Correspondence

Quinolone resistance in Campylobacter

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Sir,

The Campylobacter Sentinel Surveillance Scheme Collaborators (CSSSC) highlight the importance of antimicrobial resistance in Campylobacter jejuni isolated in England and Wales, reiterating the previously described risk for quinolone resistance of foreign travel.1,2 Overall and foreign travel associated rates of quinolone resistance of 19% and 53% (noted as 55% in the abstract) are in keeping with previously reported rates. They quote the relative likelihood of resistance in C. jejuni acquired in representative areas of the world. Absolute rates of resistance are of more use in making day to day decisions regarding treatment. The rate of antimicrobial resistance in campylobacters isolated over a similar period in south west London is presented here. In general these two data sets are complementary, and highlight the importance of knowing the destination of recent foreign travel in individuals presenting with gastroenteritis.

Between December 1999 and September 2000 all campylobacters identified in stools submitted to a District General Hospital Microbiology laboratory were recorded. Campylobacter spp. were isolated from 554 individuals. Eighty-eight (16%) either had foreign travel in the preceding 10 days noted on the request form or if no date of travel was noted it was assumed that the recording of foreign travel indicated a temporal association. Sensitivity to ciprofloxacin and erythromycin was tested using a disc method. The rates of resistance in individuals with and without a history of recent foreign travel in both the CSSSC and the London groups are shown in Table 1. With the exception of resistance rates in those with a history of travel the rates are remarkably similar.

The nature of the data collection outlined here has potential biases. Individuals with a history of foreign travel may have been missed but the proportion of travellers in each of the groups is similar. Even though the time period within which a case of gastroenteritis was linked with foreign travel was less in this study compared with the CSSSC (10 versus 14 days), the south London data are unlikely to be less specific as the incubation period of Campylobacter enteritis is rarely if ever >10 days.3 The presented data relate to an unselected group of campylobacters and not, as with the CSSSC, exclusively to C. jejuni. The fact that non-jejuni campylobacters cause <10% of human infections combined with the similarity in macrolide resistance rates in the two groups (the second most common human isolate, Campylobacter coli, is more frequently resistant to macrolides than C. jejuni) suggests that the effects on resistance rates of C. coli are likely to be small.3,4 In the absence of further information it is uncertain what impact the exclusion of 24% of the CSSSC’s data that pertains to quinolone-sensitive isolates resistant to one other antibiotic has on the comparability of the CSSSC and London data. A final potential bias lies in the different sensitivity tests used. The similarity of the overall results suggests that the two methods give comparable results.

The CSSSC record in their first table resistance rates as odds ratios. It may have proved more useful to record absolute rates of resistance of the total studied population, as this information has a direct bearing on how sick travellers from these countries should be treated. The greater resistance rate in south London travellers may be explained in part by the larger

Table 1. Antibiotic resistance in Campylobacter

<table>
<thead>
<tr>
<th></th>
<th>Overall quinolone resistance (%)</th>
<th>Quinolone resistance</th>
<th>Iberian peninsula-associated quinolone resistance (%)</th>
<th>Overall erythromycin resistance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No foreign travel (%)</td>
<td>Foreign travel (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSSSC (n = 3489)</td>
<td>19</td>
<td>10</td>
<td>53</td>
<td>87</td>
</tr>
<tr>
<td>South west London</td>
<td>20</td>
<td>10</td>
<td>72</td>
<td>95</td>
</tr>
<tr>
<td>(n = 554)</td>
<td></td>
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proportion, when compared with the CSSSC group, that visited the Iberian peninsula (57% versus 45%) but this is speculative due to the CSSSC’s incomplete reporting of data.

The information presented here complements that of the CSSSC and shows the importance of knowing the country of acquisition of Campylobacter infection and hence the likelihood of quinolone resistance. Rates of quinolone and macrolide resistance in agricultural animals in Spain and Portugal are significantly higher than in the UK as are rates in many other popular holiday destinations, e.g. South East Asia. Locally one should be aware of the travel habits and destinations of the local population as the likelihood of antibiotic-resistant Campylobacter gastroenteritis in returning travellers will be dictated by the rates of resistance in the country they return from. These data add further weight to the CSSSC’s assertion that empirical quinolone therapy is no longer appropriate for the treatment of infectious diarrhoea in individuals returning from the Iberian peninsula.

References


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