

# Do Tramadol and Steroids Provide Similar Pain Control as Oxycodone/Hydrocodone after Ankle Fracture Fixation?

## Introduction

- Conventional methods of pain control after ankle fracture fixation are opiate medications which can have deleterious side effects and a risk of addiction
- Recent studies have shown that adjuvant postoperative steroids can reduce pain, rehabilitation time, and postoperative emesis
- The purpose of this study was to determine how tramadol and a methylprednisolone dose pack compared to oxycodone or hydrocodone in controlling pain following ankle fracture fixation

## Methods

- Retrospective review of outpatient operative ankle fractures before and after adoption of Tramadol + Methylprednisolone dose pack for postoperative pain control, rather than opioids
- Patients treated with and without Tramadol/steroids were compared to terms of number of pills prescribed, refills, return to the emergency department for pain in, two-week clinical follow-up pain scores, and superficial/deep surgical site infections (SSIs)

**Table 1: Comparison of treatment groups**

	Tramadol + Steroid dose pack group (n=19)	Oxycodone or Hydrocodone group (n=60)	Difference (95% CI)	P-value
Age	38.0 (29.0, 54.0)	39.5 (28.0, 52.0)	1.0 (-8.0, 9.0)	0.89
Male gender	7 (36.8%)	32 (53.3%)	-15.5% (-39.3%, 9.1%)	0.29
BMI	27.4 (24.4, 30.6)	29.0 (25.0, 33.2)	-1.6 (-4.6, 1.3)	0.27
ASA >2	2 (10.5%)	10 (16.7%)	-6.1% (-21.2%, 14.3%)	0.72
Active tobacco use	6 (31.6%)	21 (35.0%)	-3.4% (-25.5%, 21.3%)	1.00
Diabetes	2 (10.5%)	6 (10.0%)	5.3% (-13.9%, 19.9%)	1.00
Lateral malleolus fixation only	7 (36.8%)	20 (33.3%)	3.5% (-19.6%, 28.0%)	0.79
Regional block by anesthesia	16 (84.2%)	38 (63.3%)	20.8% (-2.6%, 38.7%)	0.10
Local block by surgeon	15 (78.9%)	40 (66.7%)	12.3% (-11.6%, 31.8%)	0.40
Tylenol	19 (100.0%)	43 (71.8%)	28.3% (9.8%, 38.8%)	<b>0.008</b>
Ibuprofen	15 (79.0%)	26 (43.3%)	35.6% (10.6%, 54.6%)	<b>0.008</b>
Number of controlled pain medication pills prescribed	28.0 (28.0, 28.0)	28.0 (25.0, 30.0)	0.0 (-2.0, 0.0)	0.26
Controlled pain medication refill	6 (31.6%)	15 (25.0%)	6.6% (-15.4%, 30.4%)	0.56
Return to ED for pain in first 2 weeks	2 (10.5%)	3 (5.0%)	5.5% (-8.3%, 24.0%)	0.59
Pain VAS at 2-week f/u	1.5 (0.0, 4.0)	2.0 (0.0, 5.0)	0.0 (-2.0, 1.0)	0.81
Superficial SSI	1 (5.3%)	2 (3.3%)	1.9% (-8.9%, 18.3%)	0.57
Deep SSI	0 (0.0%)	3 (5.0%)	-5.0% (-12.6%, 9.3%)	1.00

## Results

- There were 19 patients identified in the Tramadol/steroid group and 60 patients in the control group (Oxycodone (n=32) and Hydrocodone (n=28)).
- The Tramadol/steroid group was more likely to receive Tylenol and Ibuprofen but did not have any differences in other characteristics
- **There was no difference between groups in the need for controlled pain medication refills, return to the ED in the first two weeks for pain control, pain score at the 2-week follow-up appointment, or the rate of superficial or deep SSI.**

## Conclusion

There were **no differences in pain control between the Tramadol/steroid group and the Oxycodone/Hydrocodone group.** Considering the deleterious side-effects and potential risk of addiction of opioids Tramadol/steroids are a reasonable choice as a novel pain protocol.

## Citations

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