

Vitamin D Inadequate Even in Supplement Users

BY HEIDI SPLETE
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WASHINGTON — A whopping 97% of 78 patients hospitalized for minimal trauma fractures had vitamin D levels of less than 30 nanograms per mL, Christine Simonelli, M.D., said at an international symposium sponsored by the National Osteoporosis Foundation.

Even the patients who took at least 400 IU of vitamin D demonstrated inadequate vitamin D levels, added Dr. Simonelli of HealthEast Medical Research Institute, St. Paul, Minn. More than 90% of 39 patients who took at least 400 IU of vitamin D still had serum vitamin D levels below 30 nanograms per mL.

However, there was a significant difference overall in the mean serum vitamin D levels between those patients who took at least 400 IU of vitamin D compared with those who took 400 IU of vitamin D supplementation or less (16.4 ng/mL vs. 11.9 ng/mL).

Patients who took at least 400 IU of vitamin D as a daily supplement were sig-

nificantly less likely to have vitamin D levels in the lowest cutoff group—less than 9 ng/mL—compared with patients who took less than 400 IU of vitamin D daily.

The mean vitamin D levels were not significantly different based on age, gender, or use of an osteoporosis medication.

Overall, the mean serum 25-hydroxyvitamin D level was 14.1 among the 61 women in the study, and 14.3 among the 17 men. All the patients were aged 50 years or older, all except one were white,

and were hospitalized with a fracture between August 1, 2001 and January 31, 2002.

Almost all (97%) of the patients had hip fractures, and 10 (12%) of them were taking an osteoporosis medication prior to their hospital admissions. The investigators excluded patients with high impact trauma fractures and metastatic cancer diagnoses.

A total of 14 patients (18%) were taking vitamin D only, while 36 (46%) reported taking a multivitamin only and 39 (50%) reported taking vitamin D and/or multi-

vitamins. The study was limited by its small size, lack of ethnic minorities, and possible lack of generalizability to other populations, Dr. Simonelli and her colleagues wrote.

"Half of the patients had little or no vitamin D supplementation," Dr. Simonelli noted. Physicians should encourage patients at risk for fractures to increase their vitamin D intake, she added. Dr. Simonelli received research support from Merck & Co. for this study. ■

Fracture Severity Tied to Bone Volume Value

WASHINGTON — The severity of vertebral fractures increases significantly in patients whose trabecular bone volume falls below the critical value of 15%, Harry K. Genant, M.D., said in his oral presentation of a poster at an international symposium sponsored by the National Osteoporosis Foundation.

Dr. Genant, a member of the Osteoporosis and Arthritis Research Group at the University of California, San Francisco, and his colleagues assessed the bone quality of 190 postmenopausal women, mean age 69 years, using radiographic data from 2-D histomorphometry and 3-D microCT.

The women were categorized into four groups based on varying severity of vertebral fractures, with 0 meaning "no fracture," and 1, 2, and 3, relating to mild, moderate, and severe fracture levels, respectively.

Based on the radiographic data, patients in the moderate and severe fracture groups had significantly reduced 2-dimensional trabecular bone volumes (0.15 and 0.13, respectively), compared with patients who had no fractures (0.20). On further analysis of the radiographs, the researchers found that as the severity of vertebral fractures grew worse, patients had progressively worse bone quality based on measurements including trabecular separation, trabecular number, and 3-dimensional trabecular bone volume.

These results are consistent with earlier findings that patients are at significantly increased risk of fracture when the trabecular bone volume falls below approximately 15%. Dr. Genant has received grants and research support, as well as an honorarium, from Eli Lilly & Co.

—Heidi Splete

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