

Abstract

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Nutritional status in adolescents and young adults with screen-detected celiac disease.

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OBJECTIVE: To describe the nutritional status in patients with screen-detected celiac disease (CD).

METHODS: Nutritional status was assessed by serum tests and anthropometric measures in 26 subjects (16 to 25 years of age) with biopsy-proven CD and 29 healthy control subjects (16 to 21 years of age) with negative tissue transglutaminase antibodies (16 to 22 years of age); all the subjects were selected from the cohort of 3654 schoolchildren.

RESULTS: Compared with control subjects, CD patients had lower median values of whole blood folic acid (91 versus 109 nmol/L; $P = 0.01$), serum ferritin (14 versus 27 microg/L; $P = 0.028$) and pre-albumin (0.21 versus 0.28 g/L; $P \leq 0.001$) and higher transferrin receptor (1.3 versus 1.1; $P = 0.008$) and serum transferrin receptor-ferritin index (1.2 versus 0.7; $P = 0.006$). Folic acid concentration was subnormal in 31% of the CD subjects (versus 14% of the controls) and iron status (transferrin receptor-ferritin index) was subnormal in 30% (versus 14%). Body mass index was not different in females of the CD and control groups (22 versus 22 kg/m²) or in the males of the respective groups (25 versus 24 kg/m²). Females with CD were shorter than the controls (mean 162 versus 167 cm; $P = 0.018$), but no difference was found in males. No association was found between the nutritional status and the markers of mucosal injury (villous-crypt measures), but titer of transglutaminase was associated with whole blood folic acid ($r = -0.5$; $P = 0.016$) and with transferrin receptor-ferritin index ($r = 0.4$, $P = 0.05$).

CONCLUSIONS: One third of screen-detected adolescent CD subjects have abnormalities in folate or iron status that call for early diagnosis and dietary treatment of the disease to prevent nutritional deficiencies.

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