Efficacy of postoperative antibiotic prophylaxis in Foot and ankle surgery

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My disclosure is in the Final AOFAS Mobile App.

I have no potential conflicts with this presentation.
Background

Foot and ankle surgeons commonly use postoperative antibiotic prophylaxis in an effort to prevent surgical site infections, although there is little evidence to suggest that it effectively decreases infection rates. The purpose of this study was to compare infection rates following foot and ankle surgery for patients who received postoperative antibiotic prophylaxis with infection rates for patients who did not.
Methods

We conducted a retrospective review of 4890 consecutive patients who had orthopaedic foot and ankle surgery between January 2008 and January 2014. Two attending surgeons routinely placed all patients on a short (2-3 day) postoperative course of oral antibiotics and another two attending surgeons did not. Patients counted as having an infection were those requiring reoperation for debridement. Exclusion criteria removed patients on antibiotics preoperatively for non-prophylactic reasons, and patients who had chronic infections prior to surgery. Chi-squared analysis was used to determine statistical significance.
## Results

<table>
<thead>
<tr>
<th></th>
<th>Non-infection</th>
<th>Infection</th>
<th>OR (95% CI)</th>
<th>$\chi^2$ (df)</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non antibiotic</td>
<td>1344/4890</td>
<td>3/4890</td>
<td>0.19 (0.06 - 0.60)</td>
<td>9.92 (1)</td>
<td>0.002</td>
</tr>
<tr>
<td>Antibiotic</td>
<td>3501/4890</td>
<td>42/4890</td>
<td>5.37 (1.66 – 17.37)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Results

Overall, there is a significant association between receipt of an antibiotic and infection, $\chi^2(1) = 9.92, p = .002$. Interestingly, in this situation not receiving an antibiotic was protective. If you did not receive an antibiotic, you were 0.19 (95% CI 0.06 – 0.60) times more likely to be infected than if you received an antibiotic.
The use of routine postoperative antibiotic prophylaxis following foot and ankle surgery did not reduce the incidence of infection; surprisingly, the rate of infection was significantly higher among patients receiving postoperative antibiotics. This increased incidence of infection may be influenced by the complexity of the cases, and patient comorbidities such as diabetes and rheumatoid arthritis.