**MAIN RESULTS**

13 RCTs (n = 655) met the selection criteria. 7 RCTs (54%) were high quality (Jadad score >3). Using a random effects model, meta-analysis of 3 RCTs showed that metoclopramide reduced headache pain (table), nausea (odds ratio [OR] 4.20, 95% CI 1.70 to 10.36), and the need for rescue drugs (OR 0.21, CI 0.05 to 0.85) more than placebo. The groups did not differ for complete relief of headache (see table at www.evidence-basedmedicine.com), relapse of migraine, nausea, or adverse events. Pooled results showed that metoclopramide combination in adults with acute migraine in an emergency department (ED) or headache clinic, and distinguished migraine from other types of headaches. Study quality was assessed.

**Outcomes:**

- Complete relief of headache, significant reduction in headache pain (from moderate or severe to mild or none), and reduction in headache pain on the basis of a 10 cm visual analogue scale (VAS). Secondary outcomes included relapse of migraine within 48 hours of treatment, nausea, number of rescue drugs required, functional status, and adverse effects.

**CONCLUSIONS**

In patients with acute migraine, metoclopramide reduces headache pain. Compared with other single agents, metoclopramide shows variable effectiveness for reducing nausea, migraine relapse, need for rescue medication, functional status, and adverse effects.

Abstract and commentary also appear in ACP Journal Club.

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**Data sources:** Medline; EMBASE/Excerpta Medica; LILACS; CINAHL; Cochrane Central Register of Controlled Trials; neurology, headache, and emergency medicine conference proceedings (1998–2004); clinical practice guidelines; websites; theses or dissertations; reference lists; and experts in the field.

**Study selection and assessment:** randomised controlled trials (RCTs) that compared parenteral metoclopramide with placebo, other antimetics (AEs), non-AEs, or other antimigraine (AM) regimens in adults with an acute migraine in an emergency department (ED) or headache clinic, and distinguished migraine from other types of headaches. Study quality was assessed.

**Outcomes:**

- Complete relief of headache, significant reduction in headache pain (from moderate or severe to mild or none), and reduction in headache pain on the basis of a 10 cm visual analogue scale (VAS). Secondary outcomes included relapse of migraine within 48 hours of treatment, nausea, number of rescue drugs required, functional status, and adverse effects.

**METHODS**

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**Metoclopramide for acute migraine**

<table>
<thead>
<tr>
<th>Outcomes at 1 week</th>
<th>Number of trials (n)</th>
<th>Comparison</th>
<th>Weighted event rates</th>
<th>RBI (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction in headache pain</td>
<td>3 (185)</td>
<td>Metoclopramide v placebo</td>
<td>56% vs 31%</td>
<td>80% (1 to 221)</td>
<td>4 (3 to 44)</td>
</tr>
<tr>
<td>Complete relief of headache</td>
<td>2 (161)</td>
<td>Metoclopramide v other AEs</td>
<td>Metoclopramide v other AEs</td>
<td>0.39 (0.18 to 0.87)</td>
<td>7.79 (1.79 to 33.86)</td>
</tr>
</tbody>
</table>

*Abbreviations defined in glossary; weighted event rates, RBI, NNT, and CI calculated from data in article using a random effects model. †Not significant.
Review: intravenous metoclopramide is better than placebo for reducing pain in acute migraine in the emergency department

*Evid Based Med* 2005 10: 83
doi: 10.1136/ebm.10.3.83

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