Robbins, H.L., Symington, M., Mosterman, B., Goodby, et al, 2018.
Supplementation of Vitamin D Deficiency in Patients with Neuroendocrine Tumors Using Over-the-Counter Vitamin D3 Preparations. *Nutrition and cancer*, pp.1-7.

Abstract

Vitamin D (vit-D) deficiency is highly prevalent in patients with gastro-entero-pancreatic neuroendocrine tumors (GEP-NET) and has been linked to reduced overall survival. We here assessed the vit-D status in 183 patients with GEP-NET at the time of their first presentation in the ARDEN NET Centre. We further examined the effect of simple advice to increase vit-D intake using over-the-counter vit-D preparations[colecalciferol (Vit-D3), 1,000-2,000 units/day], over a prospective observation period of 24 mo. At baseline, only 33.3% of patients showed vit-D sufficiency (25-OH-vit-D; >50 nmol/L), the remainder was insufficient (31.3%; 25-OH-vit-D; 25-50 nmol/L) or deficient (35.5%; 25-OH-vit-D; <25 nmol/L). Repeated advice to increase vit-D intake at routine 6-monthly follow-up appointments was associated with increased 25-OH-vit-D from 37.8 ± 3.5 nmol/L at baseline to 60.4 ± 5.6 nmol/L ($P < 0.0001$) and 56.8 ± 7.0 nmol/L ($P = 0.039$) after 12 and 24 mo. Percentage of vit-D insufficiency decreased from 66.6% at baseline to 44.9% and 46.2% after 12 and 24 months, respectively. Previous abdominal surgery, but not treatment with somatostatin analogues predicted 25-OH-vit-D levels in bootstrapped linear regression analyses ($P = 0.037$). In summary, simple advice to increase vit-D intake using over-the-counter preparations was associated with significant improvement of vit-D deficiency/insufficiency, although, 15% of GEP-NET patients remained deficient and may benefit from additional measures of vit-D replacement.