



Western Surgical Association 2020 Annual Meeting

Monday, November 9, 2020
4:00pm – 6:15pm Pacific Time
– Virtual Meeting –

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Q 10. PRE-HOSPITAL ADMINISTRATION OF OPIOIDS IN TRAUMA PATIENTS: DOES DOSE EFFECTS OUTCOMES?

Presenter: Muhammad Khurram MD | University of Arizona

M Khurram, M Chehab, M Douglas, S Asmar, M Ditillo, L Bible, L Gries, B Joseph

Background: The use of opioids for prehospital analgesia in trauma patients is increasing with time and contributes to the opioid overuse epidemic. Current efforts to prevent and control prescription opioid overuse are focused on the in-hospital and post-discharge phases. The aim of our study was to assess the impact of pre-hospital opioids use on in-hospital outcomes among trauma patients.

Methods: We performed a 2-year (2016-2017) retrospective analysis of our Level-I trauma center database. We included all adult trauma patients (age>18y) who received pre-hospital opioids (Fentanyl (F) or Morphine-Sulfate (MS)). Outcome measures were emergency-department (ED) hypotension (SPB & #60; 90 mmHg), ED intubation, prescription opioid medication upon discharge, and mortality. Multivariate logistic regression was performed.

Results: In total, 723 patients were included in the analysis. Mean age was (42 ± 20y) and 67% were males. A cutoff value of 200 mcg F and 15 mg MS were significant predictors of adverse outcomes. Overall, 24% and 31% of the patients received high-dose F or MS, respectively. Overall, the ED hypotension rate was 14.4%, ED intubation rate was 6%, and ED mortality rate was 3.1%. On regression analysis, a higher dosage of pre-hospital F was independently associated with increased odds of ED hypotension (OR=2.04; 95%CI=1.12-2.34; p=0.01), ED intubation (OR=1.74; 95%CI=1.14-2.54; p=0.01), and discharge on opioid medications (OR=1.57; 95%CI=1.28-2.21; p=0.01), but not with ED mortality (p=0.21). On regression analysis, a higher dosage of pre-hospital MS was independently associated with increased odds of ED hypotension (OR=2.11; 95%CI=1.01-2.70; p=0.01), ED intubation (OR=1.53; 95%CI=1.09-2.32; p=0.01), and discharge on opioid medications (OR=1.67; 95%CI=1.18-2.94; p=0.01), but not with ED mortality (p=0.63).

Conclusion: Pre-hospital administration of high dose opioids is associated with increased odds of adverse outcomes. Collaborative efforts to standardize and control the overuse of opioids should target the pre-hospital setting to limit opioid associated adverse effects.