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Case Report

Coexistence of Celiac and Crohn's Disease in a Patient Presenting with Chronic Diarrhea

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Abstract

Celiac disease (CD) and Crohn's disease (CrD) both involve inflammation of the gastrointestinal lumen, with environmental, genetic, and immunological factors playing roles in their pathogenesis. The prevalence of celiac disease in patients with CrD ranges from 0% to 14%. Some studies have found an increased coexistence of these two diseases, both of which have an autoimmune background. In this article, we present a case of a patient who presented with chronic diarrhea and was diagnosed with both CD and CrD at the time of admission.

Keywords: Celiac, Crohn's disease, diarrhea

INTRODUCTION

Crohn's disease (CrD) is characterized by chronic, recurring inflammation of the gastrointestinal tract.[1,2] CrD can affect any part of the gastrointestinal tract, with inflammation occurring in a skipped pattern, though it has transmural involvement, which can lead to bowel stricturing or fistulization.[3]

Celiac disease (CD) is one of the most common causes of malabsorption. It is an immune-mediated disease manifested by diarrhea, steatorrhea, flatulence, and weight loss, caused by the ingestion of gluten-containing diets. The prevalence of CD is reported to be 1% in the general population. Some studies have noted an increased coexistence of CD and CrD, with prevalence rates ranging from 0% to 14%.[4,5] In this article, we present a case of a patient who presented with chronic diarrhea and was diagnosed with both CD and CrD at the time of admission.

CASE REPORT

A 26-year-old male patient was admitted to our outpatient clinic with complaints of abdominal pain, weight loss, and bloody diarrhea occurring 8-10 times a day for approximately 45 days. He had no known pre-existing conditions. Laboratory results showed a sedimentation rate of 26 mm/h, C-reactive protein (CRP) at 130 mg/L, white blood cell (WBC) count at 17,000 x 10^9/L, hemoglobin level at 10.5 g/dL, and platelet count at 656 x 10^9/L.

Endoscopy revealed antral gastritis, along with combing and nodularity in the folds of the second part of the duodenum (Figure 1A). Biopsies were taken with a preliminary diagnosis of gluten-sensitive enteropathy. The patient's anti-tissue transglutaminase IgA level was 32.5 U/ml (reference range: 0-10), and the total IgA level was normal. During ileocolonoscopy, deep ulcers, erythema, fragility, and a cobblestone appearance were observed in the ileum and entire colon (Figure 1B). Biopsies were taken with a preliminary diagnosis of Crohn's disease.

The duodenal biopsy revealed intraepithelial lymphocytosis, villus atrophy, and partial crypt hyperplasia (Marsh-2 classification). Biopsies from the colon and ileum showed chronic inflammation, crypt abscesses rich in lymphocytes (Figure 2). Magnetic resonance enterography evaluation showed no abscess or fistula formation. The patient was diagnosed with ileocolonic Crohn's disease and simultaneous celiac disease.

DISCUSSION

Numerous cases of the coexistence of CD and CrD have been reported in both genders within the pediatric patient group.[6,7] Recent meta-analyses have shown an increased risk of CD in patients with inflammatory bowel disease (IBD) compared to controls (relative risk [RR] = 2.9). Specifically, the increased risk of CD in CrD patients versus controls was found to be RR = 3.15, and in ulcerative colitis (UC) patients versus controls, RR = 2.81.[8]

Cottone and Capello[9] first demonstrated the association of CD and CrD in three different Sicilian families in 1989. Since then, the coexistence of these two diseases has been reported in numerous case series. In addition to the increased frequency of CD in IBD patients, a 5- to 10-fold increase in the frequency of IBD has been reported in CD patients compared to the general population.[10]

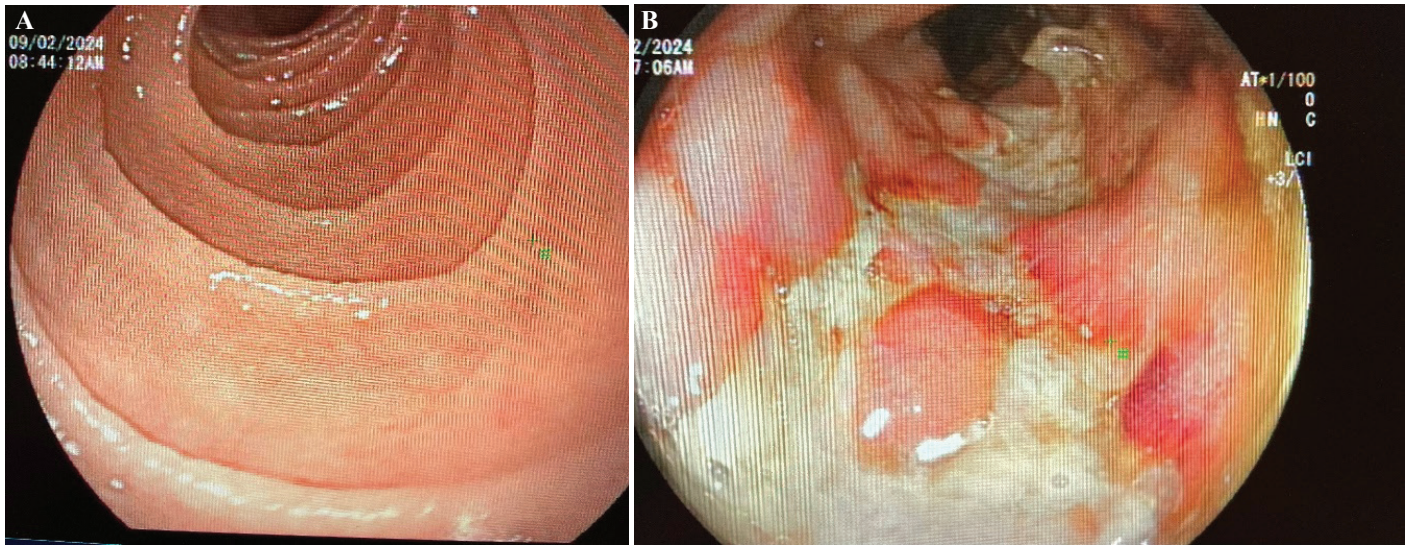

Figure 1. (A) Nodularity and scalloping in the duodenum. (B) Deep ulcers and cobblestone in colon.

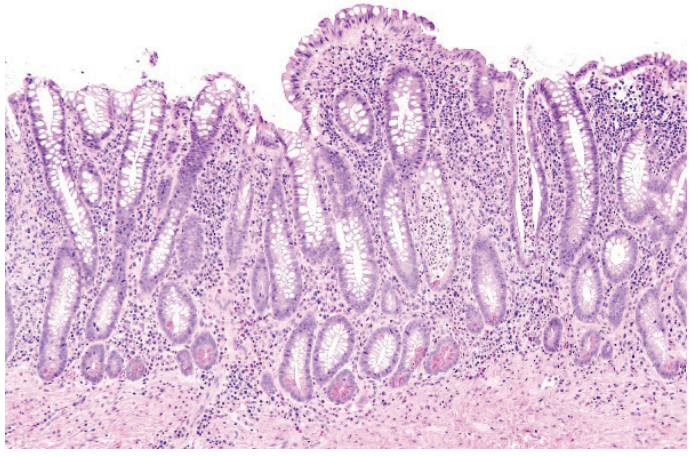

Figure 2. Lymphocytes infiltration and cryptitis.

In their study, Yang and colleagues[11] evaluated 455 CD patients for IBD and found an association with IBD in 10 patients. This study determined that the prevalence of IBD in CD patients was significantly higher than in the general population.

In Italy, 1,711 IBD patients were evaluated across 22 centers between 2002 and 2004. Nine of these patients were diagnosed with CD by serology and biopsy. Although CD is more common in UC, the frequency of CD in IBD patients was not found to be higher than in the general population (0.5% in IBD versus 1-2% in the general population).[12]

However, diagnosing celiac disease in Crohn's patients can be challenging. Symptoms such as abdominal pain, weight loss, and diarrhea, which are common in celiac patients, are also seen in Crohn's patients, making diagnosis difficult. CD should be suspected in cases where symptoms like abdominal pain, diarrhea, and iron deficiency anemia do not improve with Crohn's treatment.

CONCLUSION

Many studies and reviews have determined that the coexistence of inflammatory bowel diseases and celiac disease has increased. Celiac disease should be suspected in IBD patients, particularly in cases that are unresponsive to treatment and resistant to iron replacement. Further investigation in such cases would be beneficial.

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