



Co-occurrence of celiac disease and ulcerative colitis in an Iranian girl

Mehran Hakimzadeh¹, Mitra Ahmadi², Hazhir Javaherizadeh², Nooshin Sadjadei³

¹Department of Pediatric Gastroenterology, Abuzar Children's Hospital, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

²Alimentary Tract Research Center, Clinical Sciences Research Institute, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

³Department of Pediatric Gastroenterology, Arak University of Medical Sciences, Arak, Iran

*Correspondence to

Hazhir Javaherizadeh, Email:

Hazhirja@yahoo.com,

Hazhirja@ajums.ac.ir

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Key point

Celiac disease and inflammatory bowel disease co-occurrence are rare. Here we describe a 5-year-old girl with a history of lower gastrointestinal bleeding and elevated anti-tissue transglutaminase was reported. In upper gastrointestinal endoscopy, villous blunting and increased intraepithelial lymphocytes (80-85 per 100 lymphocytes) were reported. Lymphoplasmacytic infiltration of colonic mucosa, moderate cryptitis, and crypt abscess, and irregular gland were seen.

Keywords: Celiac disease, Ulcerative colitis, Crohn's disease, Colon

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Simultaneous occurrence of celiac disease and inflammatory bowel disease (IBD) was reported rarely in the literature (1,2). Here, we report the first report of co-occurrence of celiac disease and IBD from Iran.

A 5-year-old girl with a history of poor weight gain and history of admission due to lower gastrointestinal bleeding was visited.

Laboratory examination revealed normal antineutrophil cytoplasmic antibodies and anti-saccharomyces cerevisiae antibody. Meckel's scan was negative. Anti-tissue transglutaminase was more than 200 units/mL.

Upper gastrointestinal endoscopy and lower gastrointestinal endoscopy were conducted. Samples were sent to a laboratory for pathologic evaluation. Mild villous blunting of duodenal mucosa was seen in microscopic evaluation. Intraepithelial lymphocytes were increased about 80-85 per 100 enterocytes which is consistent with class IIIb according to Marsh Oberhuber classification. Pathologic examination of colon samples revealed normal findings. Giardia was not seen in microscopic examination. Mild Helicobacter pylori were seen in microscopic examination.

About 6 months later, due to recurrent lower gastrointestinal bleeding, the patient was undergoing colonoscopy for reevaluation of lower gastrointestinal bleeding. Fecal calprotectin was measured and was >1000

µg/g stool (normal <50 µg/g stool). Biopsies obtained from the transverse and descending colon showed lymphoplasmacytic infiltration of colonic mucosa, moderate cryptitis, crypt abscess, and irregular glands.

The patient was undergoing concurrent treatment of celiac disease and ulcerative colitis. In a recent follow-up, bleeding was ceased and satiety was improved.

Simultaneous occurrence of celiac disease and IBD was rarely reported among children in the literature (1). Ansaldi et al reported two children with celiac disease IBD among 80 children with coeliac disease, but one of them had cow's milk protein allergy (3). The occurrence of celiac disease and IBD together was very rare and has not been reported in the United States. Three case reports have been published between 1978 and 1993 about the co-occurrence of celiac disease and IBD however these cases had not enough evidence to support diagnosis (3,4). Three cases with the confirmed diagnosis were published till now (2,5,6).

Our case had enough pathologic findings for confirmed diagnosis such as cryptitis and crypt abscess (7). Crypt abscess was not seen in infectious colitis.

False-positive tTG (tissue Transglutaminase) can occur in children with IBD (8), but in our case histopathologic examination of duodenal mucosa also confirmed celiac disease.

Fecal calprotectin was high in our case. Fecal calprotectin may be high due to several etiology such as IBD, infection, and celiac disease (9). In the study by Balamtekin et al, fecal calprotectin was decreased following a gluten-free diet and negative anti-endomysial antibody (9).

Fecal calprotectin remained high despite a gluten-free diet in our case. Therefore, the remaining high level of calprotectin may be due to uncontrolled IBD. Because lower gastrointestinal bleeding continued. After mesalamine dosage increment, lower gastrointestinal bleeding was stopped and fecal calprotectin tend to be decreased.

IBD should be in mind in children with celiac disease when lower gastrointestinal bleeding occurred.

Authors' contribution

MH, HJ, MA and NS are responsible for the patient diagnosis and treatment. MH and HJ wrote the draft of manuscript. MA and NS revised the draft of the manuscript. HJ reviewed the literature and corresponding author. All authors read and approved the manuscript.

Conflicts of interest

The authors declare that they have no competing interests.

Ethical issues

This manuscript was conducted based on the World Medical Association Declaration of Helsinki. Written informed consent was taken from the parent of the girl for its publication. Additionally, ethical issues (including plagiarism, data fabrication, double publication) have been completely observed by the authors.

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