Correspondence

Prevalence of lymphoid follicles in Helicobacter pylori associated gastritis

We read with great interest the paper by Zaitoun1 which addressed the detection of lymphoid follicles in Helicobacter pylori associated gastritis. Given several points raised by the author, we would briefly like to mention our personal experience of the histological detection of primary and secondary lymphoid aggregates in H pylori associated gastritis, including some general comments on mucosal sampling in H pylori associated gastric disease.

In an ongoing prospective study, we are evaluating the possibility of increasing the sensitivity of histological characterisation of gastritis by routinely taking samples of the incisura angularis along the lesser curvature in addition to biopsy specimens from the antral and oxyntic mucosa.

In our opinion, in the assessment of H pylori infection, the high predictive value provided by lymphoid follicles could be regarded as redundant information, as both the bacterium and the follicles clearly coexist within the same biopsy sample. Actually, it would be more exciting to ascertain, in the absence of histologically detectable H pylori, whether the presence of lymphoid follicles could successfully identify patients in whom H pylori infection could be confirmed by technical procedures other than histology—for example, PCR and culture.

However, the study by Dr Zaitoun, in which follicles were mainly found in the antral mucosa, provides useful information and enabled us to speculate which site would be the most appropriate for sampling: (1) to achieve accurate staging of H pylori associated inflammatory lesions; and (2) to have the greatest chance of detecting mucosa associated lymphoid tissue (MALT) derived primary gastric lymphoma.

Consecutive patients (n = 181) with non-ulcer dyspepsia (94 H pylori positive and 87 H pylori negative) underwent gastric endoscopy. Biopsy specimens, two from each site, were taken from the antral and corpus mucosa, and the incisura angularis. Table 1 shows the significant association between the presence of lymphoid follicles in non-oxyntic gastric mucosa and H pylori infection and also highlights the higher incidence of lymphoid follicles in samples of the incisura angularis.

These data confirm that (1) lymphoid follicles are part of the histological spectrum of H pylori associated gastritis;2 (2) they are more characteristic of mucosa of the incisura angularis than of the antrum (p < 0.000); and (3) indicate that the incisura angularis is the site of choice for sampling for the early detection of primary gastric lymphomas, which arise more frequently in lymphoid tissue acquired as a result of a pre-existing disorder and characteristically tend to remain restricted to their site of origin.

Dr Zaitoun comments:
The observations by Dr Rugge and his colleagues confirm previous studies1 2 that lymphoid follicles are a constant histological feature of H pylori associated gastritis. I have used the Sydney system to grade and stage gastritis in a previous study.3 In Rugge's study, however, two additional biopsy specimens were taken from the incisura angularis along the lesser curvature. Their initial findings appear to agree with previous studies4 5 that lymphoid follicles are more numerous in the antrum than in the corpus in H pylori associated gastritis. Rugge's data also suggest a higher prevalence of lymphoid follicles in the incisura angularis than in the antrum or the corpus. This is not a surprising or new finding as Genta et al have demonstrated that lymphoid follicles were more numerous on the antral lesser curvature than on either the antral greater curvature or corpus and there was an almost linear progression in the number of follicles from proximal to distal lesser curvature. In all previous studies including my own,6 7 the prevalence of lymphoid follicles was strongly correlated with the degree of inflammation and the activity and severity of gastritis. My study7 has provided further evidence that lymphoid follicles are strongly correlated with the degree of inflammation as lymphoid follicles were found in the corpus in all cases of pan-gastritis, but predominantly corporal. Rugge et al, however, do not provide information about the grades of activity, inflammation and H pylori in all the sites studied.

The study by Genta et al8 and the observations of Rugge and his colleagues suggest that the lesser curvature and incisura angularis represent a common site for detecting lymphoid follicles in H pylori associated gastritis from patients with ulcer and non-ulcer dyspepsia. One possible explanation for this is the higher density of lymphatic vessel pleats (primary lymphoid follicle formation) in the lesser curvature in comparison with other sites of the stomach. This is a matter for further investigation.

Rugge's data show that the incidence of H pylori associated gastritis is 52% in patients with non-ulcer dyspepsia. This figure is lower than those reported by other authors9 10 who recorded incidences of 78%,10 11 12 and 87%10 in similar clinical conditions. Rugge's data also confirm those reported by other13 that lymphoid follicles are seen in H pylori negative gastritis defined by histological criteria. Further studies are needed, including serological investigations, to confirm/exclude previous infection with H pylori in patients with H pylori negative gastritis.

Rugge's letter also addresses the issue of MALT derived gastric lymphoma and H pylori infection. It is known that the incidence of MALT derived primary gastric lymphoma is higher in the lower part of the stomach than the upper part and this parallels the prevalence of H pylori infection and the formation of lymphoid follicles in H pylori associated gastritis. The similarities in the epidemiology between H pylori infection, the formation of lymphoid follicles and that of MALT derived gastric lymphoma necessitate further studies to look at the incidence of MALT derived gastric lymphoma in different sites in the antrum and the corpus, as Rugge's observations imply.


Table 1: Detection of lymphoid follicles in antral, angular and oxyntic mucosa in histologically confirmed H pylori positive and negative gastritis

<table>
<thead>
<tr>
<th>Sample type</th>
<th>Antral</th>
<th>Angular</th>
<th>Oxyntic</th>
</tr>
</thead>
<tbody>
<tr>
<td>H pylori positive</td>
<td>47 (25%)</td>
<td>67 (37%)</td>
<td>8 (4%)</td>
</tr>
<tr>
<td>gastritis</td>
<td>H pylori</td>
<td>11 (7%)</td>
<td>14 (8%)</td>
</tr>
<tr>
<td>negative</td>
<td>58 (32%)</td>
<td>81 (45%)</td>
<td>11 (6%)</td>
</tr>
</tbody>
</table>

If you wish to order or require further information regarding the titles reviewed here, please write to or telephone the BMJ Bookshop, PO Box 295, London WC1H 9JR. Tel: 0171 383 6244; fax: 0171 383 6662. Book are supplied post free in the UK and for BFPO addresses. Overseas customers should add 15% for postage and packing. Payment can be made by cheque in Sterling drawn on a UK bank or by credit card (MasterCard, Visa or American Express) stating card number, expiry date, and full name. (The price and availability are occasionally subject to revision by the Publishers.)


This book has 61 contributing authors, many of them distinguished in their fields of expertise. There are five chapters on immunopatho-
Prevalence of lymphoid follicles in Helicobacter pylori associated gastritis.

M Rugge, M Cassaro and F Di Mario

J Clin Pathol 1996 49: 527
doi: 10.1136/jcp.49.6.527-a