In Vitro Activity of Dirithromycin against Chlamydia trachomatis

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Dirithromycin is a new macrolide antibiotic with an active metabolite, erythromycylamine. We evaluated the in vitro activities of both drugs against 16 isolates of Chlamydia trachomatis and compared them with that of doxycycline. In vitro susceptibility testing was performed with McCoy cell monolayers. The MIC was defined as the lowest concentration of antibiotic without inclusions. The MBC was defined as the lowest concentration of antibiotic yielding no inclusions after passage onto 24-h-old antibiotic-free McCoy cell monolayers. Dirithromycin and erythromycylamine appeared to be equally effective against these 16 strains of C. trachomatis (MIC for 90% of strains tested, 1 mg/ml; MBC for 90% of strains tested, 2 μg/ml). Both were less active than doxycycline (MIC for 90% of strains tested, 0.06 μg/ml; MBC for 90% of strains tested, 0.12 μg/ml). The combination of dirithromycin and erythromycylamine appeared to be additive.
TABLE 1. In vitro susceptibilities of 16 C. trachomatis strains

<table>
<thead>
<tr>
<th>Drug</th>
<th>MIC (µg/ml)</th>
<th>MBC (µg/ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range</td>
<td>50% 90%</td>
</tr>
<tr>
<td>Dirithromycin</td>
<td>0.03–4.0</td>
<td>1.0 2.0</td>
</tr>
<tr>
<td>Erythromycylamine</td>
<td>0.5–2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Doxycycline</td>
<td>&lt;0.03–0.125</td>
<td>0.06 0.06</td>
</tr>
</tbody>
</table>

*50% and 90%, MICs for 50 and 90% of strains tested.
*50% and 90%, MBCs for 50 and 90% of strains tested.

ment of C. trachomatis would be its improved pharmacokinetic properties.

REFERENCES