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Intestinal pseudo-obstruction on the setting of celiac disease: a case report

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Dear Editor,

Celiac disease is a disease of small intestines developing in patients with genetic susceptibility after intake of gluten-like proteins. Here, we aim to present a case with intestinal pseudo-obstruction, a rarely seen complication in celiac patients.

This letter presents the case of a 20-year-old female who presented in our emergency department with increased nausea and vomiting that had been present for the last 3 months. During this period, the patient had a weight loss of 6 kg and there was no gas or stool pass within the last 2 days. There was no abnormal findings or medication in the history. During the physical examination, she had mild distention with tenderness on palpation. She weighed 52.4 kg with a calculated BMI of 20 kg/m². In the laboratory, the following results were seen: White Blood Cell, 11.7 x 10^3/M (4.3-10.3); hemoglobin, 14.1 g/dL (13.6–17.2); platelet: 290 x 10^3/mL (156–373); blood urea nitrogen, 13 mg/dL (7.0–18.7); creatinine: 0.52 mg/dL (0.57–1.11); total protein, 4.5 g/dL (6.4–8.3); albumin, 1.8 g/dL (3.5–5.0); aspartate aminotransferase, 88 U/L (5.0 – 34); alanine aminotransferase, 84 U/L (0– 55); alkaline phosphatase, 183 U/L (40–150); gamma glutamyl transferase, 110 U/L (9 – 64); calcium, 6.8 mg/dL (8.4 – 10.2); vitamin B12, <150 pg/Ml (160 – 980); transglutaminase A, >200.0 U/ml (0 – 10); transglutaminase G, >200 U/ml (0 – 10); anti-gliadin IgA,>100.0 U/ml (0 – 12); anti-gliadin IgG, >100.0 U/ml (0 – 12). We observed diffuse air-fluid levels on abdominal radiography (Figure 1) in addition to the noticeable hepatosteatosis along with filled and dilated segments of the small intestine in all quadrants on abdominal CT (Figure 2).

The patient was consulted with the general surgery department and observation was recommended as no emergent surgical condition was considered. It was seen that there was edema at the bulbus and the second part of duodenum with plica effacement in the endoscopic evaluation; then, a biopsy was taken. Colonoscopy was considered normal. Biopsy result was reported as total villus atrophy, crypt hyperplasia, and intra-epithelial lymphocytosis (Type 3c destructive mucosal lesion according to Modified Marsh classification). No pathogen microorganism growth was detected in duodenal aspirate culture.

Figure 1. Diffuse air-fluid levels are observed on abdominal radiography

With these findings, the patient was considered as pseudo-obstruction on the ground of celiac disease. A nasogastric tube was inserted and oral intake was withdrawn. Parental nutritional supplementation was provided. The patient achieved clinical and radiological improvement during observation; thus, oral intake with celiac diet was initiated. The patient had no complaints in follow-up visits.

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Figure 2. All quadrants show filled and dilated segments of small intestines on abdominal CT.

As reported in several case reports and in addition to diarrhea, steatorrhea, distension and weight loss, intestinal pseudo-obstruction can be observed in celiac disease (1, 2). Intestinal pseudo-obstruction is defined as the presence of intestinal obstruction symptoms without mechanical causes (2). It can be idiopathic as well as secondary to neurological, auto-immune, endocrine and inflammatory reasons. Neuromyopathic mechanisms as well as injury of intestinal Cajal cells can play a role in the pathogenesis of intestinal pseudo-obstruction developing in celiac disease (3). Bacterial overgrowth can also cause mucosal injury and subtotal villus atrophy and such patients can present with intestinal pseudo-obstruction. However, we ruled out this diagnosis as our patient had positive auto-antibodies, no growth in culture test, and response to a gluten-free diet (2, 4).

In conclusion, celiac disease is a condition that should be kept in mind in the differential diagnosis for the etiology of patients with intestinal pseudo-obstruction.

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