Hypovitaminosis D in geriatric inpatients: a marker of severity of chronic diseases

Background and aims: Hypovitaminosis D is associated with adverse health outcomes including several bone and non-bone chronic diseases. It remains unclear whether hypovitaminosis D leads to more numerous or more severe chronic diseases. Our aim was to determine whether there was an association between serum 25-hydroxyvitamin D deficiency (i.e., 25OHD <= 25 nmol/L) and, respectively, the number and severity of chronic diseases assessed with the Kaplan-Feinstein index (KFI) among geriatric inpatients. Methods: Two hundred and forty older Caucasian adults admitted between December 2008 and September 2009 to the geriatric acute care unit of Angers University Hospital, France (mean 84.6 +/- 0.4 years; 68.8% women) were included in this cross-sectional study. Serum 25OHD, KFI score and number of chronic diseases (i.e., diseases lasting at least 3 months or running a course with minimal change, whatever their nature or site) were assessed. Subjects were divided into 2 groups according to 25OHD concentration (either deficient for 25OHD <= 25 nmol/L, or non-deficient for 25OHD >25 nmol/L). Age, gender, use of vitamin D supplements, number of chronic diseases, serum parathyroid hormone and season tested were used as potential confounders. Results: Mean serum 25OHD concentration was 35.2 +/- 1.7 nmol/L. The 102 (42.5%) subjects with 25OHD deficiency had higher KFI compared with their counterparts (p=0.008). Vitamin D deficiency was not significantly associated with the number of chronic diseases (adjusted beta=-0.37 with p=0.216), but with KFI (unadjusted beta=1.33 with p=0.008; adjusted beta=1.37 with p=0.010). Conclusions: Irrespective of the number of chronic diseases, 25OHD deficiency was associated with the severity of chronic diseases. (C) 2012, Editrice Kurtis
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