

Generalized edema as an atypical clinical manifestation in a pediatric patient with celiac disease

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Keywords:

celiac disease, generalized edema, malnutrition

Background:

Generalized edema is systemic soft tissue swelling produced by the expansion of the interstitial fluid volume caused by various etiopathologies. Celiac disease is a lifelong systemic autoimmune disorder, elicited by gluten and related prolamins in genetically susceptible individuals. This case report describes a pediatric patient with celiac disease who presented with atypical extraintestinal symptoms.

Case presentation:

A 4-year-old female presented with poor weight gain for 10 months, alongside occasional periumbilical cramping pain after a meal. In addition, her parents have reported postprandial vomiting starting one month and diarrhea 10 days before hospitalization. At admission to Children's Hospital Zagreb, the patient was in poor general condition, hypotrophic and pale. On examination, she showed significant abdominal distension, generalized edema and parasternal systolic murmur of grade II/VI. Laboratory workup showed hypoproteinaemia (56 g/L) and hypoalbuminemia (36 g/L), microcytic iron deficiency anemia (hemoglobin 107 g/L, mean cell volume 78 fL, ferritin 3.5 ng/mL) and elevated alanine and aspartate aminotransferases (61 U/I, 62 U/I). Cardiological examination revealed pericardial effusion with functional mitral regurgitation. Esophagogastroduodenoscopy was performed with duodenal biopsies that were classified as Marsh 3c, meaning total villous atrophy. Typical serological markers (anti-tissue transglutaminase IgA and anti-endomysial IgA antibodies) were highly elevated, confirming the diagnosis of celiac disease. The therapeutic protocol included albumin administration, temporary nocturnal nasogastric tube feeding and a gluten-free diet. Gradually the patient recovered, started to thrive and the edema and pericardial effusion resolved. She was discharged in good clinical condition. Afterwards, the patient was regularly followed up every 3 months during the first year, and later once a year. She is adhering to a strict gluten-free diet, thriving, and growing well.

Conclusion:

Generalized edema is a rare clinical manifestation of celiac disease that is likely to be misinterpreted. This case emphasizes the importance of recognizing extraintestinal celiac manifestations in order to set up the correct diagnostic and therapeutic regime.