

Abstract

Aliment Pharmacol Ther. 2002 Jul;16(7):1333-9.

Evidence of poor vitamin status in coeliac patients on a gluten-free diet for 10 years.

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BACKGROUND: Patients with coeliac disease are advised to keep to a lifelong gluten-free diet to remain well. Uncertainty still exists as to whether this gives a nutritionally balanced diet.

AIM: To assess the vitamin nutrition status of a series of coeliac patients living on a gluten-free diet for 10 years.

METHODS: Thirty adults with coeliac disease (mean age, 55 years; range, 45-64 years; 60% women), in biopsy-proven remission following 8-12 years of dietary treatment, were studied. We measured the total plasma homocysteine level, a metabolic marker of folate, vitamin B-6 and vitamin B-12 deficiency, and related plasma vitamin levels. The daily vitamin intake level was assessed using a 4-day food record. Normative data were obtained from the general population of the same age.

RESULTS: Coeliac patients showed a higher total plasma homocysteine level than the general population, indicative of a poor vitamin status. In accordance, the plasma levels of folate and pyridoxal 5'-phosphate (active form of vitamin B-6) were low in 37% and 20%, respectively, and accounted for 33% of the variation of the total plasma homocysteine level ($P < 0.008$). The mean daily intakes of folate and vitamin B-12, but not of vitamin B-6, were significantly lower in coeliac patients than in controls.

CONCLUSIONS: Half of the adult coeliac patients carefully treated with a gluten-free diet for several years showed signs of a poor vitamin status. This may have clinical implications considering the linkage between vitamin deficiency, elevated total plasma homocysteine levels and cardiovascular disease. The results may suggest that, when following up adults with coeliac disease, the vitamin status should be reviewed.

PMID: 12144584

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