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PRESENTACIÓN DE CASO

Endoscopic findings of primary follicular lymphoma

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A 79-year-old female with benign past medical history presented to the gastroenterology clinic complaining of long-standing symptoms of dyspepsia. Esophagogastroduodenoscopy showed nodular smooth mucosa in the second part of the duodenum. The morphologic and immunophenotypic findings were consistent with low-grade follicular lymphoma. The purpose of this manuscript is to educate the reader on this unusual finding that is pathognomonic for gastrointestinal lymphoma.

Key words: Lymphoma, duodenum, endoscopy, duodenal diseases, neoplasm.

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Hallazgo endoscópico de linfoma folicular primario

Una mujer de 79 años, sin antecedentes patológicos de importancia, consultó al servicio de gastroenterología por síntomas de dispepsia de larga data. Se practicó una esofagogastroduodenoscopia en la que se observó mucosa nodular en la segunda porción del duodeno. Esta morfología y los hallazgos inmunofenotípicos eran indicativos de linfoma folicular de bajo grado. El propósito de este manuscrito es ilustrar al lector sobre esta inusual condición en el duodeno, la cual es patognomónica de linfoma.

Palabras clave: linfoma, duodeno, endoscopia, enfermedades duodenales, neoplasia.

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A 79-year-old female with long-standing symptoms of cough, nighttime heartburn and mild intermittent right upper abdominal pain was referred to the gastroenterology clinic for evaluation of possible reflux disease. Family history was significant for leukemia in a sister and non-Hodgkin lymphoma in a brother. Past medical history was benign and she denied smoking, proton pump inhibitors use, weight loss, blood in the stool or dysphagia. Basic laboratory tests including complete blood count, comprehensive metabolic panel, and liver function tests were normal except for low leukocytes of 2,900/mm³.

An esophagogastroduodenoscopy (EGD) revealed a 2 cm hiatal hernia, and grade A esophagitis with a nonobstructing Schatzki's ring. In addition,

nodular smooth mucosa was noted in the second part of the duodenum (figure 1). Biopsy showed a dense submucosal infiltrate of mature CD20-positive lymphocytes with disrupted and scattered lymphoid follicles (figure 2). Lymphocytes exhibited coexpression of CD10 and BCL2, but were negative for CD5 and CD43 (figure 2). This morphologic and immunophenotypic findings were consistent with duodenal low-grade follicular lymphoma that exhibited a follicular and diffuse growth pattern. The patient was started on proton-pump inhibitors therapy and was referred to the hemato/oncology clinic for further staging and management.

Primary gastrointestinal follicular lymphoma is a rare malignant disease, in the spectrum of non-Hodgkin B-cell lymphoma. It is commonly found in the duodenum, and is a frequent lymphoma in the gastrointestinal tract (1). The clinical course tends to be indolent with a continuous pattern of relapse (2). The median survival is 10 years after diagnosis, though in a recent multicenter, retrospective study male sex and the presence of abdominal symptoms were independently associated with

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Author's contributions:

Diana L. Franco: study concept and design, acquisition of data and drafting of the manuscript

Sameer Islam: study concept and design and drafting of the manuscript

Kevin Ruff: critical revision of the manuscript for important intellectual content

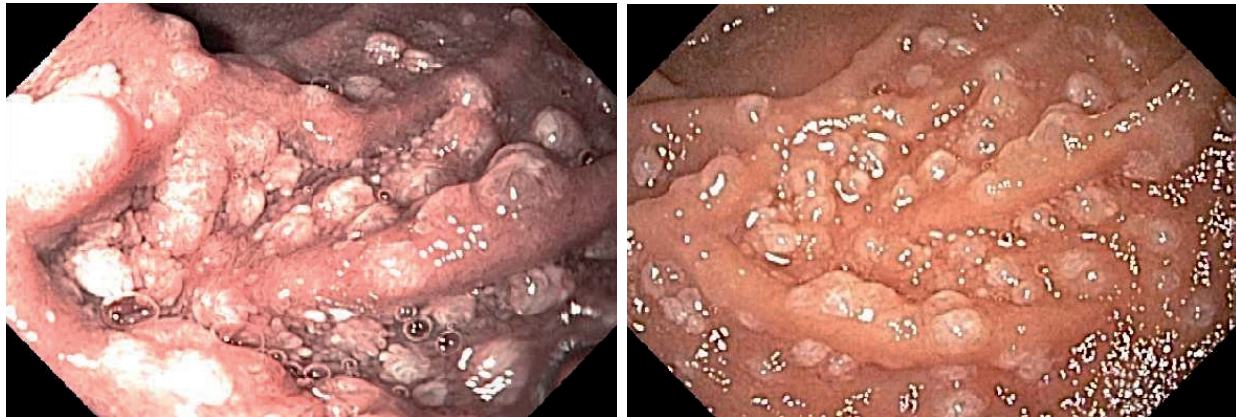


Figure 1. Nodular smooth mucosa on second portion of duodenum

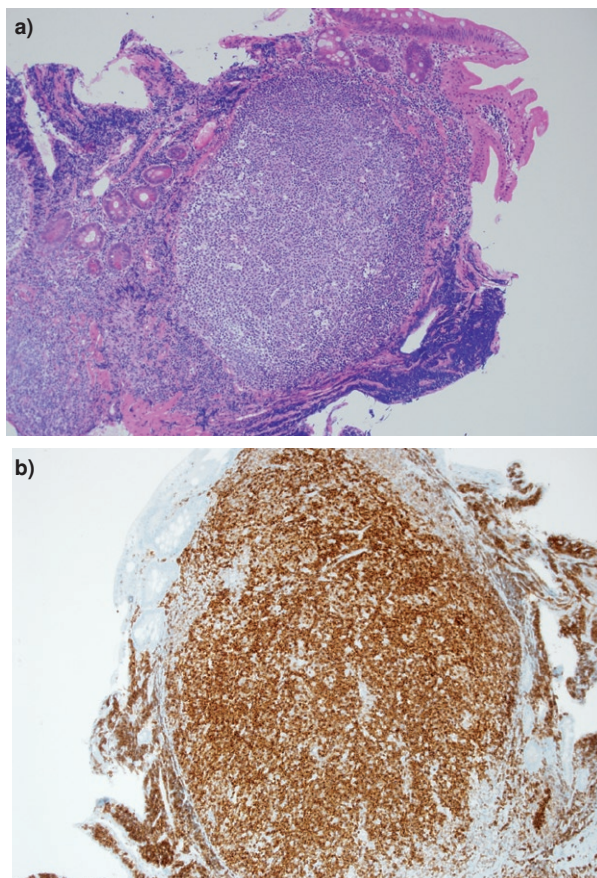


Figure 2. a) Lymph follicle, hematoxylin and eosin, 10X; b) BCL2 stain, 10X

worse clinical outcomes (1). Follicular lymphoma accounts for 1% to 3% of primary gastrointestinal lymphomas, and endoscopically appears in the form of small intestinal whitish smooth nodules as in our case (3). Follicular lymphoma can be part of a spectrum of disease called multiple lymphomatous polyposis, which is characterized by the formation of multiple mucosal nodules on various regions of the gastrointestinal tract including the esophagus, stomach, duodenum, and intestine. Histological findings tend to lead to the classification of most multiple lymphomatous polyposis as mantle cell lymphomas (4).

Immunohistochemical techniques positive for CD10 and bcl-2 markers establishes the diagnosis (3). Differential diagnosis includes pancreatic cancer, as this is the most frequent tumor in this area, and mantle cell lymphoma, the most common lymphoma in the gastrointestinal tract, which is characterized by CD10 negativity in immunohistochemistry stains (2) (table 1). This case was chosen to highlight the macroscopic and pathology images, as diagnosis can be done by recognizing those typical patterns.

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Table 1. Immunophenotype and cytogenetics characteristics of mantle cell lymphoma vs. follicular lymphoma

Lymphomas	CD20	CD5	CD10	CD23	Cyclin D	Bcl2	Characteristic feature
Follicular lymphoma	+	-	+	-	-	+	Aggregates of CD21 (+) follicular dendritic cells
Mantle cell lymphoma	+	+	-	-	+	+	Presence of epithelioid histiocytes

Conflict of interest

The authors declare that they have no conflict of interest.

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