Lymphocytic gastritis, gastric adenocarcinoma, and primary gastric lymphoma

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Abstract
A series of primary gastric lymphomas and adenocarcinomas was reviewed to assess the prevalence of lymphocytic gastritis in these conditions. Lymphocytic gastritis was more prevalent in patients with gastric adenocarcinoma (16 of 130 cases; 12·3%) and primary gastric lymphoma (six of 45 cases; 13·7%) than in unselected patients undergoing endoscopy (0·83–2·5%). This suggests that these two disparate gastric tumours may share an immunological dysfunction or a common pathogenesis, and this is of interest given that Helicobacter pylori is thought to have a role in the evolution of gastric adenocarcinoma and lymphoma.

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Intraepithelial lymphocytosis is a well recognised component of gluten sensitive enteropathy and the role of these T lymphocytes in the pathogenesis of coeliac disease has been the focus of much attention. Dramatic intraepithelial lymphocytosis (lymphocytic gastritis) has also been described in the gastric mucosa.1 This condition is sometimes suspected clinically because of the presence of varioliform gastritis on endoscopy.1 Serological evidence of Helicobacter pylori infection is present in most, but not all, of these cases,2 but the precise link between H pylori and lymphocytic gastritis is unknown. A hypertrophic form has been recognised and distinguished from Menetrier’s disease.3 Lymphocytic gastritis also occurs in a substantial proportion of patients with coeliac disease.4 The disorder affects the whole stomach5 and occurs with an incidence of between 0·83 and 2·5% in unselected patients undergoing endoscopy,6 and of 4·5% in those with chronic gastritis.2 Concurrent lymphocytic gastritis and primary gastric tumours in resection specimens prompted us to review a series of primary gastric lymphomas and adenocarcinomas to assess the prevalence of lymphocytic gastritis in these conditions.

Methods
Specimens were retrieved from the archives of Leeds General Infirmary and St James’s University Hospital, Leeds, and from the Yorkshire Regional Lymphoma Panel. A total of 52 gastric lymphomas were examined, 45 of which had features associated with primary gastric mucosa associated lymphoid tissue (MALT) lymphoma.2 We also examined 130 cases of primary gastric adenocarcinoma.
Results
Lymphocytic gastritis was present in six of the 45 (13.7%) MALT lymphoma cases; lymphocytic gastritis was not found in the non-MALT lymphoma cases. Of the 130 cases of adenocarcinoma, 16 (12.3%) had concomitant lymphocytic gastritis. The prevalence of lymphocytic gastritis was the same in cases of intestinal type and diffuse carcinoma.

Discussion
The prevalence of lymphocytic gastritis in both primary gastric MALT lymphoma and gastric adenocarcinoma is clearly much greater than that seen in non-ulcer dyspepsia4 and chronic active gastritis.2 This suggests that lymphocytic gastritis may be associated with an increased risk of developing lymphoma or carcinoma. It is particularly intriguing that the prevalence of lymphocytic gastritis is similar in both gastric lymphoma and adenocarcinoma given the current hypotheses linking both tumours with H pylori infection.

H pylori infection was not determined in this retrospective series because gastrectomy specimens are unsuitable for the histological detection of H pylori, this is attributed to reduced sensitivity following suboptimal fixation.4 Furthermore, most patients with lymphocytic gastritis are H pylori positive despite the absence of the organism on histology.2 Most patients with gastric carcinoma also have chronic gastritis. In a previous study from Leeds some form of chronic gastritis was present in 50 of 52 gastric biopsy specimens taken from sites other than the tumour in patients with gastric adenocarcinoma; however, H pylori was detected in only 21 (42%) of these.9 This observation agrees with the hypothesis that H pylori gastritis is important in the early stages of carcinogenesis, although the organism may no longer be detectable when the tumour is clinically apparent. In 19 patients with gastric adeno-

carcinoma studied using mucosal immunology there was evidence of current or previous H pylori infection in 18.10 That lymphocytic gastritis is not a direct precursor or premalignant phase of primary gastric lymphoma is evident from the fact that the neoplastic lymphocytes in the latter condition are B cells, whilst the intraepithelial lymphocytes in the former are CD8 positive T cells. However, cytokines secreted by T cells in H pylori gastritis may promote B cell proliferation.11

Further research on the relation between lymphocytic gastritis, gastric MALT lymphoma, gastric adenocarcinoma, and H pylori could yield important clues to the cause and pathogenesis of these conditions.

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