CASE REPORT

Celiac disease manifest in the elderly

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KEY WORDS

celiac disease, diagnosis, gluten-free diet, malnutrition, treatment

ABSTRACT

We present a case of a 75-year-old woman with manifestations of celiac disease. Currently, there is an increase in the prevalence atypical celiac disease which is more commonly diagnosed in the elderly. Diagnostic techniques and treatment options of celiac disease, particulary in the elderly have been presented in detail.

INTRODUCTION Celiac disease (gluten-sensitive enteropathy) is a chronic disease caused by intolerance of gluten, a protein present in cereal and its derivatives. Until recently, it has been assumed that the disease affects mainly children; however, since the introduction of gluten into the infant diet and the propagation of breast feeding, a smaller number of new incidents in this age group has been noted.[1,2] However, celiac disease is diagnosed more commonly in adult patients, mainly of European origin possitive for HLA-DQ2 or HLA-DQ8 haplotypes. Celiac disease often coexists with autoimmune diseases, including type 1 diabetes, autoimmune thyroiditis, autoimmune hepatitis, Sjögren's syndrome and rheumatoid arthritis.[3,4] Classic celiac disease is mainly observed in children; however, atypical forms, mildly symptomatic, with the delayed onset, which most often are induced by a concomitant additional trigger, are more commonly diagnosed in adult patients.[5]

CASE REPORT A 75-year-old female was admitted to the department because of malaise, dizziness, chronic diarrhea lasting about 5 months (aggravated in the last 2 months), epigastric pain and bloating, postprandial nausea, milk product intolerance and body weight loss of about 10 kg within 6 months with maintained normal appetite and no signs of clinically overt bleedings. Ambulatory tests showed iron deficiency anemia (hemoglobin [Hb] level 8.4 g/dl, iron level 7 μg/dl). Anemia was diagnosed 7 years earlier. The bone marrow biopsy performed at that time revealed suppressed hypocellular bone marrow. Endoscopic examination of the gastrointestinal tract performed 2 years prior to the last hospitalization demonstrated peptic ulcers in the duodenum (test for celiac disease was not performed at that time, macroscopic morphology of duodenal mucosa is not suggestive of celiac disease). Colonoscopy did not demonstrate any abnormalities.

On admission the patient was in a fairly good general condition. Cachexia (body mass index <15 kg/m^2), paleness and tenderness in the epigastrium were observed. Additional laboratory tests showed microcytic anemia with Hb 8.6 g/dl, mean corpuscular volume 77 fl, ferritin 22 ng/ml, transferrin 278 mg/dl (norm: 200–360), erythrocyte sedimentation rate 45 mm/h, prothrombin index 60%, international normalized ratio (INR) 1.69, total protein 6.9 g/dl, albumin 3.0 g/dl, potassium 3.3 mmol/l, calcium 2.17 mmol/l, glucose 94 mg/dl, total cholesterol 145 mg/dl, low-density lipoprotein cholesterol 81 mg/dL, high-density lipoprotein cholesterol 51 mg/dl, γ-glutamyl transpeptidase 10 U/l, aspartate transaminase 38 U/l, alanine transaminase 38 U/l, thyroid-stimulating hormone 0.557 μIU/ml, free thyroxine 13 pmol/l, free triiodothyronine 2.7 μg/l (norm: 3.1–6.8). The result of fecal occult blood test was negative. Abdominal ultrasound showed no significant abnormalities. Evaluation of the grade of malnutrition included densitometry with assessment of adipose tissue content of 17%, and a leptin level was 6.7 ng/ml (norm: 0.5–50).

Gastroscopy revealed a normal gastric mucosa, however in the descending part of the duodenum significant mosaicism and indentation of mucosal folds was noticed with macroscopic picture suggestive of celiac disease. In consequence, serological tests were performed and showed a titer of anti-endomysial antibodies (IgA EmA) of 5.0 U/ml (borderline value) and

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IgG EmA antibodies of 17.7 U/ml (normal values >9.0 U/ml). Histological examination of mucosal biopsy samples showed duodenal villous atrophy, slightly hyperplastic crypts, intraepithelial lymphocytes and degeneration of superficial epithelium, inflammatory infiltration composed mainly of mononuclear cells; the picture of Marsh III C celiac disease. Colonoscopy showed deep single sigmoid diverticula. Endoscopy showed no abnormalities in the large bowel.

A gluten-free diet combined with intravenous iron and intramuscular B_{12} vitamin supplementation were administered, which improved the patient's general condition. After about 1-month on a gluten-free diet, her well-being further improved. Resolution of diarrhea and abdominal pain were observed. Follow-up tests showed increased Hb levels up to 10.6 g/dl. Prothrombin index was 95%, and INR 1.05.

DISCUSSION In the presented case, symptoms of celiac disease appeared in elderly subjects. Celiac disease may manifest itself at any age; however, it is typically diagnosed in children and young adults. In older people it is more commonly observed in the 5th decade of life. Women constitute about 70% of all adult patients with celiac disease.[1,2] Clinical presentation of the disease is variable and range from the asymptomatic form with the presence of anti-endomysial antibodies, with a normal result of jejunal biopsy (latent celiac disease), to the full-blown cases. In the former group of patients the diverse course should be expected, from villous atrophy in the future, through the mildly symptomatic and atypical course presenting more frequently with symptoms outside the gastrointestinal tract including anemia, tetany, stomatitis, dermatitis, peripheral neuropathy, migraine, depression, bone and joint pains, osteopenia, osteoporosis, menstruation disturbances, sterilization, impotence (silent celiac disease), in which typical mucosal lesions are observed, up to advanced cases (manifest celiac disease), where flatulence, diarrhea, abdominal pain, malaise, body weight loss and deficiency symptoms (i.e. iron deficiency anemia) occur. In such patients elevated transaminase levels unrelated to liver damage may occur; a gluten-free diet normalizes the enzyme activity.[6-8]

The late onset of the disease in the presented patient could indicate silent celiac disease, which may not manifest itself for many years either clinically or histologically; however, positive results of serological markers are usually obtained. Symptoms may be induced by stress, pregnancy, intestinal infections, abdominal surgery and an increased gluten intake. None of these factors was detected in the current case.

Over a period of several years the patient had undergone tests for refractory iron deficiency anemia. We assume that the features of suppressed bone marrow in a biopsy performed several years earlier was caused by an atypical celiac disease. At that time tests for celiac disease were not performed. Because of the clinical picture and the patient's age, the first phase of diagnostic evaluation during the present hospital stay included elimination of neoplastic disease of the gastrointestinal tract. However, due to the symptoms suggestive of malabsorption syndrome and the morphology of duodenal mucosa, the diagnostic evaluation was expanded to the measurement of IgA EmA titers. The borderline value of IgA EmA antibody titers in the patient was most probably caused by the avoidance of food containing gluten and malnutrition. Titers of antibodies against tissue transglutaminase can be alternatively assayed. Both tests are characterized by high sensitivity and specificity. In clinical practice titers of these IgA antibodies are determined, therefore IgA deficiency should be excluded prior to measurement of its total level. In the past, anti-gliadin antibodies were also assessed; however, because of low sensitivity and specificity of the assay, this test is not recommended at present.[9,10]

Correct diagnosis of celiac disease is vital, as it requires to keep a lifelong gluten-free diet. Since there is a risk of obtaining both false positive and false negative results of serological tests, histological examination of jejunal biopsy samples is, according to the European Society for Pediatric Gastroenterology Hepatology and Nutrition (ESPGHAN), the gold standard in the diagnosis of celiac disease.[11] In the current case, examination of biopsy from the retrobulbar segment of the duodenum confirmed the diagnosis of celiac disease.

In the presented case chronic malabsorption syndrome led to patient malnutrition. Treatment of celiac disease involves elimination of gluten products from the diet.[12] A gluten-free diet improves the quality of life, prevents metabolic disturbances and decreases the risk of cancer development. Gluten-free products are obtained from cereals that do not naturally contain gluten (rice, corn, millet, sorghum, buckwheat, soybean, lentil, bean) and from wheat starch containing <1 mg of gluten in 100 g. Because of lactose intolerance, observed in about 24% of patients with celiac disease, a milk-free diet with folic acid and other vitamin and magnesium supplementation is recommended at the beginning of treatment, and in case of iron deficiency anemia iron is intravenously administered. The treatment administered to our patient improved her quality of life and condition.

SUMMARY The current paper presents a case of celiac disease in an elderly patient. The disease occurs more and more commonly in adults and is often underdiagnosed. Its clinical course is often atypical and has a subclinical character. Symptoms including malnutrition suggestive of cancer and drug-resistant iron deficiency anemia indicate that diagnostic evaluation of celiac disease should be performed. Correct diagnosis is of crucial importance as a permanently untreated

celiac disease leads to malnutrition and deficiency symptoms and decreases the patient's well-being significantly. A proper diet reduces symptoms and yields beneficial outcome.

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OPIS PRZYPADKU

Choroba trzewna ujawniona w podeszłym wieku

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SŁOWA KLUCZOWE

choroba trzewna, diagnostyka, dieta bezglutenowa, leczenie, niedożywienie

STRESZCZENIE

Autorzy omówili przypadek chorej, u której w wieku 75 lat ujawniła się celiakia. W artykule zwrócono uwagę na zwiększenie liczby zachorowań na nietypowe postacie celiakii i częstsze ujawnianie się choroby w późniejszym wieku. Szczegółowo omówiono metody rozpoznawania celiakii, jej przebieg (zwłaszcza u osób w podeszłym wieku) oraz możliwości leczenia.

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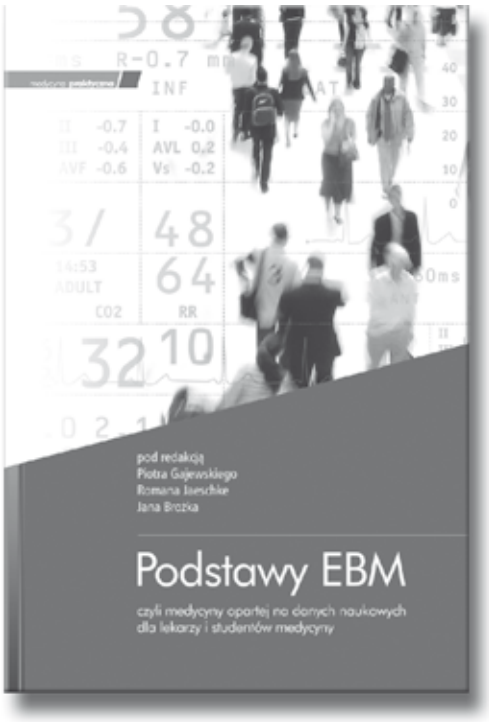

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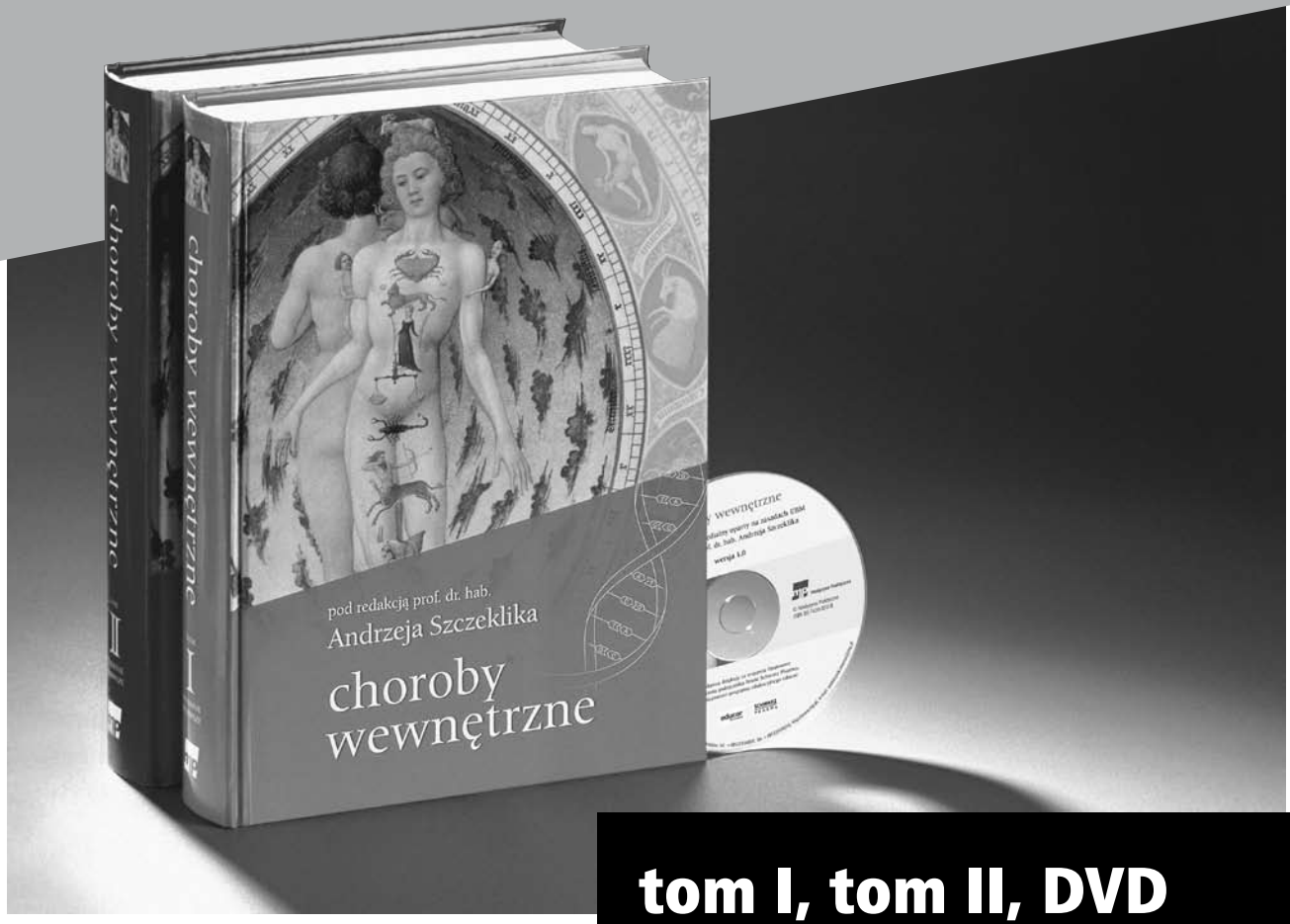

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