

Lymphocytic Gastritis Identified by Abnormal PET Scan

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CASE REPORT

A 20-year-old man presented for evaluation of diffuse abdominal pain. He had completed chemotherapy 2 months earlier for stage IV diffuse large B-cell lymphoma (DLBCL). On a recent positron emission topography (PET) scan, he was found to have a new area of intense activity within the proximal stomach (Figure 1). Upper endoscopy showed scattered shallow ulcers throughout the stomach (Figure 2). Gastric biopsies demonstrated lymphocytic gastritis-type pattern with acute inflammation and reactive gastropathy (Figure 3). On further immunostaining, the lymphocytes were CD3+ T-cells rather than the B-cells expected in recurrent DLBCL. This confirmed the diagnosis of lymphocytic gastritis. *Helicobacter pylori* and celiac disease serologies were negative. His symptoms resolved within a few days of daily proton pump inhibitor (PPI) usage, and upper endoscopy and repeat PET demonstrated resolution (Figure 4).

Lymphocytic gastritis accounts for 5% of cases of chronic gastritis.¹ Symptoms are often nonspecific and include abdominal pain, nausea and vomiting, or weight loss. Endoscopic appearance of the mucosa is varied and unreliable as it can appear as nodules, erosions, enlarged and prominent rugae, or normal. Lymphocytic gastritis is characterized by dense and diffuse T-cell lymphocytic infiltration of the gastric epithelium, and it is defined histologically as >25 lymphocytes per 100 epithelial cells, with an average of 50 lymphocytes per 100 epithelial cells.² While the etiology of lymphocytic gastritis is unknown, it has important clinical associations with celiac disease and *H. pylori* infection.^{3,4} In these patients, *H. pylori* histology may have a reduced sensitivity, and it is recommended patients with lymphocytic gastritis and negative biopsies should undergo serologic testing.^{4,5} Eradication of *H. pylori* has been shown to be an effective treatment; in one randomized trial, 83% of patients achieved resolution at 3

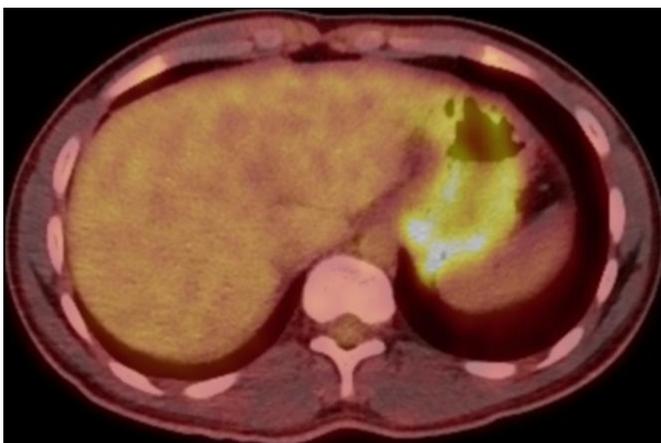


Figure 1. PET scan demonstrating abnormal hypermetabolic activity within the stomach.



Figure 2. Esophagogastroduodenoscopy demonstrating diffuse superficial gastric ulcerations.

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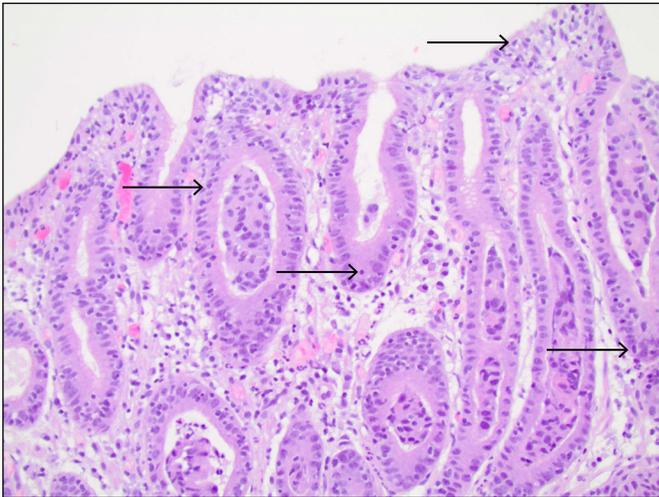


Figure 3. Gastric biopsies demonstrating lymphocytic gastritis type pattern with acute inflammation and reactive gastropathy (H&E stain at 400x magnification).

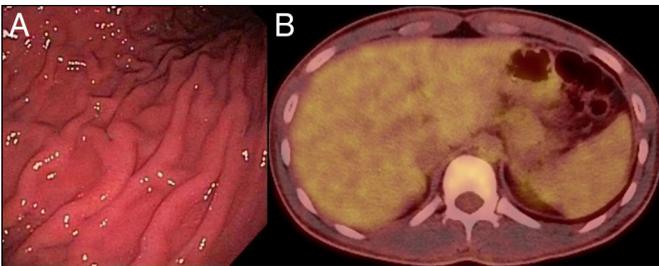


Figure 4. (A) Repeat endoscopy after PPI therapy showing full mucosal healing. (B) Repeat PET scan after PPI therapy showing resolution of previous hypermetabolic activity in the gastric wall.

months and 95.8% at 12 months compared to 53.8% with PPI alone.⁴ There is currently no evidence that lymphocytic gastritis is associated with an increased risk of lymphoma or malignancy of the gastrointestinal tract.

To our knowledge, this is the first reported case of lymphocytic gastritis presenting as an abnormal PET finding. We speculate that the increase in intraepithelial lymphocytes and associated inflammation is the etiology of hypermetabolic activity on the PET scan, which would fit with previous reports showing resolution of intraepithelial lymphocytes with PPI therapy. This case highlights that lymphocytic gastritis should be considered as a potential cause of abnormal gastric imaging.

DISCLOSURES

Author contributions: CJ Murphy wrote the manuscript. B. Swanson and M. Markow provided the pathology captions and reviewed the manuscript for important intellectual content. PP Stanich edited the manuscript and is the article guarantor.

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Informed consent was obtained for this case report.

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