Vitamin D Supplementation Fails Fibromyalgia Pain Trial

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SAN DIEGO — Vitamin D supplementation did not lessen fibromyalgia symptoms in a small trial, a finding that casts doubt on the theory that vitamin D deficiency underlies some patients' pain and that screening vitamin D levels would identify patients who would benefit from supplementation, Dr. Ann Warner said in a poster presentation at the annual meeting of the American College of Rheumatology.

She performed two studies examining the vitamin D hypothesis. In one study, Dr. Warner, a rheumatologist who practices in Kansas City, Mo., took 50 fibromyalgia patients with insufficient serum levels of vitamin D (a 25-hydroxyvitamin D level less than 20 ng/mL) and randomized them to weekly doses of 50,000 IU of vitamin D or to placebo for 3 months.

The 25 patients who were randomized to supplementation had a higher mean pain score on a visual analog scale at baseline compared with the patients who received placebo (74 mm vs. 61 mm). The mean pain score of patients given supplemental vitamin D improved after 3 months, falling to 64 mm. However, the mean visual analog scale score of the control patients fell to a similar degree, to 54 mm, and neither group's changes were statistically significant. Patients in the control group showed a slight, but significant improvement on the functional pain score, while the supplemented group did not.

The vitamin D hypothesis gained some credibility in 2003 with publication of an article suggesting a link between low levels and diffuse musculoskeletal pain.

In the second study, Dr. Warner compared 25-hydroxyvitamin D levels in 104 patients with osteoarthritis with levels in 184 fibromyalgia patients.

There was no statistically significant difference in mean levels between the groups—28.76 ng/mL for the osteoarthritis group versus 29.16 for the fibromyalgia group—even though there was a slightly higher percentage with fibromyalgia who were insufficient, 29% versus 20%.

In an interview, Dr. Warner said the vitamin D hypothesis achieved some credibility in 2003 when an article in the Mayo Clinic Proceedings reported that 93% of a group of 150 patients with diffuse musculoskeletal pain were vitamin D insufficient. The article was accompanied by an editorial suggesting that vitamin D insufficiency is so common that all patients with diffuse pain should perhaps have their levels checked. The theory seemed to make sense, since vitamin D deficiency causes osteomalacia.

Her studies had some possibly confounding features, Dr. Warner said. In the supplementation study, even the control patients had an improvement in their vitamin D levels during the course of the study because the weather turned warmer. And in the second study, the osteoarthritis patients were significantly older (an average of 60 years versus 54 years).

Still, neither group in the first study had a significant change in their visual analog scale pain scores, and age did not correlate statistically with vitamin D level in the second study. ■