Efficacy of NC STOP Act in Reducing Prescriptions in Mandibular Fractures

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INTRODUCTION

Drug overdose is the number one cause of accidental death in the United States with 67,367 deaths in 2018. Opioids were involved in 46,802 of those deaths in 2018 (69.5% of all drug overdoses) and all states have passed legislation to combat the opioid epidemic. On January 1st, 2018, the Strengthen Opioid Misuse Prevention (STOP) Act was implemented in the state of North Carolina to heighten regulations on opioid prescriptions. The effectiveness of the STOP Act in mandible fractures has not been assessed.

MATERIALS & METHODS

This is a retrospective chart review of patients who underwent mandibular fracture repair at a single level 1 trauma center between August 2015 to November 2019. Patients were excluded if they sustained multi-system trauma or had greater than 48 hours of inpatient stay. Patient demographics, surgical interventions, and postoperative course were reviewed. The North Carolina Controlled Substances Database was reviewed to quantify both preoperative and perioperative (within 30 days of surgery) prescriptions filled in morphine milligram equivalents (MME). Mean MME per patient was compared between before and after implementation of the STOP Act. Subgroup analysis was conducted on patients who underwent maxillomandibular fixation (MMF) or open reduction internal fixation (ORIF).

RESULTS

- Of the 92 patients who met the inclusion criteria there were 51 in the before group and 41 in the after group. The patient characteristics did not differ in the two groups.
- While there was a 32% decrease in opioids dispensed per patient overall, this did not lead to a statistical difference (p=0.19).
- The ORIF and MMF subgroups displayed 24.5% (p=0.39) and 65% (p=0.11) decreases respectively, but these were not statistically significant.
- The percentage of patients who received opioid prescriptions equal to or greater than 300 MME was higher before the STOP Act relative to after it was enacted (57% vs 38%).

DISCUSSION

- After implementation of the STOP Act, there has been a decrease in the amount of opioid prescriptions related to mandibular trauma. Although the difference was not statistically significant, it does however, suggest that the STOP Act may be effective in decreasing the volume of opioid prescriptions.
- Further studies should be considered of multi-center studies as well as single-center studies with larger patient populations.

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