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Case Report Olgu Sunumu

AN OBESE CHILD PATIENT DIAGNOSED WITH CELIAC DISEASE

Çölyak Hastalığı Tanısı Alan Obez Çocuk Hasta

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ABSTRACT

Celiac disease is a systemic autoimmune disease that frequently presents with clinical manifestations such as malnutrition, abdominal distension and diarrhea in childhood. With the increase in the incidence of celiac disease in recent years, differences in findings in patients at the time of diagnosis have been observed. While classical symptoms are common in younger age groups, differences in symptoms are more commonly observed in the adolescent age group. These findings often include abdominal pain, treatment-resistant iron deficiency anemia, elevated transaminase levels and diarrhea. Celiac disease should be considered in the differential diagnosis, even when malnutrition is not evident in such patients. In this case report, we present a case of an obese patient diagnosed with celiac disease, who experienced intermittent abdominal pain.

Keywords: *Celiac disease, obesity, malnutrition, constipation, diarrhea*

ÖZ

Çölyak hastalığı, çocukluk çağında sıklıkla malnütrisyon bulguları, karında şişlik, ishal gibi klinik tablolar ile başvuruya sebep olan sistemik bir otoimmun hastalıktır. Son yıllarda çölyak hastalığının insidansının artmasıyla birlikte tanı anında hastalarda saptanan bulgulardaki farklılıklar dikkat çekmektedir. Küçük yaşlarda bu klasik semptomlarla başvuru daha sık olurken, özellikle adölesan yaş grubunda bu bulgulardaki farklılıkların daha çok olduğu izlenmektedir. Bu bulguların sıklıkla karın ağrısı, tedaviye dirençli demir eksikliği anemisi, transaminaz yüksekliği veya ishal olduğu belirtilmiştir. Böyle hastalarda malnutrisyon bulunmasa da çölyak hastalığının ayırıcı tanılar arasında bulunması gerekmektedir. Bu olgu sunumunda aralıklı olarak karın ağrısı şikayeti olan, çölyak hastalığı tanısı alan obez hasta sunulmuş ve literatür bilgileriyle tartışılmıştır.

Anahtar Kelimeler: *Çölyak hastalığı, obezite, malnütrisyon, kabızlık, ishal*

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INTRODUCTION

Celiac disease (CD) is a systemic disease that develops in genetically susceptible individuals due to the autoimmune response to gluten in childhood (1). The classical presentation of CD is usually described as diarrhea, abdominal distension, malnutrition, and growth retardation. However, the increasing incidence of CD, the increasing awareness of the disease, the widespread use of serological tests for diagnosis, along with the increased availability of endoscopy, has resulted in a higher number of CD diagnoses that do not conform to the classical presentation (2-4). The frequency of CD diagnosis is also increasing in patients who are normal or overweight, in addition to those with diarrhea and growth retardation in the classical presentation. This article presents an obese patient who has been investigated for intermittent abdominal pain complaints for a long time and has been diagnosed with CD.

CASE REPORT

A nine-year-old female patient presented to the outpatient clinic with complaints of intermittent, recurrent abdominal pain for two years. Her symptoms were aggravated after eating and she had intermittent constipation. The patient had intermittent constipation, manifesting twice a week as painful and hard bowel movements. There was no history of diarrhea and her medical history was unremarkable. The patient had a history of using lactulose and macrogol treatments for constipation, as well as proton pump inhibitors for dyspeptic symptoms in the past. However, the patient did not benefit from these treatments. Upon presentation, the patient's weight was 68 kg (p>99.98), height was 150 cm (p:97.6), weight percentage according to height was 158%, body mass index (BMI) was 30.22 kg/m^2, and the BMI Z score was 2.54, which classified the patient as obese. The patient's phenotype was compatible with obesity, and her systemic examinations were normal. Laboratory tests revealed hemoglobin: 12.1 g/dL, mean corpuscular volume (MCV):80 fL, leukocyte count: 9800/mm^3, platelet count: 459000/mm^3, fasting blood glucose: 95 mg/dL, aspartate aminotransferase:41 U/L, alanine aminotransferase:44 U/L, and ferritin:19.5 mcg/L. Urine analysis for investigating the etiology of abdominal pain was found to be normal. There was no growth in the urine culture, and no parasites were detected in the stool microscopy. Grade 1 hepatic steatosis was detected on abdominal ultrasonography. After excluding infection-related causes, among the differential diagnoses for the patient, functional dyspepsia, irritable bowel syndrome, abdominal migraine, functional abdominal pain, aerophagia, functional constipation, and fecal incontinence were considered. Since the patient's main complaint began after meals, an endoscopy was performed to exclude Helicobacter pylori infection and gastric causes of chronic abdominal pain with a preliminary diagnosis of functional dyspepsia. The macroscopy of the esophagus and stomach was normal, but widespread cracks were seen in the duodenal mucosa. CD serological tests were performed, and the results showed anti-tissue transglutaminase IgA: >300 U/mL (positive: >18 U) and positive results for anti-endomysium antibody IgA (indirect fluorescent antibody method). A biopsy of the duodenal mucosa revealed total-subtotal villous atrophy and increased intraepithelial lymphocytes, leading to a diagnosis of CD. The patient was started on a gluten-free diet and her complaints improved significantly.

DISCUSSION

Celiac disease has been mostly associated with malnutrition, but in recent years, cases of celiac patients with obesity at the time of diagnosis have also been reported (4,5). When the first case of an obese celiac patient was diagnosed in 1986, it was hypothesized that absorption could increase in the distal intestinal segments due to adaptation based on duodenum-jejunum atrophy in celiac patients, resulting in weight gain and obesity (6). It has also been suggested that excessive adaptation can lead to weight gain and obesity due to excessive energy intake. Children under two years of age with CD present with malabsorption

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symptoms, as adaptation has not yet developed in their small intestine. Celiac patients with atypical symptoms are more likely to be diagnosed during adolescence and adulthood due to the increased adaptation mechanism with age (6-8). Despite these hypotheses, the pathogenesis of overweight celiac patients with malabsorption symptoms is not clear.

In a study conducted in Sweden, 242 cases of CD were detected in 12,632 screened patients, and it was stated that body mass index measurements at the time of referral were not a reliable screening tool for CD (9). It has been shown that celiac patients diagnosed by screening are mostly underweight and shorter than their peers who show normal development, but being normal or overweight does not rule out the possibility of having CD.

The most common symptoms in obese children diagnosed with CD are abdominal pain, treatment-resistant iron deficiency anemia, elevated transaminases, and diarrhea after consuming gluten-containing foods (2,7). In our patient, abdominal pain, which had been present for a long time, was the reason for admission to the hospital, but there was no history of anemia or diarrhea. In a study by Valletta et al., that examined the weight, height, and body mass index of 149 celiac patients at the time of diagnosis and after at least 12 months of a gluten-free diet, it was shown that 11% of patients were overweight and 3% were obese at the time of admission (10). It was shown that the number of overweight patients doubled in measurements taken 12 months after starting a gluten-free diet. This is noteworthy in terms of the careful monitoring of nutrition after a diagnosis of CD.

In a case series reported from Italy, 7.8% of 445 children with CD were classified as overweight/obese at the time of diagnosis, and it was shown that the ages of these patients were higher than those of other patients (11). However, there was no significant increase in the prevalence of obesity and overweight after at least 6 months of a gluten-free diet in this series. In a previous study conducted at our clinic, it was found that 4.2% of 148 celiac patients were overweight, and 1.7% were obese (3). In the same study, the presence of isolated abdominal pain, short stature, anemia, constipation, and elevated liver enzymes was determined as atypical presentations when only one of these symptoms was present, or in cases of asymptomatic disease. The prevalence of atypical symptoms in the entire cohort was reported as 43.2%. In our case, among the atypical symptoms present, abdominal pain and constipation had rates of 12.8% and 0.7%, respectively, as atypical symptoms in this study.

In overweight patients, an elevation in liver function tests can be observed due to fatty liver disease. Our patient had a fatty liver on abdominal ultrasonography but normal liver function tests. In overweight patients who do not show improvement in liver function tests and fatty liver despite appropriate diet programs, the etiology of possible liver diseases should be investigated, and CD should be considered as a differential diagnosis, even if the patient is overweight (12).

In recent years, the number of celiac patients diagnosed as overweight beyond the classical presentation has increased, along with the epidemic of obesity. When taking the history and performing laboratory tests of patients with long-term abdominal pain, constipation, intermittent diarrhea, anemia, and unexplained transaminase elevation, the possibility of CD should be taken into consideration, independent of obesity, and necessary investigations should be planned. The clinician should determine which systemic conditions require CD screening, as CD can also present with extraintestinal symptoms and also manifest with unusual symptoms such as obesity and constipation.

Conflict of Interest: All authors declare that there is no conflict of interest.

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