Lymphocytic Gastritis: A Distinct Nosologic Entity or A Histopathologic Expression of Other Conditions?

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Background

Lymphocytic gastritis (LG) is characterized by infiltration of the gastric foveolar epithelium by at least 25 lymphocytes per 100 epithelial cells, regardless of the inflammation in the lamina propria.[1] This entity was initially associated with a form of severely erosive nodular gastritis (varioliform gastritis).[2] Later, it became clear that many patients with LG have mild erosions or even a normal appearing endoscopy. Furthermore, a group in Brazil found no correlation between the presence of varioliform gastritis and lymphocytic gastritis.[3]

Increase in the number of intraepithelial lymphocytes can occur in association with other conditions such as *Helicobacter pylori* infection, syphilis, celiac sprue, microscopic colitis and NSAID users.[4-5] LG is occasionally associated with mild nonspecific dyspeptic symptoms as well. Thus, LG is used as a histopathologic pattern with no strong correlation with a particular disease entity.

Failure to detect consistent clinicopathologic correlations may be due to several factors , including the small size of the study samples.

Purpose

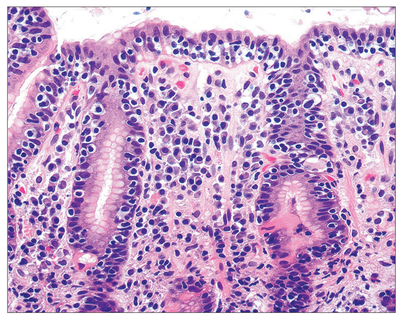
The purpose of this study was to use a large clinicopathologic database to determine whether LG is a distinct nosologic entity or represents the histopathologic manifestation of other conditions.

Methods

The gastrointestinal division of Miraca Life Sciences is a specialized histopathology laboratory that receives specimens from gastroenterologists operating in private outpatient endoscopy and surgery centers across the U.S. All demographic, histopathologic, endoscopic, and clinical information is stored in a searchable SQL database (the "Miraca Life Sciences Database").

We extracted all the patients who had an esophagogastroduodenoscopy (EGD) with a histopathologic diagnosis of LG and simultaneous duodenal and colonic biopsies from 1/2008 to 12/2011. Patients with upper gastrointestinal cancer or surgery were excluded.

LG patients were divided in two groups: 1) LG without concurrent intestinal lymphocytosis (LG-Alone); and 2) LG with intestinal lymphocytosis (duodenal, celiac sprue, or microscopic colitis (LG-IL). Patients with LG and concurrent *H. pylori* infection were analyzed separately.



Lymphocytic Gastritis. The foveolar epithelium is infiltrated by lymphocytes, which in this case number >50/100 epithelial cells.

Results

There were 206 patients with LG and simultaneous duodenal and colonic biopsies. Of these, 91 patients (median age 61 years; 54% female) had LG-Alone (21 with *H. pylori* infection) and 115 (median age 65 years; 71% female) had LG-IL (5 with *H. pylori* infection). Compared to those with LG-IL, patients with LG-Alone were more likely to have erosions/ulcers (15.4% versus 7.8%; OR 2.15) and twice as likely to be male (46% versus 29%; OR 2.13). Anemia was a more common indication for EGD in patients with LG-Alone (22% versus 14%), while diarrhea and vomiting were more common in patients with associated lymphocytosis than in those with LG-Alone. *H. pylori* infection was more common in patients with LG-Alone than in those with LG-IL (23% versus 4.4%; OR 6.60); however, when patients with *H. pylori* were excluded from the analysis, the correlations remained similar.

	Median age (year)	Female (%)	Anemia (%)	Erosions or ulcers (%)	*H. pylori* (%)
LG alone (n = 91)	61	49 (53.8)	20 (22.0)	14 (15.4)	21 (23.1)
LG with Intestinal lymphocytosis (n = 115)	65	82 (71.3)	16 (13.9)	9 (7.8)	5 (4.4)
Odds ratio (LG alone = 1)	-	2.13 (1.19 - 3.79)	0.57 (0.28 - 1.18)	0.47 (0.19 - 1.13)	6.60 (2.38 - 18.3)

Table 1 – Comparison of the two study groups: 1) LG without concurrent intestinal lymphocytosis (LG-Alone); and 2) LG with intestinal lymphocytosis (duodenal, celiac sprue, or microscopic colitis; LG-IL)

Study Highlights

- Gastric intraepithelial lymphocytosis may not be a single disease.
- Differences in age, sex, some of the presenting symptoms, and the endoscopic pictures suggests that patients with LG-Alone represent a different population from those with associated intestinal lymphocytosis.
- The relative rarity of ulcers and erosions in both groups suggests that varioliform gastritis may have become an obsolete condition.

Conclusions

Lymphocytic gastritis in some patients is the epiphenomenon of intestinal conditions characterized by intraepithelial lymphocytosis and a high prevalence of diarrhea. In other, younger and mostly male patients, LG is restricted to the stomach, is associated with a higher prevalence of anemia and may be the expression of an autoimmune phenomenon. In a portion of LG-Alone patients intraepithelial lymphocytosis may be associated with or precipitated by *H. pylori* infection. The relative rarity of ulcers and erosions suggests that varioliform gastritis may have had other associations or causes that have now become rare.

References

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