



1. M.D. Assoc. Prof.  
Faculty of Medicine,  
Abant Izzet Baysal University,  
Bolu, Turkey.
2. M.D  
Faculty of Medicine,  
Abant Izzet Baysal University,  
Bolu, Turkey.
3. M.D  
Faculty of Medicine,  
Abant Izzet Baysal University,  
Bolu, Turkey.
4. M.D  
Faculty of Medicine,  
Abant Izzet Baysal University,  
Bolu, Turkey.

**Correspondence Address:**

Gulali Aktas  
M.D. Assoc. Prof.  
Faculty of Medicine,  
Department of Internal Medicine,  
Abant Izzet Baysal University,  
14280, Bolu, Turkey  
draliaktas@yahoo.com

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## INTRODUCTION

Celiac Disease (CD) is an autoimmune disorder based on immune response to gluten in genetically predisposed subjects.<sup>1</sup> It is one of the most common causes of malabsorption in childhood. However, CD can occur any time of the life span of human and patients suffer from the disease during decades. A study from Italy reported that 4% of all CD patients had been diagnosed after 65 years of age.<sup>2</sup> Celiac Disease could be asymptomatic in a minority of patients, however, it usually may manifest with malabsorption symptoms; such as abdominal pain, bloating, weight loss and diarrhea. Iron deficiency anemia and metabolic bone disease due to vitamin D deficiency and hypocalcemia are the most common extra-intestinal symptoms of CD. Secondary hyperparathyroidism, infertility, dermatitis herpetiformis, myocarditis, dilated cardiomyopathy, idiopathic pulmonary hemosiderosis, IgA nephropathy, epilepsy, peripheral neuropathy due to vitamin B12 and B1 deficiency, type 1 diabetes mellitus, autoimmune thyroiditis may be accompanied during the course of CD.<sup>3</sup> There is a direct relation between

## CELIAC DISEASE;

AN UNUSUAL CASE IN AN ELDERLY. DIAGNOSED ONLY IF CONSIDERED.

**Edip Erkus<sup>1</sup>, Mehmet Zahid Kocak<sup>2</sup>, Gulali Aktas<sup>3</sup>, Haluk Savli<sup>4</sup>**

**ABSTRACT...** Celiac Disease (CD) is an autoimmune disorder based on immune response to gluten in genetically predisposed subjects. Five subtypes of CD has been described; classical disease, atypical disease, silent disease, latent disease, potential disease. Literature consists at least five different definition of latent CD. We aimed to present a unique latent CD case in an elderly woman, who referred with anemia, hypoalbuminemia and vitamin D deficiency. She responded well to initiation of gluten free diet.

**Key words:** latent celiac disease, anemia, vitamin D deficiency, gluten, hypoalbuminemia.

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duration of gluten exposure and initiation and development process of autoimmune disease. Immune response in intestinal mucosa is characterized with inflammation, villous atrophy and crypt hyperplasia. IgA/IgG anti-tissue transglutaminase (anti-tTG), anti-endomysium (EMA) antibodies are serologic markers of CD. HLA-DQ2, DQ8 tissue types are signs of genetic predisposition and useful in diagnosis. Proximal small intestinal biopsy is the golden standard test for definite diagnosis.

We aimed to present a unique latent CD case in an elderly woman, who referred with anemia, hypoalbuminemia and vitamin D deficiency. She responded well to initiation of gluten free diet.

## CASE REPORT

An 85 year old woman referred to our clinic after detection of anemia and hypocalcemia in preoperative laboratory evaluation of rectal prolapse. She has been interned to internal medicine ward for further investigation. She had a history of hypertension but she was not used antihypertensive medicine regularly.

On physical examination, overall condition was medium, and she looked weak and pale. Her systolic and diastolic blood pressure was 115 and 85 mmHg, respectively. Body temperature was 36.2 celsius degree, heart rate was 88 per minute and breathing rate was 16 per minute. Her conjunctiva and skin was pale, too.

On laboratory testing hemogram revealed a white blood cell count of 10000/mm<sup>3</sup>. Other laboratory tests were as follows; Hb: 8.7 g/dl, Hct: 27% and MCV: 71fL, Mentzer index 18.6, erythrocyte sedimentation rate: 49mm/hour, total serum protein: 5g/dl, albumin: 2.7g/dl, corrected calcium: 6mg/dl, plasma potassium: 2.8mmol/l, vitamin B12: 331 (187-883)pg/ mL, folate: 3,7(3,1-20,5) ng/mL, serum iron: 20 µg/dL, total iron binding capacity: 182 µg/dL, ferritin: 4,9 ng/mL, Parathormone: 230,9 (15-68)pg/mL, 25-OH Vitamin D: 2,9 (9,5-55,5) ng/mL.

Her TSH and other thyroid function testing were normal. On blood samples, IgA anti-tTG was positive, however, IgG tTG was negative. Although proteinuria was negative in spot urine analysis, 83mg of proteinuria detected in 24 h urine sample. An abdominal ultrasound scan was non-diagnostic. Abdominal computerized tomography was unremarkable except type 1 sliding hiatal hernia and pelvic base relaxation.

Endoscopic evaluation revealed sliding hernia, erythematous pan-gastritis and duodenitis. Pathologic examination of duodenal biopsy was reported lymphocyte infiltration in lamina propria of the intestinal mucosa.

After these results, a latent CD is suspected and gluten free diet is initiated. One unit of packed red cell transfused and calcium and potassium replaced in saline solution. She discharged with suggestion of oral vitamin D supplement and clinic re-visit in 2-3 weeks.

She was looking well in 3rd week of discharge. Physical examination was normal. Serum albumin was 3.5 g/dl and calcium was 8.1 mg/dl. We confirmed latent CD in lights of presenting signs

and resolving of them after gluten free diet.

## DISCUSSION

Celiac disease usually occur in childhood, however, it can manifest in adulthood, too. A study from Italy reported that 4% of all CD patients had been diagnosed after 65 years of age.<sup>2</sup> Present case was 85 years of age and not had a history of diarrhea, bloating and other symptoms of malabsorption. Atypical or silent course is not rare in CD. CD should be kept in mind even in elderly if clinical and laboratory signs indicate the disease.

Celiac disease may cause weight loss, growth retardation, osteoporosis, anemia (iron deficiency or megaloblastic), malabsorption, chronic constipation, abdominal pain, and metabolic bone disease.<sup>4</sup> Present case had iron deficiency anemia, osteoporosis, hypoalbuminemia, hypocalcemia, vitamin D deficiency and secondary hyperparathyroidism, and signs of malabsorption.

Five subtypes of CD has been described; classical disease, atypical disease, silent disease, latent disease, potential disease. Literature consists at least five different definition of latent CD<sup>5</sup>: 1- serology positive CD without abnormal intestinal mucosa and villous atrophy; 2- patients that have gluten containing diet with normal mucosa but after consumption of gluten they will have a smooth mucosa shortly; 3- under diagnosed CD is equal to latent CD for some authors; 4- CD following another autoimmune disease (type 1 diabetes mellitus, etc...); 5- normal mucosa or increased mucosal permeability with some abnormalities that are not serologic, such as, increased number of  $\gamma$  or  $\delta$  delta cells.<sup>6</sup> Our case is compatible with the "positive serology without villous atrophy" definition of latent CD.

Some authors described latent CD as presence of HLA-DQ2 and/or HLA-DQ8 predisposing gene, normal mucosal biopsy findings and sometimes increased intra epithelial lymphocyte infiltration of the intestinal mucosa.<sup>7</sup>

Autoimmunity of CD is associated with two times

positive test results for anti-tTG or EMA antibodies before arriving of the biopsy results. If biopsy proves CD in autoantibody positive cases, it is so called definitely CD, otherwise it is so called probable CD.<sup>6</sup> We found anti-tTG positive two times in present case.

While high gluten diet cause specific intestinal mucosal changes in CD, gluten free diet improves rapidly both the symptoms and intestinal changes. Gluten free diet also improves symptoms and mucosal findings in latent CD and lymphoma cases.<sup>8,9</sup> The case we present here also showed laboratory improvement after gluten free diet within 3 weeks.

In conclusion, latent CD should be kept in mind even in very elderly especially presented with multiple signs of malabsorption such as anemia, hypoalbuminemia and hypocalcemia.

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**PREVIOUS RELATED STUDY**

Nagina Shahzadi, Muhammad Almas Hashmi, Sadida Bahawal. Celiac Disease; Efficacy of probiotics in children (Original) Professional Med J 2016;23(7): 807-811.

Amir Shahzad, Abdul Aziz Sahto, Samina. Frequency of celiac disease; Patients presenting with iron deficiency anemia at tertiary care hospital (Original) Professional Med J 2016;23(7): 812-816.

**AUTHORSHIP AND CONTRIBUTION DECLARATION**

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Edip Erkus	Designed the study	
2	Mehmet Zahid Kocak	Concept of the study, collected the data	
3	Gulali Aktas	Wrote the paper	
4	Haluk Savli	Critical revision of the year	