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Anesthesiology and Pain Medicine

Title

Modified Preoperative Oral Dose Acetaminophen vs Intravenous Acetaminophen in Children: A Randomized Clinical Trial

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The data associated with this publication are not available for this reason: N/A



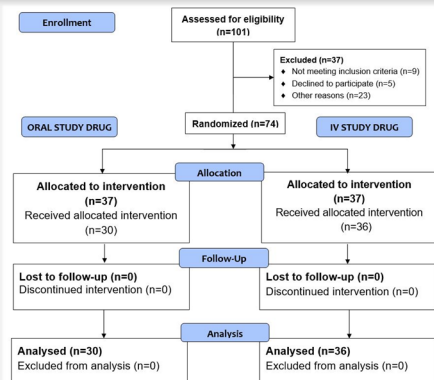
INTRODUCTION

Purpose: Compare opioid utilization in pediatric surgical patients undergoing tonsillectomy/adenoidectomy using

- Modified preoperative oral vs IV acetaminophen
- Standard multimodal pain regimen

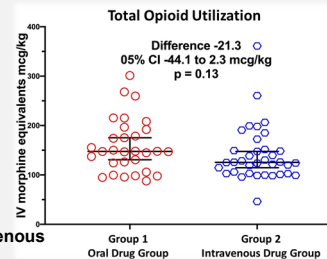
Hypothesis: One loading dose of PO acetaminophen given pre-operatively will provide superior opioid sparing effects compared to one standard dose of IV acetaminophen.

METHODS



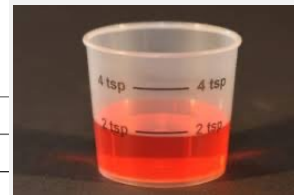
RESULTS

- The difference in total opioid dose between groups was not clinically or statistically significant
- No opioids required after PACU admission
- No patient exceeded acetaminophen level of 40 mg/L



Modified Preoperative Oral Dose Acetaminophen vs Intravenous Acetaminophen Patient Characteristics and Results

	Group 1 Oral (N= 30) Median, IQR Mean ± SD	Group 2 IV (N= 36) Median, IQR Mean ± SD	p-value
Age (years)	4, 4 to 8 5.7 ± 2.7	6, 4.3 to 7 6.5 ± 3.1	0.14
Weight (kilograms)	19.3, 16.6 to 25.3 24.2 ± 14.5	20.6, 18.3 to 28.2 25.3 ± 12.2	0.11
Weight (%ile for age)	55, 27 to 86.3 54.5 ± 32.0	45, 29.3 to 84.8 53.8 ± 29.1	0.92
Total opioid morphine equivalents (mcg/kg)	147.6, 119.6 to 193.0 159.0 ± 54.4	125.4, 102.8 to 150.9 150.9 ± 55.6	0.13
APAP level – intraoperative (mg/L)	N = 26 22.9, 16.5 to 27.8 22.9 ± 7.9	N=36 19.5, 16.5 to 27.8 18.9 ± 5.4	0.01
APAP level – ward (mg/L)	N = 23 18, 15 to 21 18.7 ± 4.8	N = 19 11, 10 to 11.8 11.8 ± 8.8	<0.0001



- Intraoperative APAP level drawn at emergence
- Ward APAP level drawn 3 hours after study drug administered

DISCUSSION

- Oral loading dose of acetaminophen may provide comparable postoperative surgical pain control to a single IV dose
- **Ward APAP levels** were higher in the PO group compared to the IV group
- **Acetaminophen PO syrup price/mg: \$0.0006/mg** or \$2.24 for a standard size 3776mg bottle
Acetaminophen IV form price/mg - \$0.06/mg or \$58.44 for a standard size 1000 mg/bottle

CONCLUSION

- ★ **Oral loading dose of 30 mg/kg provided similar opioid sparing compared to an IV loading dose of 15mg/kg**
- ★ **May provide the basis for more consistent acetaminophen therapeutic levels**

REFERENCES

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