Review: a single dose of oral naproxen or naproxen sodium reduced acute postoperative pain in adults


Is a single dose of oral naproxen or naproxen sodium effective and safe for acute postoperative pain in adults?

METHODS


Study selection and assessment: published and unpublished randomised, double blind, clinical trials in any language that compared a single oral dose of naproxen or naproxen sodium with placebo (≥10 patients/group) in adults (≥12 y) with moderate to severe pain after a surgical procedure in a day surgery or inpatient setting; pain intensity had to be assessed 4–6 hours after initial administration using a validated pain measurement scale (ie, 5 point pain relief scale, 4 point pain intensity scale, or a 10 cm visual analogue scale for pain relief or pain intensity). 2 reviewers independently assessed individual study quality using the 3 item scale developed by Jadad et al. Outcomes: included patients with ≥50% pain relief over 4–6 hours and patients with ≥1 adverse event.

MAIN RESULTS

10 trials (n = 996, age range 14–72 y) met the selection criteria. 68% of patients had dental surgery, and the remaining patients had either orthopaedic or general surgery. All trials had quality scores ≥3 out of 5. Meta-analysis was done using a fixed effects model.

<table>
<thead>
<tr>
<th>Drug and dosage</th>
<th>Number of trials (n)</th>
<th>Weighted event rates (NapS/Nap v placebo)</th>
<th>RBI (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NapS, 550 mg</td>
<td>6 (n = 500)</td>
<td>50% vs 12%</td>
<td>318 (193 to 497)</td>
<td>3 (3 to 4)</td>
</tr>
<tr>
<td>NapS/Nap, 440/400 mg</td>
<td>3 (n = 334)</td>
<td>50% vs 11%</td>
<td>380 (175 to 738)</td>
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<td>NapS/Nap, 220/200 mg</td>
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<td><strong>RRR (CI)</strong></td>
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<td>≥1 adverse event</td>
<td>5 (n = 392)</td>
<td>24% vs 27%</td>
<td>11% (1–25 to 37)</td>
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CONCLUSION

A single dose of oral naproxen sodium, 550 mg (equivalent to naproxen, 500 mg) or 440 mg (equivalent to naproxen, 400 mg), reduced acute postoperative pain in adults more than placebo.

For correspondence: Dr R A Moore, c/o Pain Research Unit, Churchill Hospital, Oxford, UK. andrew.moore@pru.ox.ac.uk

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Naproxen sodium (NapS) or naproxen (Nap) v placebo for acute postoperative pain in adults*

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*NS = not significant; other abbreviations defined in glossary. Weighted event rates, RBI, RRR, RRI, and CI calculated from data in article (based on a fixed effects model).
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