Single dose oral etodolac for acute postoperative pain in adults

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Authors' objectives
Background: Etodolac is a selective cyclo-oxygenase-2 (COX-2) inhibitor, with evidence of efficacy in osteoarthritis and rheumatoid arthritis. Its analgesic efficacy in postoperative pain has not been clearly established. There are no systematic reviews on Etodolac’s use in this condition.

Objectives: To assess the analgesic efficacy of etodolac in single oral doses for moderate and severe postoperative pain.

Search methods: We searched Cochrane CENTRAL, MEDLINE, EMBASE and the Oxford Pain Relief Database for studies to May 2009.

Selection criteria: Randomised, double blind, placebo-controlled trials of single dose orally administered etodolac (any formulation) in adults with moderate to severe acute postoperative pain.

Data collection and analysis: Two review authors independently assessed trial quality and extracted data. Pain relief or pain intensity data were extracted and converted into the dichotomous outcome of number of participants with at least 50% pain relief over 4 to 6 hours, from which relative risk (RR) and number needed to treat to benefit (NNT) were calculated. Numbers of participants using rescue medication over specified time periods, and time to use of rescue medication, were sought as additional measures of efficacy. Information on adverse events and withdrawals were collected.

Main results: Nine studies (1459 participants) compared etodolac and placebo. Studies were of adequate reporting quality, and the majority of participants had pain following dental extractions. The dose of etodolac used was 25 mg to 1200 mg, with most of the information for 100 mg and 200 mg. For at least 50% pain relief over 4 to 6 hours compared with placebo the NNT for etodolac 100 mg (498 participants) was 4.8 (3.5 to 7.8) and for etodolac 200 mg (670 participants) it was 3.3 (2.7 to 4.2). Very limited information with the extended release formulation did not suggest improved benefit for this outcome.

The proportion of participants with at least 50% pain relief was 41% with 100 mg and 44% with 200 mg. Remedication was needed by about 60% with etodolac 200 mg or 400 mg over 6 to 8 hours, compared with almost 80% with placebo. Adverse events were uncommon, and not significantly different form placebo.

Authors' conclusions: Etodolac 200 mg may be a useful analgesic in postoperative pain, with efficacy similar to paracetamol 1000 mg and celecoxib 200 mg. Higher doses may provide analgesia equivalent to more commonly used drugs, such as ibuprofen 400 mg, naproxen 500 mg and diclofenac 50 mg.


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