Morphine is not superior to ibuprofen for managing children’s pain following minor orthopedic surgery

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Implications for practice and research

► Nurses should encourage parents to use ibuprofen along with paracetamol as the first-line treatment for their children’s postoperative pain at home.
► Future research is needed to determine the added benefit versus risk of using morphine alongside ibuprofen for postoperative pain control.

Context
Morphine and other opioids such as oxycodone and hydrocodone increasingly serve as the cornerstone of children’s postoperative pain treatment. Yet, opioid use may result in a number of complications, including respiratory depression, nausea, constipation and an increased risk for opioid misuse later in life. Given the associated risks, it is important that evidence support the use of opioids over other reliable analgesics such as ibuprofen and paracetamol. However, such evidence is lacking in paediatric outpatient surgery. To fill this gap in knowledge, Poonai et al set out to determine whether oral morphine is more effective than ibuprofen in controlling children’s pain at home following surgery.1

Methods
The primary aim was to determine whether oral morphine was superior to oral ibuprofen for controlling children’s postoperative pain at home. Participants were 154 children 5–17 years of age (mean age=12.4 years) undergoing outpatient orthopaedic surgery. Researchers performed an intention-to-treat randomised controlled trial, which meant that every subject was randomly assigned, both observers and patients were adequately blinded, data were analysed in an intention-to-treat analysis and the primary outcome was measured using a validated instrument. Thus, readers of this article can be confident in the findings. Furthermore, findings from this study will be used by stakeholders, including clinicians, health policymakers and parents, in efforts to reduce use of opioid pain medications by children. Specifically, in the USA, there is now a strong drive to limit opioid prescribing to children and to treat acute pain with non-opioid medications.4

However, we should also consider two other important limitations. First, multimodal analgesia is superior to single modality use for postoperative analgesia. Thus, future studies should determine whether morphine in combination with ibuprofen provides superior pain relief as compared with ibuprofen alone. Second, a limitation of all randomised trials is that study participants are chosen using narrow criteria which limits generalisability of findings to the larger childhood population.

In conclusion, this is a well designed and executed study which found that morphine was not superior to ibuprofen for relieving children’s pain following minor orthopaedic surgery. Parents should use ibuprofen and paracetamol as first-line treatment for their children’s postoperative pain at home.

Competing interests None declared.

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References