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Letter to the Editor

Sarcoidosis associated with celiac disease: a unique clinical combination

Dear Editor,

Celiac disease (CD) is a multifactorial disease of an inflammatory nature that has both genetic and environmental components[1]. It causes atrophy of the small intestine's villi with subsequent absorptive loss of nutrients, vitamins (especially fat-soluble vitamins), water, and electrolytes[2,3]. CD is thought to be due to an inappropriate immune response against antigens present in gluten[2,4], a protein found in wheat, barley, rye, oats (although there is controversy concerning this in some studies), and malt[2,5]. Studies in human biopsies show that gliadin, a component of gluten found in wheat, binds to the endomysium[1]. Thus, the presence of IgA antibodies against the endomysium (IgA-EMA anti endomysial antibody)[1,4,6], in addition to the small bowel biopsy[7], is an essential component of the diagnostic workup for CD.

The diagnosis of CD should be carefully established via family history, through a series of genetic testing, and by the presence of other autoimmune diseases found in the patient's family history, laboratory data, histology, serology, and physical exam. The treatment of celiac disease is the permanent and definitive adoption of a completely gluten-free diet[1-4]. Several conditions have been described as being associated with celiac disease, such as hypothyroidism, type I diabetes mellitus, lactose intolerance, cancer, inflammatory bowel disease, autoimmune diseases, including sarcoidosis in a few cases[4]. Sarcoidosis is a chronic disorder associated with non-caseous granulomas on biopsies and affects mainly the lungs and mediastinal lymph nodes. Some previous reports[8-10] in the literature of sarcoidosis associated with CD. This article presents the case of a patient who presented with CD and sarcoidosis simultaneously.

A 71-year-old Caucasian male patient sought medical care in June 2021 due to diarrhea, fever, dyspnea, cough, and RT-PCR for COVID-19 was negative. He was submitted to a thorax-computed tomography that showed multiple nodules on his lungs. He was admitted to the hospital and performed an extensive evaluation, although he was out without any diagnosis. He was submitted to a thoracoscopy and biopsy during hospitalization, demonstrating a non-caseous granuloma on his lung. He had an episode of uveitis (Figure 1), treated with eye corticoid drops with improvement. He evolved with arthralgia of his knees and hips and arthritis of his left knee. Some skin lesions appeared over his elbows, buttocks, knees, and periorbital regions (Figure 2). His physical examination showed the vesicles over his elbows and periorbital regions. The rest of the physical examination was unmarked. He has smoked for 15 years, stopped 40 years ago, and has dyslipidemia treated with rosuvastatin 10 mg/day. Laboratory tests revealed negative antinuclear antibodies and the other autoantibodies (anti-dsDNA, anti-Sm, anti-P, ANCA, and rheumatoid factor). Blood cell count and biochemistry were within the normal range, except for ionic calcium, 1.36 mmol/L (normal range: 1.11-1.20 mmol/L). C-reactive protein was 34.6 mg/L (nr: < 5 mg/L). Due to the aspect of skin lesion, remind *dermatitis herpetiformis*, was performed aCD autoantibodies, and they were positive: IgA anti-endomysium 1:40 and IgA antigliadin 1.8 (nr: < 1.1). Skin biopsy was compatible with *dermatitis herpetiformis*. Angiotensin converter enzyme was normal 22.6 μ/L (nr; 5-82 Symbol μ/L). Upper endoscopy with biopsies was ordered. Spirometry was normal. Serology for the infectious disease was negative. He was treated with 20 mg/day of prednisone and improved arthritis, fever, and dyspnea. Endoscopy showed a normal appearance of the gastrointestinal mucosa. Biopsy showed atrophy of the duodenal villi, mild intraepithelial lymphocytosis (35 per 100 epithelial cells), hyperplasia of crypts, and mild nonspecific chronic inflammatory infiltrate. We referred him to a dietist to start a gluten-free diet.

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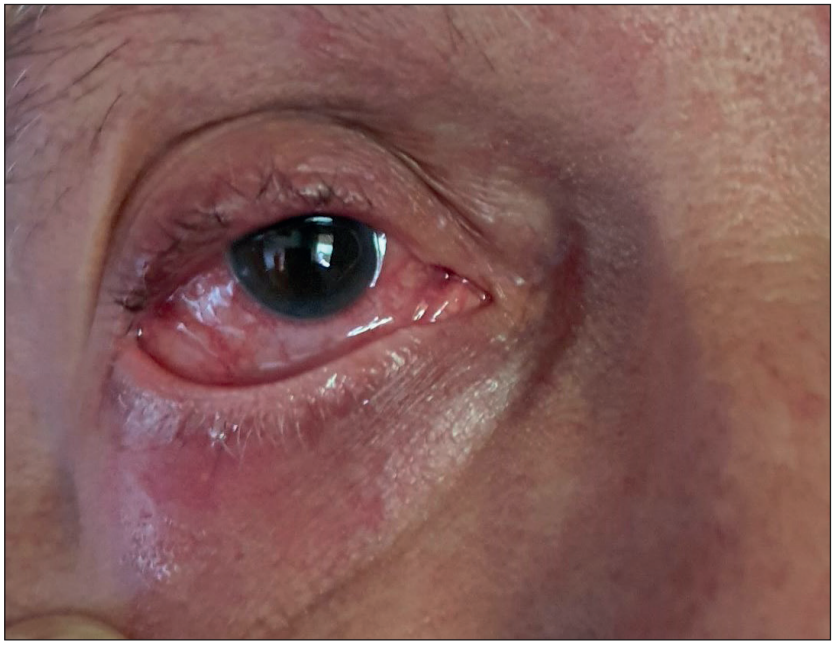

Figure 1. Photography showing conjunctival chemosis and red left eye and ophthalmological evaluation confirmed the presence of uveitis.

Sarcoidosis and CD have been associated with class II haplotype HLA-DR3 and DQ2 and share immunological and genetic diseases[11]. Interestingly, a previous diagnosis of sarcoidosis is associated with a greater risk of CD development (OR: 3.58; 95% CI: 1.98-6.45). In the same way, a previous diagnosis of CD disease is linked to a higher risk of sarcoidosis (HR: 4.03; 95% CI: 2.32-7.00)[12].

The present article reports an additional rare case of the association of CD and sarcoidosis. As rarely reported in the literature, all descriptions about this unique association are welcome. Our patient evolved with a good outcome since he had a good response of sarcoidosis after glucocorticoid and the beginning of a gluten-free diet.

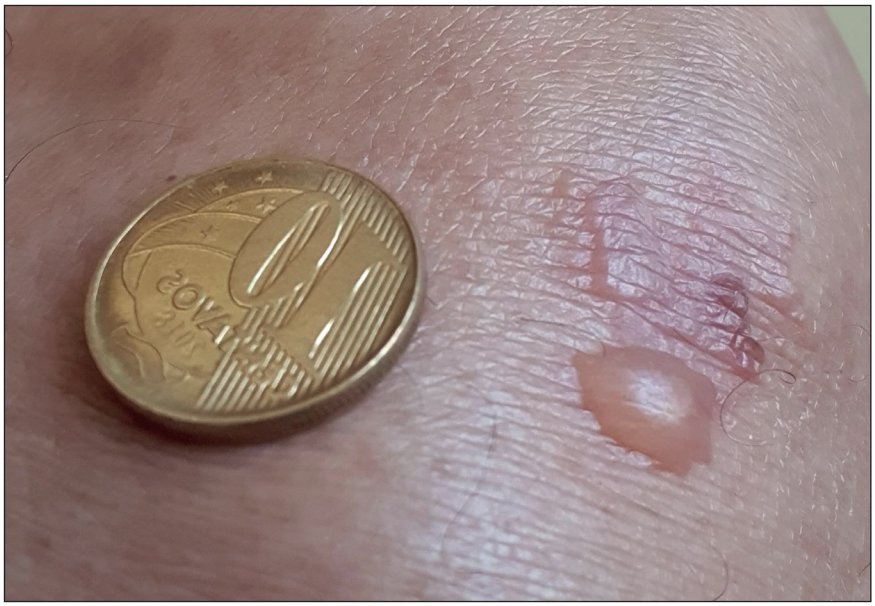

Figure 2. Bullae over the elbow of the patient that was compatible with *dermatitis herpetiformis*.

Availability of Data and Materials
Datasets used and/or analysed during the current study are available from the corresponding author upon reasonable request.

Conflict of interest
The author declares that he has no competing interests.

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Ethical Statement
The author declares that the World Medical Association Declaration of Helsinki was followed.

Patient's Consent
Informed consent was obtained from the patient to publish this study.

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