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EARLY DIAGNOSIS OF CELIAC DISEASE IN CHILDREN AND ITS CLINICAL SIGNIFICANCE

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Abstract: Celiac disease is a chronic autoimmune enteropathy that develops as a result of gluten consumption in genetically predisposed children. The disease is characterized by damage to the small intestinal mucosa, villous atrophy, and malabsorption syndrome. The clinical manifestations of celiac disease in children are diverse, ranging from classical gastrointestinal symptoms to latent and atypical forms. This article analyzes the importance of early diagnosis of celiac disease in children, modern diagnostic approaches, and the clinical significance of early detection.

Keywords: celiac disease, pediatric gastroenterology, gluten, early diagnosis, malabsorption, autoimmune disease.

Introduction: In accordance with the Decree of the President of the Republic of Uzbekistan "On the Development Strategy of New Uzbekistan for 2022–2026" and Presidential Decree No. PF-60 dated January 28, 2022, as well as Resolution No. PQ-22 dated November 27, 2021, "On Measures to Further Improve the Activities of Medical and Social Expertise Services and the System for Determining Disability in Children," significant efforts are being implemented in the healthcare sector. Celiac disease (gluten enteropathy) is a chronic disorder that develops as a result of a pathological immune response to gluten proteins found in wheat, barley, and rye. According to World Health Organization data, the prevalence of celiac disease among children is approximately 1%. In recent years, the increasing incidence of latent and atypical forms has made early detection of this disease a pressing issue. If celiac disease is not diagnosed in a timely manner, children may develop growth retardation, anemia, hypovitaminosis, decreased bone mineral density, delayed puberty, and other serious complications. Therefore, early diagnosis of celiac disease is one of the key tasks in pediatrics and pediatric gastroenterology.

Main Part: 1. Pathogenesis of Celiac Disease Celiac disease is associated with the development of an immune response to gluten peptides in the presence of genetic predisposition (HLA-DQ2 and HLA-DQ8). As a result, inflammatory processes intensify in the intestinal mucosa, leading to villous atrophy and crypt hyperplasia. These changes impair nutrient absorption and result in malabsorption syndrome.

2. Clinical Manifestations in Children Celiac disease in children may present in several forms:

- **Classical form:** chronic diarrhea, abdominal distension, flatulence, and weight loss.
- **Atypical form:** iron-deficiency anemia, growth retardation, osteopenia, and chronic fatigue.
- **Latent form:** minimal or absent clinical symptoms, despite the presence of laboratory and morphological changes. In particular, delayed growth and development in early childhood is an important indicator that should raise suspicion of celiac disease.

3. Early Diagnosis of Celiac Disease Modern diagnostic strategies include the following steps:

- **Serological screening:** detection of anti–tissue transglutaminase antibodies (anti-tTG IgA), endomysial antibodies (EMA), and assessment of total IgA levels to exclude false-negative results.
- **Endoscopy and biopsy:** identification of villous atrophy in the small intestinal mucosa.
- **Genetic testing (HLA-DQ2/DQ8):** important for assessing risk groups. Early diagnosis is particularly achieved through regular screening of children in high-risk groups, including those with type 1 diabetes mellitus, Down syndrome, and autoimmune thyroiditis.

4. Significance of Early Diagnosis Early detection of celiac disease and timely initiation of a gluten-free diet provide several benefits:

- restoration of the intestinal mucosa;
- обеспечение normal growth and development in children;
- prevention of vitamin and mineral deficiencies;
- reduction in long-term complications such as osteoporosis, infertility, and intestinal lymphoma. Moreover, early diagnosis significantly improves the quality of life of affected children and minimizes the consequences of chronic disease.

Conclusion: Celiac disease is a common chronic autoimmune disorder in children and often has a latent course. The variability of its clinical manifestations complicates early diagnosis. Therefore, screening examinations in high-risk children, widespread use of serological tests, and confirmation of diagnosis through biopsy when necessary are of critical importance. Early diagnosis and timely initiation of a gluten-free diet play a decisive role in preventing severe complications in children.

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