Low Vitamin D Tied to Musculoskeletal Pain

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Major Finding: The prevalence of suboptimal vitamin D levels in a cohort of elderly patients with chronic musculoskeletal pain was significantly higher, at 70%, than the 32% observed in age-, sex-, and BMI-matched patients who were pain free.

Data Source: An observational study comparing the serum vitamin D levels of 265 community-dwelling adults with chronic musculoskeletal pain aged 65 and older with those of 200 pain-free matched controls.

Disclosures: Dr. Abou-Raya reported having no financial conflicts of interest to disclose.

BY DIANA MAHONEY

Is vitamin D a neglected analgesic for chronic musculoskeletal pain? Dr. Suzan Abou-Raya, professor of geriatric medicine at the University of Alexandria in Egypt, thinks it could be and recommends that physicians consider oral supplementation for all pain patients. Dr. Abou-Raya based her opinion on a recent study in which she and her colleagues evaluated the association between vitamin D status and chronic musculoskeletal pain in a cohort of community-dwelling older adults.

The investigators compared the vitamin D status of 265 adults aged 65 years and older who presented to their institution for musculoskeletal pain management with that of 200 other adults who were free of chronic musculoskeletal pain. These controls were matched to the cases by age, sex, and body mass index, said Dr. Abou-Raya. Individuals with known vitamin D deficiency and calcium abnormality were excluded from the study, as were those with severe cognitive impairment or infectious, blood, hepatic, and renal disorders.

All of the participants in the study (conducted during the months of April through September to account for seasonal variation) were surveyd about sun exposure and nutritional intake to assess daily intake of vitamin D and calcium, Dr. Abou-Raya said. They underwent a comprehensive clinical examination, with pain assessed using the Brief Pain Inventory and Visual Analogue Scale.

"Chronic pain was defined as pain that was present in the previous month and for at least 3 months during the previous year, and it was assessed according to the site of pain, the overall severity of the pain, and interference with daily activities," she said. Also, all of the patients completed a joint pain questionnaire to assess chronic musculoskeletal pain in the hands and wrists, shoulders, back, hips, knees, and feet, and they were directed to record daily pain in a diary.

Levels of pain were assessed at monthly intervals, as was physical performance using activities of daily living, grip strength, 6-minute walk distance, and the timed Get up and Go Test of mobility. Additionally, serum vitamin D was measured by Liaison immunoassay and levels between 10 and 30 ng/ml were classified as vitamin D insufficiency and levels lower than 10 ng/ml were classified as vitamin D deficiency, she noted.

In musculoskeletal patients, the mean 25-hydroxyvitamin D level was 18.4 ng/ml compared with 28.9 ng/ml in the control group, which represents a statistically significant difference, Dr. Abou-Raya reported. "The overall prevalence of suboptimal vitamin D levels among patients was 70% vs. 32% in the controls," she said, noting that 41% of the chronic musculoskeletal pain patients and only 1% of the controls met the criteria for vitamin D deficiency.

After multivariate adjustment, "chronic, multisite, musculoskeletal pain was associated with lower levels of 25-hydroxyvitamin D, and lower levels of vitamin D correlated with pain severity and poor physical performance," Dr. Abou-Raya stated. Sun exposure in the chronic pain group was significantly lower, with 40% of pain patients reporting they received fewer than 15 minutes of sun exposure weekly versus 11% of the controls.

"The possibility of inadequate vitamin D should be considered in the differential diagnosis of chronic musculoskeletal pain sufferers," she said at the annual European Congress of Rheumatology. ■