean score on a 10-point VAS pain score was 2.7 ± 3.2 in the first 30 days after discharge, 2.3 ± 3.2 at 31 to 60 days after discharge, and 2.1 ± 2.5 at more than 60 days after discharge.

Conclusion: Multimodal pain control regimens in the immediate postoperative follow-up period are effective in managing pain in patients with tibial plateau and/or pilon fractures, including in the setting of polytrauma.