

Abstract

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Can zinc deficiency be used as a marker for the diagnosis of celiac disease in Turkish children with short stature?

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BACKGROUND: It is generally accepted that celiac disease (CD) must always be considered when dealing with growth failure in children. Therefore, it is important to develop screening tests for detecting patients that need an intestinal biopsy. The aim of the present study was to investigate the value of plasma zinc levels for the diagnosis of monosymptomatic CD in short-statured children.

METHODS: Forty-nine children with a short stature and 34 healthy controls were investigated. Plasma zinc levels were assayed by atomic absorption spectrophotometry in short-statured children and controls. All patients with short stature underwent endoscopic small intestinal biopsy.

RESULTS: Duodenal mucosal histopathology was normal in 25 children. Low plasma zinc values were observed in 54.2% of patients with CD, 32.0% of patients with idiopathic short stature and 14.8% of controls. The mean values of plasma zinc levels were not significantly different among the three groups. Sensitivity, specificity and the positive and negative predictive values for plasma zinc were 45.8, 76.0, 64.7 and 59.4%, respectively.

CONCLUSIONS: These results indicate that zinc deficiency is an important problem in CD children with short stature; however, plasma zinc levels are not useful as a screening test for selecting patients for jejunal biopsy.

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