Ethical considerations

The authors declare that the present article contains no personal information that could identify the patient, because it is a review of a clinical case record, no authorization by an ethics committee was needed.

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Conflict of interest

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Monomorphic epitheliotropic intestinal T-cell lymphoma in a patient with chronic diarrhea and steatorrhea☆

Linfoma T intestinal monomórfico epiteliotrópico en un paciente con diarrea crónica y esteatorrea

Enteropathies are diseases that affect small bowel (SB) function and clinically manifest as chronic diarrhea and/or steatorrhea.[1] They are a true clinical challenge, given their extensive differential diagnosis.

Monomorphic epitheliotropic intestinal T-cell lymphoma (MEITL) is a rare aggressive disease that mainly affects the SB mucosa. Its symptoms can be nonspecific, but often present as chronic diarrhea or steatorrhea. Diagnosis tends to be delayed, despite having distinctive histologic characteristics.

A 42-year-old man with alcohol use disorder presented with lienteric diarrhea and steatorrhea (on average 5–6 daily episodes), diffuse abdominal pain, edema, and weight loss of 20 kg, over a 22-month period. Physical examination revealed a cachectic aspect, ascites, and edema of the extremities. Laboratory test results showed severe malnutrition due to hypoalbuminemia (1.8 mg/dl) and anemia, with hemoglobin of 8.2 g/dl. HIV ELISA test was negative. Initial endoscopic studies were normal, and biopsies were taken of the ileum and colon. The biopsy of the distal ileum revealed villous atrophy of the mucosa and infiltra-

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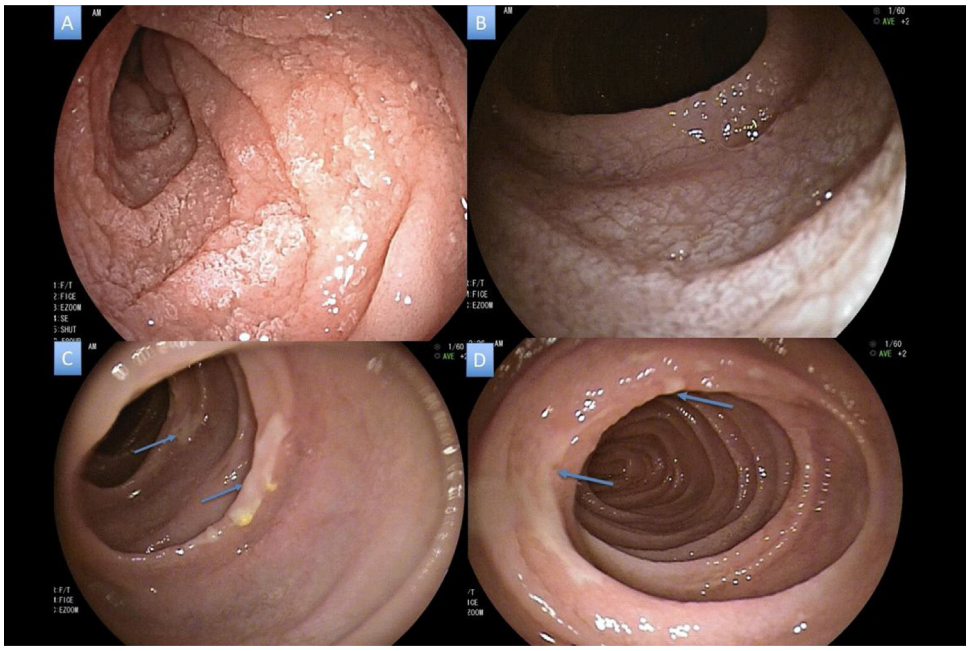

Figure 1 A) Segmental atrophy in the distal duodenum, B) Changes due to severe, homogeneous atrophy in the jejunum, C and D) Thinning of the mucosa in the mid jejunum with the presence of fibrin-covered superficial ulcerations in patches (blue arrows).

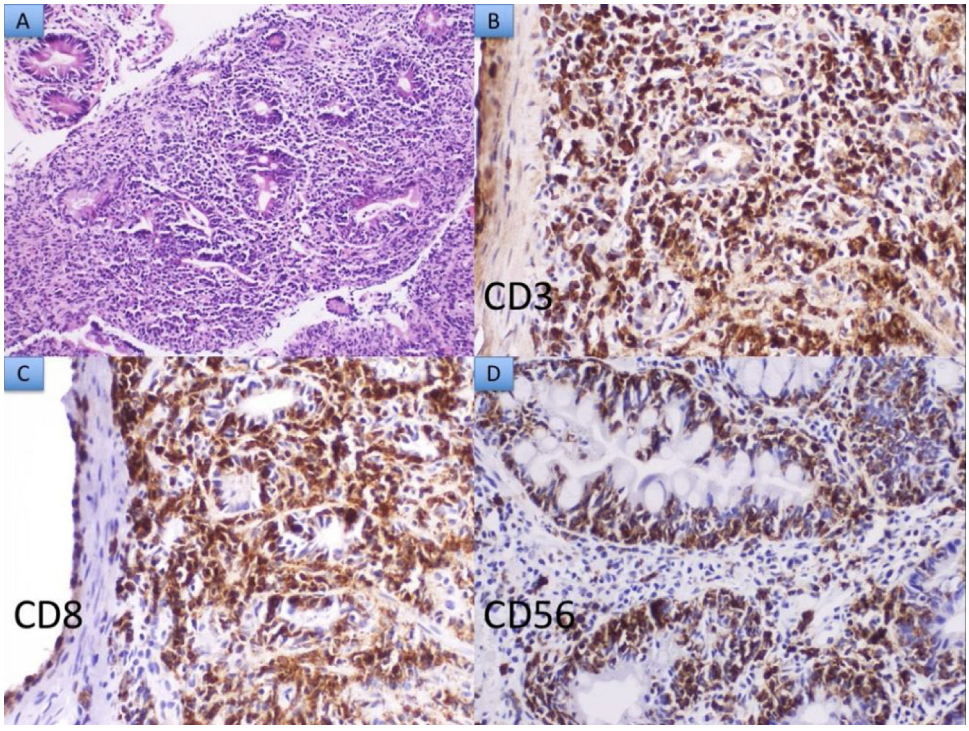

Figure 2 A) Hematoxylin and eosin ×20: Dense lymphoid infiltrate composed of medium-sized monomorphic lymphoid cells. B, C, and D) Neoplastic cells express the CD3, CD8, and CD56 markers, respectively.

tion of small lymphocytes in the lamina propria. Given those histologic findings, celiac disease was suspected, and the patient was started on a gluten-free diet, but his clinical condition remained the same. Deamidated gliadin peptide antibody and tissue transglutaminase antibody tests were negative. Anterograde enteroscopy identified inflammatory changes and villous atrophy in the distal duodenum and in the jejunum (Fig. 1A–D). Biopsies revealed a dense and monotonous infiltrate of small lymphocytes, with exocytosis into the epithelium and crypt destruction. Through immunohistochemistry, those lymphocytes expressed the CD3, CD7, CD8, and CD56 markers. They were negative for CD4 and

Table 1 Differential diagnosis in intraepithelial lymphocytosis associated with lymphoma.

Findings	Monomorphic epitheliotropic intestinal T-cell lymphoma	Enteropathy-associated T-cell lymphoma	Extranodal NK/T-cell lymphoma, nasal type
Endoscopic aspect	Inflammatory changes, atrophy, superficial ulcers	Severe inflammatory changes, villous atrophy, tumor-like appearance	Superficial ulcers, nodular or tumor-like appearance
Morphologic aspect	Monomorphic infiltrate of small-to-medium-sized lymphocytes	Polymorphic infiltrate of large lymphocytes, vesicular nuclei, prominent nucleoli, and scant cytoplasm	Polymorphic infiltrate of small, medium, and large lymphocytes; angiocentric pattern and extensive necrosis
Immunohistochemistry	CD3+, CD8+, CD56+	CD3+, CD8−/+, CD56−	CD3−, CD8−, CD56+
Gastrointestinal dominant sites	Duodenum, jejunum	Proximal jejunum, rare in distal ileum and in colon	Nasopharynx, rare in stomach and jejunum
Associations of interest	No relation to enteropathy. Asians and Latin Americans.	Celiac disease. Frequent in white people.	High incidence in Asians. Related to Epstein-Barr virus.

NK: natural killer.

perforin and the CD5 T-cell marker was lost. Ki-67 showed high proliferative activity. Those findings are characteristic of MEITL (Fig. 2A–D). No adenopathy or organomegaly was reported in the staging studies, but the bone marrow was infiltrated by atypical lymphocytes possessing the same intestinal immunophenotype.

The patient's progression during hospitalization was poor. He presented with Wernicke's encephalopathy, gastrointestinal bleeding, and finally death, due to sepsis secondary to S*taphylococcus aureus* bacteremia, without having begun chemotherapy.

The differential diagnosis of enteropathy with steatorrhea is very broad and includes immune system-mediated causes, such as celiac disease, Crohn's disease, and autoimmune enteropathy; drug-related causes; infiltrative causes, such as amyloidosis, eosinophilic enteritis, and collagenous sprue; infectious causes, such as HIV enteropathy, tropical sprue, giardiasis, Whipple disease, and tuberculosis; and rare causes, such as diffuse large B-cell lymphoma, enteropathy-associated T-cell lymphoma (EATL), and MEITL.[1] The presence of intraepithelial lymphocytosis significantly reduces the differential diagnosis to celiac disease, drug-induced enteropathy, EATL, and MEITL. Those diseases should be distinguished by immunohistochemical markers. The most useful in the differential diagnosis of lymphoma-associated intraepithelial lymphocytosis are CD3, CD8, and CD56 (Table 1).

T-cell lymphomas account for just 5% of gastrointestinal tract lymphomas (EATL and MEITL). EATL corresponds to nearly 90% of cases, is associated with celiac disease, tends to present in Whites, and is histologically characterized by a polymorphous infiltrate with numerous eosinophils and plasmacytes that can hide neoplastic lymphoid cells. MEITL is an aggressive pathology with poor outcome and predominates in Asian and Latin American males. Its median survival rate is usually 7 months.[2] At present, only one case has been reported in Colombia.[3] The disease is not linked to celiac enteropathy, albeit a few cases have been described with said association.[2] Interestingly, in Asia, where celiac disease is very rare, almost all cases of intestinal T-cell lymphoma are regarded as MEITL.[4] Endoscopic findings of MEITL are inflammatory changes, such as edema, erythema, granularity, and superficial inflammatory ulcers.[5] It spreads diffusely in the mucosa, with or without tumor-like lesions, unlike EATL, which is frequently associated with large tumors of the SB that tend to become perforated.[2] MEITL used to be considered a type II EATL, but its distinctive immunophenotypic and morphologic findings have enabled the clear differentiation between the two pathologies. In addition, the genomic hybridization technique frequently shows an 8q24 gain in MEITL, resulting in the definition of a different genomic profile.[6,7]

There is no standard treatment for the disease. Multiple chemotherapy regimens have been utilized that are based on cyclophosphamide, doxorubicin, vincristine, and prednisolone (CHOP), PEG-asparaginase, pralatrexate, or autologous bone marrow transplantation, with varying efficacy.

In conclusion, MEITL is a rare entity, described in Asian and Latin American individuals, with a poor outcome and high mortality rate. Its clinical manifestations are diverse and its histopathologic findings distinctive, such as intraepithelial lymphocytosis with small-to-medium sized lymphocytes that are positive for CD3, CD8, and CD56. Those findings make the differential diagnosis of intraepithelial lymphocytosis a necessity in the clinical setting of chronic diarrhea and/or steatorrhea.

Ethical disclosures

The present work meets the current bioethics research regulations and was authorized by the institutional ethics committee. A written statement of informed consent was not requested, given that the data are carefully protected. No data from the clinical history or imaging studies could identify the patient described in the clinical case.

The authors declare that the present article contains no data that could identify the patient.

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Conflict of interest

The authors declare that there is no conflict of interest.

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Splenic rupture after colonoscopy: A little-known complication☆

Rotura esplénica tras colonoscopia, una complicación poco conocida

Colonoscopy is a very frequently used diagnostic technique that has a good safety profile, but it is not exempt from complications, the most well-known of which are bleeding and perforation. However, there are other less common complications, such as splenic rupture, that have elevated morbidity and mortality.

A 77-year-old man had a history of GOLD III chronic obstructive pulmonary disease, lung adenocarcinoma with no current evidence of recurrence, atrial flutter (anticoagulation with edoxaban), prostatectomy due to adenocarcinoma, cholecystectomy, and right inguinal hernioplasty. He sought medical attention for diarrhea, asthenia, and weight loss of several months of progression. Upon admission, oral anticoagulation was suspended and substituted with enoxaparin (60 mg/12 h). Diagnostic colonoscopy was performed, with the patient under deep sedation with propofol. There was no technical difficulty or immediate complications, and the only finding was diverticulosis. No pressure was applied on the left upper quadrant of the abdomen. Twelve hours after the procedure, the patient presented with low blood pressure, tachycardia, and generalized abdominal pain that was poorly controlled with opioids. The pain was described as progressively worsening over several hours. Emergency laboratory tests showed anemia of 8.4 g/dl (previously 12.9 g/dl) and an abdominal x-ray ruled out perforation. Emergency abdominal CT scan was carried out (Fig. 1)

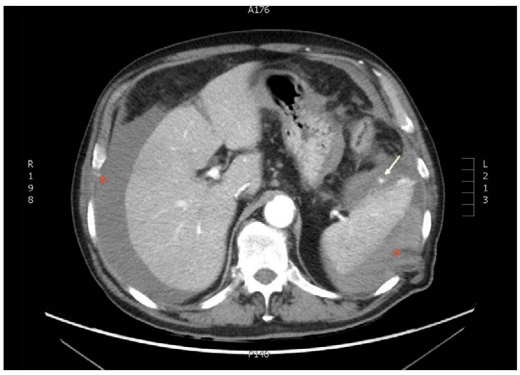

Figure 1 Hemoperitoneum and a large peri-splenic hematoma measuring 10 × 12 × 13 cm (*) with foci of contrast medium extravasation in the lower splenic pole (white arrow), corresponding to a grade V splenic injury.

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