

Abstract

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Prevalence and Clinical Correlates of Vitamin D Inadequacy among Patients with Chronic Pain.

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OBJECTIVE: Vitamin D inadequacy is associated with medication refractory musculoskeletal pain and neuromuscular dysfunction. This vitamin deficiency could subsist as an unrecognized comorbid condition among patients with chronic pain. The primary objective of this study was to determine the prevalence and clinical correlates of vitamin D inadequacy in patients seeking treatment for chronic pain.

DESIGN: Retrospective case series.

SETTING: Multidisciplinary pain rehabilitation center at a tertiary referral medical center.

PATIENTS: The study involved 267 chronic pain patients admitted from February to December 2006.

INTERVENTION: Serum 25-hydroxyvitamin D (25[OH]D) was drawn at admission.

OUTCOME MEASURES: Patients with serum 25[OH]D levels ≤ 20 ng/mL were considered to have inadequate levels and those with levels >20 ng/mL were considered to have adequate levels. Upon admission, opioid intake was documented and patients completed the Short Form-36 Health Status Questionnaire.

RESULTS: The prevalence of vitamin D inadequacy was 26% (95% confidence interval, 20.6-31.1%). Among patients using opioids, the mean morphine equivalent dose for the inadequate vitamin D group was 133.5 mg/day compared with 70.0 mg/day for the adequate group ($P = 0.001$). The mean duration of opioid use for the inadequate and adequate groups were 71.1 months and 43.8 months, respectively ($P = 0.023$). Opioid users with inadequate levels reported worse physical functioning ($P = 0.041$) and health perception ($P = 0.003$) than opioid users with adequate levels.

CONCLUSION: The prevalence and clinical correlates identified in this pilot study provide the basis for the assertion that vitamin D inadequacy may represent an under-recognized source of nociception and impaired neuromuscular functioning among patients with chronic pain.

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