TREATMENT

Review: paracetamol reduces pain in osteoarthritis but is less effective than NSAIDs


Is paracetamol efficacious for treatment of osteoarthritis (OA)?

**METHODS**

Data sources: Medline, CINAHL, EMBASE/Excerpta Medica, Scientific Citation Index, and Cochrane Library (up to July 2003); reference lists; and conference abstracts from international societies of rheumatology (previous 2 y).

**Study selection and assessment:** randomised controlled trials (RCTs) that compared paracetamol with placebo or non-steroidal anti-inflammatory drugs (NSAIDs) in patients who had radiographic evidence of OA or met American College of Rheumatology clinical criteria for OA or had pain associated with OA. Quality of individual studies was assessed based on randomisation, blinding, and withdrawals.

**Outcomes:** pain reduction from baseline, change in total Western Ontario and McMaster University (WOMAC) OA Index scores, change in function and stiffness, and adverse events (gastrointestinal discomfort, nausea, headache, and dizziness).

**MAIN RESULTS**

10 trials (n = 2144) met the selection criteria. Comparison groups were placebo (4 comparisons) and NSAIDs (11 comparisons). Mean age ranged from 56–64 years. Median study length was 6 weeks (range 1 wk to 2 y). 7 trials used a fixed dose of paracetamol, 4000 mg/day, and 3 used dosages of 2000, 2600, and 3000 mg/day, respectively. NSAIDs included diclofenac, celecoxib, ibuprofen, rofecoxib, and naproxen, and dosages varied by drug. Paracetamol was superior to placebo in reducing pain and improving function, although effects waned after 2 weeks. The authors also noted that effects differed based on the specific drug. Comparisons of topical and oral NSAIDs were based on only 1 or 2 studies, and comparisons of various topical agents were not done in this review. The well done systematic review published in the Cochrane Library found that oral NSAIDs are more effective, but perhaps less safe, than paracetamol in reducing osteoarthritis pain.

**CONCLUSIONS**

Paracetamol reduces osteoarthritis pain more than placebo but does not affect functioning or stiffness. Non-steroidal anti-inflammatory drugs are more effective than paracetamol for pain reduction but are associated with greater gastrointestinal discomfort.

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<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Paracetamol v placebo</th>
<th>NSAIDs v paracetamol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>Number of comparisons (n)</td>
<td>Pooled effect size (95% CI)</td>
</tr>
<tr>
<td>WOMAC OA score</td>
<td>2 (394)</td>
<td>0.21 (0.02 to 0.41)†</td>
</tr>
<tr>
<td>Function</td>
<td>2 (394)</td>
<td>0.14 (–0.06 to 0.34)</td>
</tr>
<tr>
<td>Stiffness</td>
<td>Not assessed</td>
<td>Not assessed</td>
</tr>
<tr>
<td></td>
<td>Not assessed</td>
<td>Not assessed</td>
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</tbody>
</table>

*NA = not available. WOMAC = Western Ontario and McMaster University. CI defined in glossary.
†Significant result favouring paracetamol over placebo.
‡Significant result favouring NSAIDs over paracetamol.
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