

## Abstract

Coeliac disease is a systemic autoimmune disease caused by gluten occurring in genetically susceptible individuals. Clinical manifestations of coeliac disease have changed over past decades. It became more diverse and begins later. Children with common gastrointestinal symptoms are on decline while children with uncommon extraintestinal symptoms are on the rise. The high sensitivity and specificity of coeliac-specific antibodies in a group of pediatric patients with disease manifestation allowed diagnosis without biopsy. The currently used treatment for coeliac disease is lifelong strict gluten-free diet.

The aim of the work was to determine the current state of knowledge of coeliac disease in children, available diagnostical methods, and treatment of coeliac disease. Furthermore, my goal was to inform about the issue of gluten-free diet, the legislation, state support, contributions of health insurers, the range and availability of gluten-free foods, their financial demands and the function of patient organizations. The aim of the practical part of my work was to find out which circumstances triggered the initial coeliac disease diagnosis in children and to inform about the problems associated with maintaining a gluten-free diet in families with children suffering from coeliac disease.

The select methodology of the work was a questionnaire survey. An anonymous questionnaire was sent to parents of children with coeliac disease and a total of 33 questions were asked, either open-ended questions or closed-questions form. The questionnaire was completed by 88 respondents and the whole set consisted of 90 patients with coeliac disease. The mean age of children was  $10.2 \pm 4.89$  years. The results showed that coeliac disease was most commonly diagnosed at age of 3 years (17.8 %). 13.3 % of patients were diagnosed at age of 5 years and the same amount was diagnosed at age of 13 years. As for the symptoms of coeliac disease; 31.8 % of patients suffered from abdominal pain, 29.1% of children had a growth retardation, 26.1 % had flatulence, 25 % of children were in generally bad health condition, 20.5% of children suffered from diarrhoea, and 9.1 % had constipation. Anemia was found in 19.3 % of children.

The first positive coeliac-specific antibodies were detected by general practitioners for children and adolescents in 48.9 %, in 25.6 % by allergologists. In 28.4 % of children. The diagnosis of coeliac disease was made without a small bowel biopsy. Gluten-free diet was most often prepared in families that occasionally also purchased ready-made gluten-free meals (48.9 % of respondents). Most of the gluten-free foods were purchased in retail chains (80.7 %) and 54.5 % of the respondents complained that gluten-free dishes are rather less accessible. A total of 56.8 % of respondents replied that nurseries and schools had trouble preparing a gluten-free diet. According to parents children maintain a strict gluten-free diet at 87.5 %. The most money spent on a gluten-free diet was in the range of CZK 1,001 to CZK 2,000 (33 % of respondents), and 27,3 % of families spent amounts in the range of CZK 2,001 to 3,000. 71.6 % of respondents received contributions to gluten-free diet from insurance companies.

Coeliac disease is manifested by a number of symptoms but these don't necessarily include gastrointestinal symptoms. The first treatment of the disease was carried out mostly

by the general practitioners for children and adolescents and secondarily treated by allergologists. The only treatment for coeliac disease is lifelong strict gluten-free diet. However, gluten-free foods are not always readily available, and problems with gluten-free diet are most common in nurseries and schools. Gluten-free diet is costly, and the health insurance companies cover only part of the costs on gluten-free diet. Coeliac disease is a common illness and its strict gluten-free diet treatment has a great impact on the life style not only of affected children but also of the entire families. Maintaining a gluten-free diet is not simple and the support and understanding by the majority is far from ideal.

**Key words:** Coeliac disease, children, nutrition, gluten-free diet