

Lymphocytic Gastritis, Isolated Type Occurring in Family Members. A Case Report.

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ABSTRACT

An isolated type of lymphocytic gastritis diagnosed in a young individual is illustrated with microscopic photographs of biopsy tissue. The individual's mother suffered from similar disease. The fact that lymphocytic gastritis appeared in closely related individuals without any other detectable associated disease such as gluten intolerance, Helicobacter pylori infection, or other entities, supports the hypothesis of genetic predisposition. Any population studies may include this case in the future.

Keywords: lymphocytic gastritis; genetic predisposition.

Lymphocytic gastritis is a rare form of chronic gastritis characterized by severe intraepithelial lymphocytosis of the gastric mucosa. The disease is likely to result from an abnormal immune response to environmental stimuli that develops in genetically predisposed individuals. It has been shown that the majority of patients with lymphocytic gastritis possess the HLA-DQ2 molecule encoded by the allele DQB1*0201 which is also possessed by 95% of patients with celiac disease.

A number of distinct diseases are associated or accompany lymphocytic gastritis. Among them are celiac disease, *Helicobacter pylori* infection, Crohn disease, HIV infection, collagenous enterocolitis, varioliform gastritis, Menetrier's disease, gastric adenocarcinoma, and primary gastric lymphoma. Interestingly, 45% of celiac disease patients are estimated to have lymphocytic gastritis, which disappears after a gluten free diet. In addition, 13% of patients with *H. pylori* infection show morphologic features of lymphocytic gastritis. Isolated form of lymphocytic gastritis is rare.

The symptoms relate to different level of damage to gastric mucosa, and the endoscopic appearance ranges from normal to nodular targetoid erosions to giant mucosal folds. Symptoms

and signs that represent underlying disease are upper gastrointestinal discomfort and pain, with subsequent anorexia and weight loss.

Treatment is successful when the identifiable underlying disease process is cured. Cases of spontaneous healing of isolated lymphocytic gastritis have occurred. Some studies report successful treatment with omeprazole.

The histopathology criteria typical for lymphocytic gastritis include more than 25 intraepithelial T-lymphocytes per 100 gastric epithelial cells in the gastric body, cytoplasmic mucin depletion, nuclear stratification of the foveolar cells, and chronic inflammation in the lamina propria. Cases with corpus-predominant lymphocytic gastritis are unlikely to have duodenal pathology, while those with an antral-predominant or diffuse form should have duodenal biopsies examined to exclude inflammatory process and villous atrophy.

Case Report

A 21 year-old-male was referred to a gastroenterologist because of upper gastrointestinal discomfort and weight loss. He did not complain of lower intestinal symptoms. Endoscopic examination revealed severe erosive gastritis involving gastric antrum and body, with normal appearing duodenum.

Microscopic findings showed chronic gastritis with intraepithelial lymphocytes and rare mucosal lymphoid aggregate (Figures 1. & 2.). Immunohistostains documented 28 to 64 intraepithelial T lymphocytes per 100 gastric epithelial cells in antrum and body, with an average of 37, as counted by two pathologists (Figures 3. & 4.). Small aggregates of B lymphocytes in gastric mucosal stroma were also noted, but no B lymphocytes were observed intraepithelially (Figure 5.). Special stain was negative for *Helicobacter pylori*.

There was normal duodenal villous architecture and no significant intraepithelial lymphocytosis was observed in duodenal mucosa, with an average number of 5 intraepithelial T lymphocytes which is within normal range (Figures 6. & 7.).

Family history was significant in this case since the patient's mother had similar symptoms and complains at young age. Her endoscopic and microscopic findings revealed features consistent with lymphocytic gastritis. Her gastric biopsy was *Helicobacter pylori* negative, and no evidence of celiac disease was found in her duodenal mucosa.

Conclusion

Analysis of this case indicates that lymphocytic gastritis may be a genetically restricted disease. The fact that it appeared in closely related individuals without any other detectable associated disease such as gluten intolerance, *Helicobacter pylori* infection, Crohn disease or malignancy, supports the hypothesis of genetic predisposition. Future workup may include examination of HLA haplotypes in these cases, which was not performed in the reported here family.

We present this case, illustrated by microphotographs, for the pathology record. Any population studies or aggregate summaries may include this case in the future.

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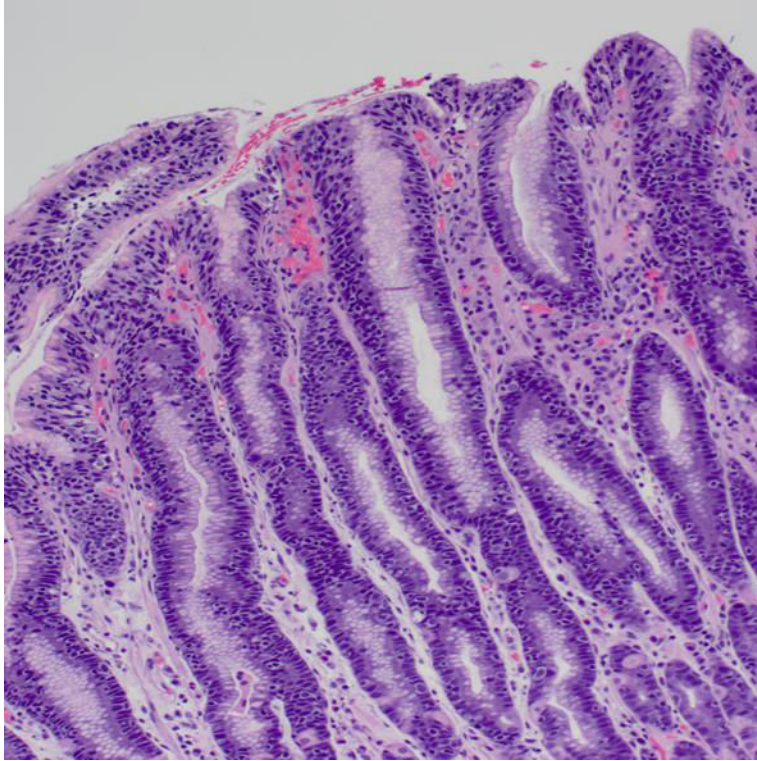


Figure 1.a. Gastric mucosa, antral, H&E stain.

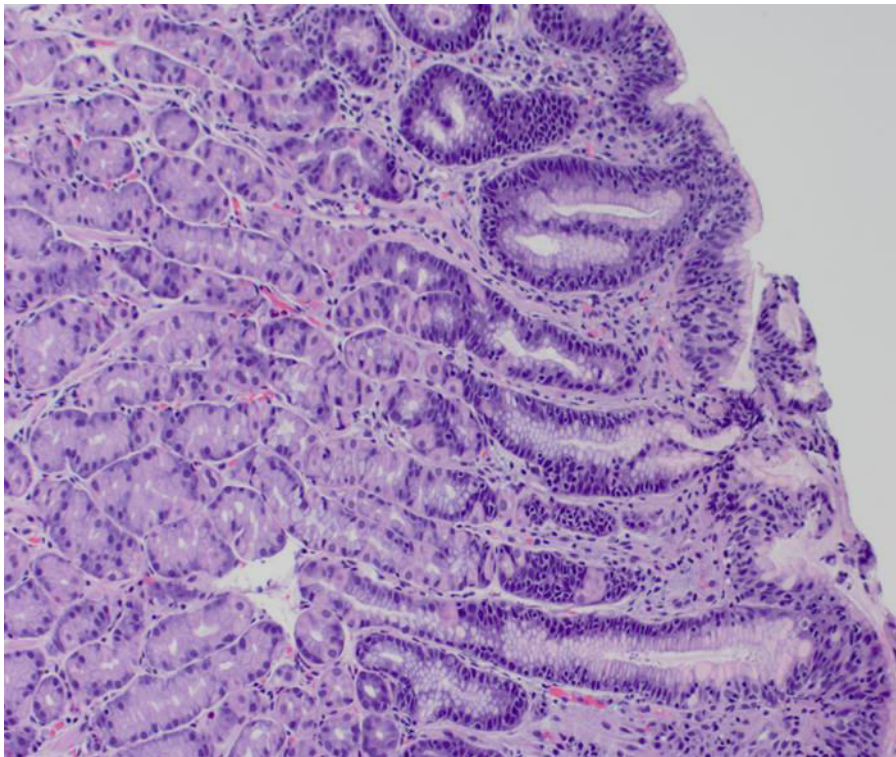


Figure 2. Gastric mucosa, body, H&E stain.

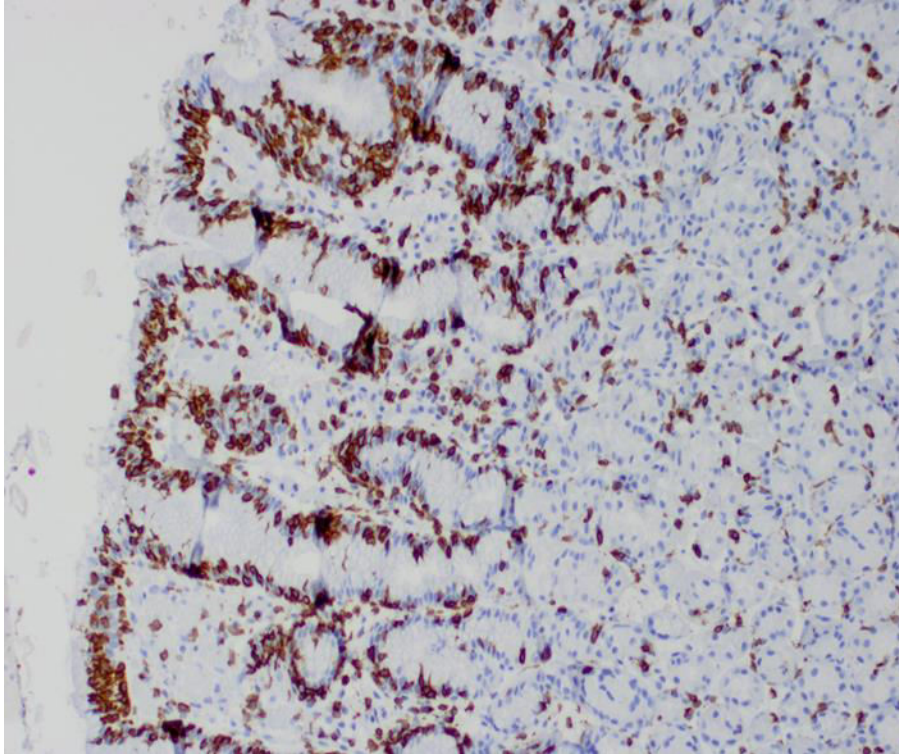


Figure 3. Gastric mucosa, body. Intraepithelial T lymphocytes on immunohistochemical stain.

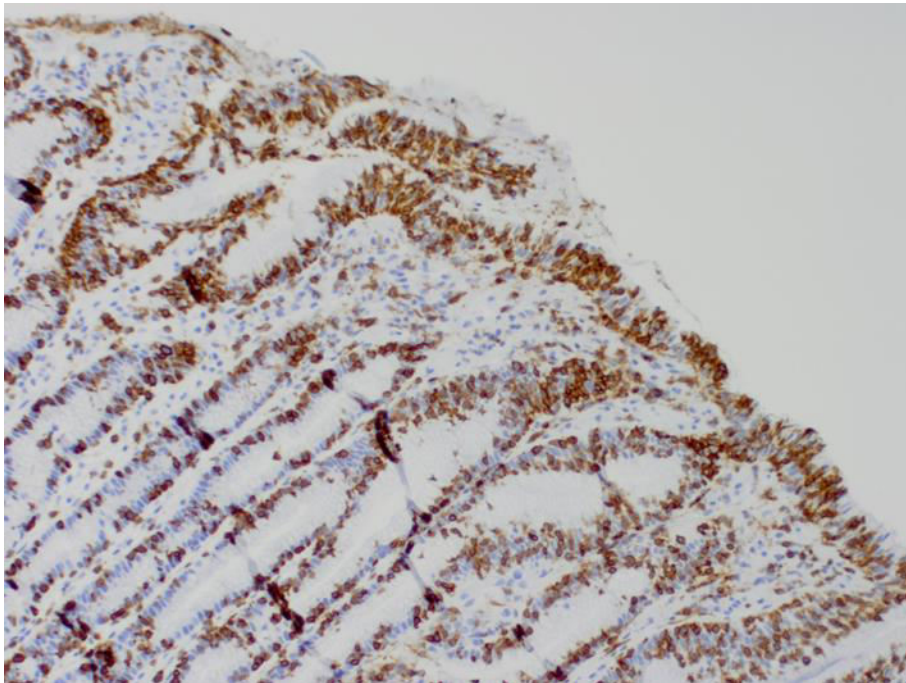


Figure 4. Gastric mucosa, antrum. Intraepithelial T lymphocytes on immunohistochemical stain.

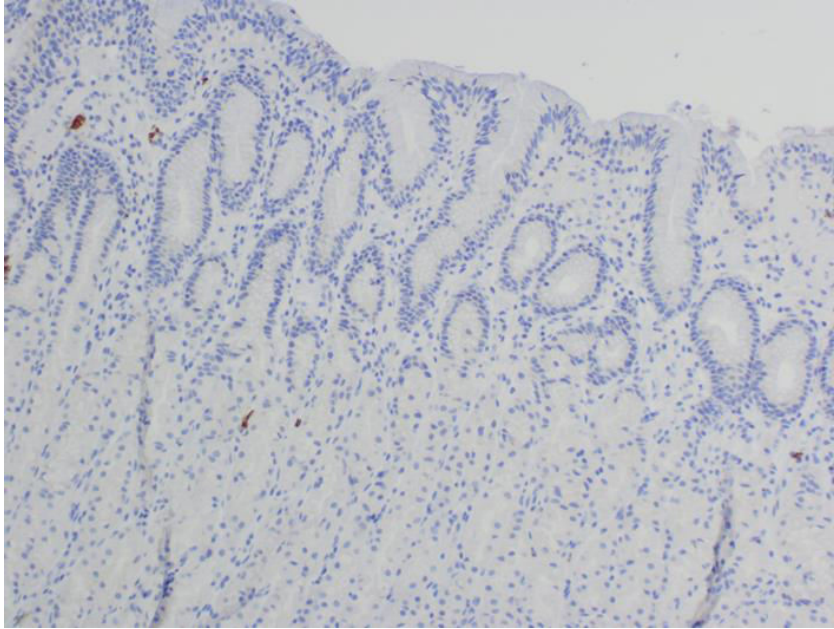


Figure 5. Gastric mucosa, body. Absence of intraepithelial B lymphocytes on immunohistochemical stain.

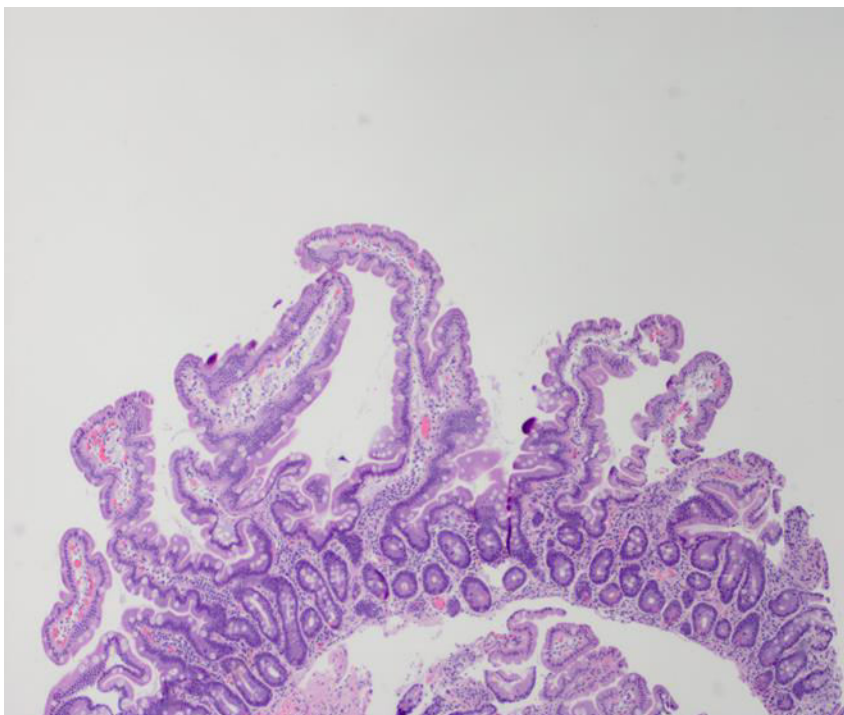


Figure 6. Duodenal mucosa with preserved villous architecture.

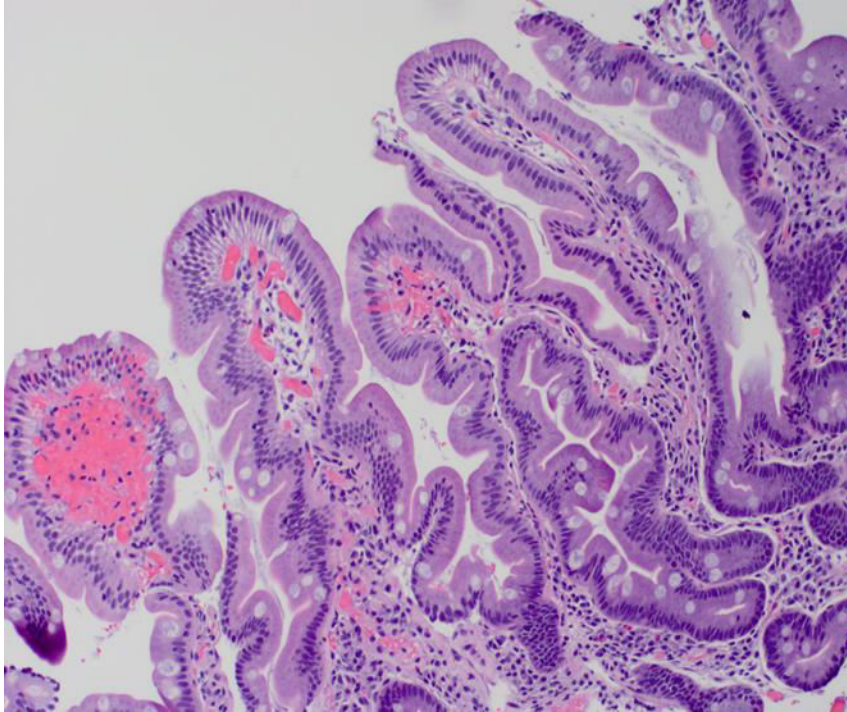


Figure 7. No significant increase of intraepithelial lymphocytes in duodenal mucosa.