Review: delaying a prescription reduces antibiotic use in upper respiratory tract infections


In patients with upper respiratory tract infections (URTIs), is delaying a prescription effective for reducing antibiotic use?

METHODS

Data sources: Medline (1966 to April 2003), EMBASE/Excerpta Medica, the Cochrane Controlled Trials Register, and researchers in the field.

Study selection and assessment: randomised controlled trials (RCTs) or clinical controlled trials (published in any language) that compared delayed and immediate antibiotic prescription for patients of any age with URTIs. URTIs included acute cough, sore throat, otitis media, the common cold, and sinusitis. Study quality was assessed using the Jadad scale.

Outcomes: use, consumption, or filling of prescriptions; and reported side effects.

MAIN RESULTS

4 RCTs (950 patients) and 1 clinical controlled trial met the selection criteria. All of the RCTs had Jadad scores >3 out of 5. Duration of delay for prescriptions was 1–7 days. Meta-analysis of RCTs was not done because of significant heterogeneity. However, rates of use (1 RCT), consumption (2 RCTs), and filling (1 RCT) of prescriptions were lower in the delayed prescription group than in the immediate prescription group (table). Furthermore, 3 RCTs reported an increase in use, consumption, or filling in the delayed prescription group compared with the immediate prescription group (p<0.05).

CONCLUSION

In patients with upper respiratory tract infections, delaying a prescription reduces antibiotic use.

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### Delayed antibiotic prescription (DAP) v immediate antibiotic prescription (IAP) for upper respiratory tract infections (URTIs)*

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>RCT (n)</th>
<th>URTI</th>
<th>DAP</th>
<th>IAP</th>
<th>RRR (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumed the antibiotic</td>
<td>A (129)</td>
<td>Common cold</td>
<td>48%</td>
<td>89%</td>
<td>46% [31 to 60]</td>
<td>3 [2 to 4]</td>
</tr>
<tr>
<td></td>
<td>B (315)</td>
<td>Otitis media</td>
<td>24%</td>
<td>98%</td>
<td>75% [68 to 82]</td>
<td>2 [2 to 2]</td>
</tr>
<tr>
<td>Collected the antibiotic</td>
<td>C (183)</td>
<td>Cough</td>
<td>45%</td>
<td>100%</td>
<td>55% [44 to 64]</td>
<td>2 [2 to 4]</td>
</tr>
<tr>
<td>Used the antibiotic</td>
<td>D (483)</td>
<td>Sore throat</td>
<td>31%</td>
<td>100%</td>
<td>69% [61 to 75]</td>
<td>2 [2 to 2]</td>
</tr>
</tbody>
</table>

*Abbreviations defined in glossary; RRR, NNT, and CI calculated from data in article.

†Round off errors result in a point estimate CI.
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