

A randomized controlled trial comparing acetaminophen plus ibuprofen versus acetaminophen plus codeine plus caffeine after outpatient general surgery.

Mitchell A¹, van Zanten SV, Inglis K, Porter G.

Author information

Abstract

BACKGROUND: Narcotics are used extensively in outpatient general surgery but are often poorly tolerated with variable efficacy. **Acetaminophen** combined with NSAIDs is a possible alternative. The objective of this study was to compare the efficacy of **acetaminophen**, codeine, and caffeine (Tylenol No. 3) with **acetaminophen** and **ibuprofen** for management of **pain** after outpatient general surgery procedures.

STUDY DESIGN: A double-blind randomized controlled trial was performed in patients undergoing outpatient inguinal/umbilical/ventral hernia repair or laparoscopic cholecystectomy. Patients were randomized to receive **acetaminophen** plus codeine plus caffeine (Tylenol No. 3) or **acetaminophen** plus **ibuprofen** (AclBU) 4 times daily for 7 days or until **pain-free**. **Pain** intensity, measured four times daily by visual analogue scale, was the primary outcome. Secondary end points included incidence of side effects, patient satisfaction, number of days until patient was **pain-free**, and use of alternative analgesia.

RESULTS: One hundred forty-six patients were randomized (74 Tylenol No. 3 and 72 AclBU), and 139 (95%) patients completed the study. No significant differences in mean or maximum daily visual analogue scale scores were identified between the 2 **groups**, except on **postoperative** day 2, when **pain** was improved in AclBU patients ($p = 0.025$). During the entire week, mean visual analogue scale score was modestly lower in AclBU patients ($p = 0.018$). More patients in the AclBU group, compared with Tylenol No. 3, were satisfied with their analgesia (83% versus 64%, respectively; $p = 0.02$). There were more side effects with Tylenol No. 3 (57% versus 41%, $p = 0.045$), and the discontinuation rate was also higher in Tylenol No. 3-treated patients (11% versus 3%, $p = 0.044$).

CONCLUSIONS: When compared with Tylenol No. 3, AclBU was not an inferior analgesic and was associated with fewer side effects and higher patient satisfaction. AclBU is an effective, low-cost, and safe alternative to codeine-based narcotic analgesia for outpatient general surgery procedures.

A randomized, controlled trial comparing acetaminophen plus ibuprofen versus acetaminophen plus codeine plus caffeine (Tylenol 3) after outpatient breast surgery.

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Author information

Abstract

BACKGROUND: The combination of **acetaminophen**, codeine, and caffeine (Tylenol 3, T3) is a standard **postoperative** analgesia after breast surgery despite the adverse effects and variable efficacy of narcotics. This study compared the efficacy of a nonnarcotic approach (**acetaminophen** and **ibuprofen**; AclBU) to T3 after outpatient breast surgery.

METHODS: This double-blind randomized equivalence trial involved patients undergoing outpatient breast surgery. Patients were randomized (stratified by procedure type) to receive AclBU or T3 four times daily for 7 days, or until free of **pain**. **Pain** intensity, measured four times daily by the visual analog scale, was the primary outcome; secondary outcomes were **pain** relief with analgesic, days until freedom from **pain**, adverse effects, discontinuation of drug as a result of adverse effects, and patient satisfaction.

RESULTS: There were 71 patients randomized to AclBU and 70 patients to T3. Repeated measures analysis showed no significant difference in average **pain** intensity over 7 days (AclBU 19.9 mm vs. T3 20.6 mm; $P = 0.78$). Similarly, there was no significant difference in **pain** relief with analgesic ($P = 0.46$). Although no difference in the incidence of adverse effects was observed ($P = 0.94$), discontinuation of the study drug as a result of adverse effects was more common with T3 (19 % vs. 6 %; $P = 0.018$). No significant differences were identified in days until freedom from **pain** or patient satisfaction; 92 % of AclBU and 89 % of T3 patients were satisfied with their **pain control** ($P = 0.55$).

CONCLUSIONS: AclBU is a safe, effective method of **pain control** after outpatient breast surgery. Compared to T3, it provides at least equivalent analgesia and has a more tolerable adverse effect profile.

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Publication types, MeSH terms, Substances 

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Intravenous non-opioid analgesia for peri- and postoperative pain management: a scientific review of intravenous acetaminophen and ibuprofen.

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Abstract

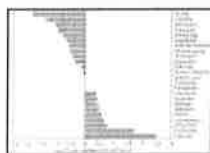
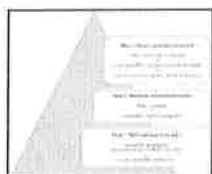
Pain is a predictable consequence following operations, but the management of **postoperative pain** is another challenge for anesthesiologists and inappropriately controlled **pain** may lead to unwanted outcomes in the **postoperative** period. Opioids are indeed still at the mainstream of **postoperative pain control**, but solely using only opioids for **postoperative pain** management may be connected with risks of complications and adverse effects. As a consequence, the concept of multimodal analgesia has been proposed and is recommended whenever possible. **Acetaminophen** is one of the most commonly used analgesic and antipyretic drug for its good tolerance and high safety profiles. The introduction of intravenous form of **acetaminophen** has led to a wider flexibility of its use during peri- and **postoperative** periods, allowing the early initiation of multimodal analgesia. Many studies have revealed the efficacy, safety and opioid sparing effects of intravenous **acetaminophen**. Intravenous **ibuprofen** has also shown to be well tolerated and demonstrated to have significant opioid sparing effects during the **postoperative** period. However, the number of randomized controlled trials confirming the efficacy and safety is small and should be used in caution in certain group of patients. Intravenous **acetaminophen** and **ibuprofen** are important options for multimodal **postoperative** analgesia, improving **pain** and patient satisfaction.

KEYWORDS: Acetaminophen; Analgesia; Ibuprofen; Intravenous; Postoperative pain

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Will adding acetaminophen (paracetamol) to ibuprofen be more effective in relieving postoperative pain on symptomatic necrotic teeth?

Spivakovsky S¹.

Author information

Abstract

DESIGN: Randomised controlled trial

INTERVENTION: Patients with a clinical diagnosis of a symptomatic tooth with a pulpal diagnosis of necrosis and moderate to severe **pain** at the time of treatment were randomised to either 80 capsules of 150mg **ibuprofen** or 80 capsules of 150mg **ibuprofen**/250mg **acetaminophen**. Patients were to take four capsules every six hours. Escape medication (hydrocodone/**acetaminophen**) was also available; if patients had significant swelling or fever, they were seen clinically. Patients' preoperative **pain** was assessed on the/a visual analogue scale (VAS). Patients also received a six-day diary to be completed after anaesthesia wore off and every morning for five days, to record **pain**, symptoms and the number of capsules taken.

OUTCOME MEASURE: The main outcome measures were **pain** and medication use.

RESULTS: No significant differences were found between the two **groups**.

CONCLUSIONS: There were decreases in **pain** levels and analgesic use over time for the **ibuprofen** and **ibuprofen/acetaminophen groups**. There was no statistically significant difference between the two **groups** for analgesic use or escape medication use. Approximately 20% of patients in both **groups** required escape medication to **control pain**.

Comment on

Efficacy of **ibuprofen** and **ibuprofen/acetaminophen** on **postoperative pain** in symptomatic patients with a pulpal diagnosis of necrosis. [J Endod. 2011]

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Publication type



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Morphine or Ibuprofen for post-tonsillectomy analgesia: a randomized trial.

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Abstract

BACKGROUND: Pediatric sleep disordered breathing is often caused by hypertrophy of the tonsils and is commonly managed by tonsillectomy. There is controversy regarding which postsurgical analgesic agents are safe and efficacious.

METHODS: This prospective randomized clinical trial recruited children who had sleep disordered breathing who were scheduled for tonsillectomy +/- adenoid removal. Parents were provided with a pulse oximeter to measure oxygen saturation and apnea events the night before and the night after surgery. Children were randomized to receive acetaminophen with either 0.2-0.5 mg/kg oral morphine or 10 mg/kg of oral ibuprofen. The Objective Pain Scale and Faces Scale were used to assess effectiveness on postoperative day 1 and day 5. The primary endpoint was changes in respiratory parameters during sleep.

RESULTS: A total of 91 children aged 1 to 10 years were randomized. On the first postoperative night, with respect to oxygen desaturations, 86% of children did not show improvement in the morphine group, whereas 68% of ibuprofen patients did show improvement (14% vs 68%; $P < .01$). The number of desaturation events increased substantially in the morphine group, with an average increase of 11.17 ± 15.02 desaturation events per hour ($P < .01$). There were no differences seen in analgesic effectiveness, tonsillar bleeding, or adverse drug reactions.

CONCLUSIONS: Ibuprofen in combination with acetaminophen provides safe and effective analgesia in children undergoing tonsillectomy. Post-tonsillectomy morphine use should be limited, as it may be unsafe in certain children.

TRIAL REGISTRATION: ClinicalTrials.gov [NCT01680939](https://clinicaltrials.gov/ct2/show/study/NCT01680939).

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KEYWORDS: NSAID; adenotonsillectomy; children; ibuprofen; morphine; opiate; pain management; sleep apnea; sleep disordered breathing

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