

POEMs

Patient-Oriented Evidence That Matters

Ibuprofen Plus Acetaminophen Equals Opioid Plus Acetaminophen for Acute Severe Extremity Pain

Clinical Question

What oral analgesic combinations are effective for reducing the pain of an acute extremity injury in adults in the emergency department?

Bottom Line

In adults presenting to the emergency department with acute extremity pain severe enough to warrant radiologic investigation, ibuprofen plus acetaminophen was equally effective in reducing pain intensity at two hours compared with three different opioid and acetaminophen combination analgesics. In a similar study (Friedman BW, et al. *JAMA*. 2015;314(15):1572-1580), naproxen alone was as effective as naproxen plus oxycodone/acetaminophen or naproxen plus cyclobenzaprine (Flexeril) for reducing pain from acute musculoskeletal low back pain. It is time we stopped believing that opioids are superior to nonsteroidal anti-inflammatory drugs for acute pain control. We would save a lot of lives. (Level of Evidence = 1b)

Synopsis

Opioid use for just three days can significantly increase the risk of opioid dependence. These investigators identified adults, 21 to 64 years of age, presenting to the emergency department for acute extremity pain, defined as pain originating distal to and including the shoulder joint in the upper extremities and distal to and including the hip joint in the lower extremities. Eligible patients (N = 411) included those with an injury severe enough to require radiologic imaging according to the judgment of the attending physician. After

baseline pain measurement, patients randomly received (concealed allocation assignment) identical capsules containing ibuprofen (400 mg) plus acetaminophen (1,000 mg); oxycodone (5 mg) plus acetaminophen (325 mg); hydrocodone (5 mg) plus acetaminophen (300 mg); or codeine (30 mg) plus acetaminophen (300 mg). Patients masked to their treatment group assignment self-assessed pain intensity using a verbal numerical rating scale from 0 (no pain) to 10 (worst pain imaginable). The minimum clinically important difference was predefined as a mean pain scale score of 1.3. Complete follow-up occurred for 100% of patients at two hours.

Using intention-to-treat analysis, pain intensity significantly declined by 3.5 to 4.4 points at two hours compared with baseline in all treatment groups, but was not significantly different among the four groups. Pain intensity was also similarly reduced in all treatment groups at one hour, and there were no group differences in the use of rescue analgesia. Even with post hoc analysis, no statistical difference was present for those with a pain score of 10 (severe) and those with acute fractures.

Study design: Randomized controlled trial (double-blinded)

Funding source: Government

Allocation: Concealed

Setting: Emergency department

Reference: Chang AK, Bijur PE, Esses D, Barnaby DP, Baer J. Effect of a single dose of oral opioid and nonopioid analgesics on acute extremity pain in the emergency department: a randomized clinical trial. *JAMA*. 2017;318(17):1661-1667.

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