New Cutoff Value Identifies More Vitamin D Deficiency

BY MIRIAM E. TUCKER
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WASHINGTON — A serum 25-hydroxyvitamin D level below 30 ng/mL appears to define vitamin D deficiency, Paraskevi Sapountzi, M.D., reported at the annual meeting of the American Association of Clinical Endocrinologists.

Vitamin D deficiency, which is highly prevalent among patients with osteoporosis, can lead to a poor response to therapy. But recent reports of assay variability have led to confusion about interpretation of the metabolite 25(OH)D levels, and not enough data are available to guide clinicians regarding when to initiate vitamin D therapy, said Dr. Sapountzi, of Loyola University Chicago.

In a retrospective analysis of 143 female and 20 male patients who had been evaluated for low bone mass at the university’s Osteoporosis and Metabolic Bone Disease Center, the patients had a mean age of 62.5 years, a mean 25(OH)D level of 29.8 ng/mL, a mean parathyroid hormone (PTH) level of 61.7 pg/mL, a mean urine calcium level of 215.7 mg/24 hours, and a mean urine T score of −1.9. None of the subjects were on vitamin D therapy or had primary hyperparathyroidism, she said.

Initially, vitamin D insufficiency was defined as a 25(OH)D level of less than 20 ng/mL, based on the lab’s reference range and data from one study suggesting that this was the cutoff below which the risk for secondary hyperparathyroidism increases. With that definition, 26.4% of the 163 patients had vitamin D insufficiency. The 25(OH)D level was significantly correlated with PTH and with urinary calcium, with the difference between the means of PTH above and below a 25(OH)D level of 30 ng/mL being significant. At 55 ng/mL, the significance was lost. Using the new cutoff of 20 ng/mL for vitamin D deficiency raised the prevalence among the subjects to 48%, Dr. Sapountzi reported.

Overlooked in Osteoporosis Patients

Suboptimal Vitamin D Levels Often Overlooked in Osteoporosis Patients

WASHINGTON — More than half of North American women receiving treatment for osteoporosis have suboptimal serum vitamin D levels, Anne E. de Papp, M.D., and her associates reported in a poster at the annual meeting of the American Association of Clinical Endocrinologists.

Inadequate vitamin D concentrations can lead to alterations in calcium and phosphate homeostasis, secondary hyperparathyroidism, bone loss, osteoporosis, and an increased risk of fractures.

Yet data from a cross-sectional study of 3,536 postmenopausal women seen at 61 North American sites suggest that the problem is often overlooked in patients being treated for osteoporosis, said Dr. de Papp, of Merck & Co. Inc., West Point, Pa., and her associates.

The patients had a mean age of 71 years (range, 47-103 years) and a mean body mass index (BMI) of 26.4 kg/m². A total of 92% were Caucasian and 13% resided at latitude greater than or equal to 42°N (Boston), while 24% lived below 35°N (Memphis). All had been taking medication to treat or prevent osteoporosis for at least 3 months. The medications used included alendronate, calcitonin, estriolone, raloxifene, risendronate, and teriparatide.

Vitamin D supplementation at a dosage of 400 IU/day or more was reported by 59.3% of the women, while the rest were taking less.

For the entire group, the mean serum level of the active vitamin D metabolite 25-hydroxyvitamin D was 30.4 ng/mL. Most of the women (92%) had levels below 30 ng/mL, considered the minimum concentration necessary to maintain optimal serum parathyroid hormone levels (Osteoporos Int. 1997;7:439-43), while 36% had 25-hydroxyvitamin D levels below 25 ng/mL, and 18% were below 20 ng/mL, the investigators reported.

Suboptimal 25-hydroxyvitamin D concentrations were found in 63% of a women taking less than 400 IU/day of vitamin D, compared with 45% of those receiving 400 IU or more per day.

The study was funded by Merck.

—Miriam E. Tucker