**Review: penicillin V is better than placebo and equal to non-penicillins for acute maxillary sinusitis**


**QUESTION:** In adults with acute maxillary sinusitis, which antibiotics lead to higher clinical cure rates?

**DATA SOURCES**

Studies were identified by searching Medline and EMBASE/Excerpta Medica (to October 1998) with the heading sinusitis and terms for randomised controlled trials, scanning bibliographies of relevant articles, and contacting pharmaceutical companies and experts in the field.

**STUDY SELECTION**

Studies were selected if they were randomised controlled trials (RCTs) that compared an antibiotic with placebo or another class of antibiotic in ≥50 patients who were ≥18 years of age and had a history consistent with acute maxillary sinusitis confirmed by radiography or aspiration.

**DATA EXTRACTION**

2 or more reviewers independently extracted data on study characteristics; interventions; study duration; length of follow up; cointerventions; compliance; and clinical, bacteriological, radiographic, and adverse event outcomes.

**MAIN RESULTS**

32 RCTs (7330 patients) with 34 comparisons met the inclusion criteria. Treatment duration ranged from 3–15 days. Penicillin V led to an increase in clinical cure rate (table). No difference in clinical cure rate was seen for amoxicillin compared with control in 2 heterogeneous RCTs. Newer non-penicillin antibiotics compared with penicillin V or amoxicillin (8 RCTs), or macrodil or cephalosporin compared with amoxicillin–clavulanate (8 RCTs) showed no difference in clinical cure rates. 5 RCTs comparing tetracyclines with a heterogeneous mix of antibiotics could not be meta-analysed. Dropouts from adverse effects were fewer for macrolide or cephalosporin than for amoxicillin–clavulanate (9 RCTs) (table).

**CONCLUSION**

In adults with acute maxillary sinusitis, penicillin V is better than placebo and equal to non-penicillins for achieving clinical cure.

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**Antibiotics v placebo or other antibiotics for acute maxillary sinusitis***

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Comparison (no. of RCTs)</th>
<th>Weighted event rates</th>
<th>RBI (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical cure rate</td>
<td>Penicillin v control (2)</td>
<td>35% v 19%</td>
<td>72% (0 to 196)</td>
<td>7 (4 to 39)</td>
</tr>
<tr>
<td></td>
<td>Macrolide v cephalosporin v amoxicillin–clavulanate (9)</td>
<td>2% v 4%</td>
<td>56% (22 to 75)</td>
<td>44 (25 to 200)</td>
</tr>
</tbody>
</table>

*RCTs=randomised controlled trials. Other abbreviations defined in glossary; RBI, RRR, NNT, and CI calculated from data in article.