pyloridis infection, antrum, duodenum and oesophagus make a specimen respectively, obtained from our Brazilian and activity and 86% in duodenum. The rapid flora may not than three. Morris A, McIntyre D, Rose T, Nicholson G. Rapid diagnosis of C pyloridis infection. Lancet 1986;i:149.


Simple half-Gram stain for showing presence of Campylobacter pyloridis in sections

Like Gray et al,1 we have abandoned the Warthin-Starry technique for identifying gastric Campylobacter pyloridis in tissue sections, because it is unpredictable, time consuming, and expensive. As an alternative to their modified Giemsa technique we can also recommend a simple half-Gram method that we have been using for the past six months, and which shows well the characteristic morphology of the organisms (figure).

Paraffin embedded sections are dewaxed, taken to water, and stained for 30 seconds in a 1/20 aqueous dilution of Hucker's stain (one part 10% alcoholic crystal violet plus four parts 1% ammonium oxalate). After a rinse in water they are treated with Lugol's iodine for 60 seconds, washed in tap water, then blotted and allowed to dry thoroughly before clearing in xylene and mounting in DPX.

Most of our patients investigated for the presence of C pyloridis have paired biopsy specimens taken, one for histology and one for culture. The biopsy specimen for culture is ground, and the suspension is plated on to 5% blood agar and also on to fastidious anaerobe agar (Lab M), containing nalidixic acid 10 mg/l, vancomycin 2-5 mg/l, and 5% horse blood. The plates are incubated for seven days at 37°C in an atmosphere of nitrogen containing 5% oxygen and 6% carbon dioxide. Isolates are identified by colonial and morphological appearance, and by a rapid urease reaction.

The results of the histological half-Gram method correlated with those of culture in 91% of cases, which is similar to the experience of Marshall et al2 using the Warthin-Starry stain. Of 102 paired biopsy specimens received, 45 were negative and 48 positive by both methods. Seven positive by the half-Gram method were culture negative, and in two cases culture was positive but no bacteria could be seen in half-Gram stained sections of the paired biopsy specimens.

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References

Isolation of Campylobacter: what are we missing?
Numerous selective media have been described for the isolation of campylobacters, almost all containing several antibiotics as inhibitory agents. A method

Figure
Gastric pit. (Half-Gram).

Table 2 Detection of C pyloridis in gastric antrum, duodenum and oesophagus

<table>
<thead>
<tr>
<th>Urease</th>
<th>Positive</th>
<th>Negative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>44</td>
<td>17</td>
<td>61</td>
</tr>
<tr>
<td>Negative</td>
<td>30</td>
<td>108</td>
<td>138</td>
</tr>
<tr>
<td>Total</td>
<td>74</td>
<td>125</td>
<td>199</td>
</tr>
</tbody>
</table>

Table 3 Detecting C pyloridis in gastric antrum, duodenum and oesophagus (Brazilian study)

<table>
<thead>
<tr>
<th>Urease</th>
<th>Positive</th>
<th>Negative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>32</td>
<td>2</td>
<td>34</td>
</tr>
<tr>
<td>Negative</td>
<td>21</td>
<td>12</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>14</td>
<td>67</td>
</tr>
</tbody>
</table>

86% and 60% for specificity sensitivity, respectively, obtained from our Brazilian study (table 3). Processing specimens immediately in the endoscopic unit and using the same specimen for the urease test seem to make no appreciable difference to the sensitivity and specificity of the test. The increase in false positive results may be explained by the fact that in the oesophagus and the duodenum the suppressive effect of gastric acid on the growth of contaminant microbial flora may not be as great as that in the gastric antrum.

On the basis of our results, we cannot recommend the biopsy urease test as a reliable and rapid test to assist in the diagnosis of C pyloridis infection, at least in sites other than in the gastric antrum. We also agree with Morris et al* that the test is really no faster than an adequate Gram stain, as most of our positive urease tests took longer than three hours to become positive.

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References
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