

### Paper Chase 4 - IV Acetaminophen for Headache

*Sanjay Arora MD and Michael Menchine MD*

#### Take Home Points

- **Adding parenteral acetaminophen to prochlorperazine and diphenhydramine improved headache symptoms.**
- **You may consider including non-narcotic analgesia in your headache cocktail.**
- **Inclusion of IV acetaminophen did not result in an opiate-sparing effect.**
- Meyering, SH et al. **Randomized trial of adding parenteral acetaminophen to prochlorperazine and diphenhydramine to treat headache in the emergency department.** West J Emerg Med. 2017 Apr;18(3):373-381. [PMID: 28435487](https://pubmed.ncbi.nlm.nih.gov/28435487/)
- **The bottom line: randomized trial of adding parenteral acetaminophen to prochlorperazine and diphenhydramine improved headache symptoms.**
- **Everyone has their own cocktail for headaches.** The authors of this study wanted to add something by adding IV acetaminophen. They did this based on a growing body of literature in post-surgical patients that IV acetaminophen can have an opioid sparing effect.
- **They conducted a single center double-blind randomized controlled trial on patients presenting with undifferentiated headache.** They excluded patients who were sick. All patients received 10 mg IV prochlorperazine, 25 mg of IV diphenhydramine and 1 liter of normal saline. Patients were then randomized to either a placebo or 1g IV acetaminophen.
- **Primary outcome was improvement on the visual analog scale and secondary outcomes included need for rescue analgesia, especially opioids.**
- **There were a handful of exclusions after randomization.** They had 45 patients who received placebo and 45 in the active treatment group. The initial pain scores are pretty much the same. At 90 minutes, pain in the placebo group was 4 versus 2 in the acetaminophen group. There was no difference in length of stay. 38% of the acetaminophen group needed rescue medication versus 53 percent of the placebo. The percent of patients who received opioids was about the same.
- **There were some methodologic issues that can't be ignored.** This was not a consecutive sample of patients with headache. The doctors may have excluded many patients where they felt the pain was too severe or they didn't want to risk treatment failure. It is unclear how closely they followed their own protocol. They don't give the intent to treat versus the per protocol numbers. It is unclear how long they waited before giving rescue medications.
- **The authors concluded that IV acetaminophen should be added to the standard headache cocktail even though they didn't see the opioid sparing effect they hoped for.** This is an aggressive conclusion. They didn't compare apples to

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apples. Whatever you decide to put in your cocktail, make sure that some part of it is an analgesic.