Low Vitamin D Plus Exemestane Tied to Bone Loss

The connection between vitamin D insufficiency and breast cancer has not been fully examined.

BY JANE SALODOF McNeIL
Southwest Bureau

ATLANTA — Vitamin D supplementation should be considered for postmenopausal breast cancer patients treated with aromatase inhibitors, Dr. Per E. Lønning reported at the annual meeting of the American Society of Clinical Oncology.

“Low vitamin D status could be one of the factors predisposing patients to breast cancer,” said Dr. Lønning, a professor at Haukeland University in Bergen, Norway. Postmenopausal breast cancer patients who were treated with exemestane and had vitamin D deficiency lost bone mineral density (BMD) more rapidly than did all other patients in a Norwegian trial, according to Dr. Lønning, who presented the trial’s results.

The double-blind study enrolled early breast cancer patients at six sites between January 1999 and October 2001. Participants were postmenopausal with estrogen receptor-negative or progesterone receptor-positive breast cancer. Median patient age was 59.5 years, and all had a low risk of breast cancer recurrence after surgery.

Exemestane (Aromasin) was administered in the randomized, controlled trial, 128 of 147 (87%) had low levels of vitamin D, defined as 30 ng/mL or less. Researchers randomized 73 women to 25 mg of oral exemestane daily and 74 women to a daily placebo for 2 years. Local guidelines did not routinely offer additional endocrine therapy at the time of the study the investigators noted. Mean vitamin D levels were reported as 21.6 ng/mL for the exemestane arm and 22.6 ng/mL for the control group.

Average patient change in femoral neck BMD was –4.7% after 2 years of treatment with exemestane, an aromatase inhibitor. Placebo patients with low vitamin D also had bone loss in the femoral neck, but the reduction was –3.0%.

Women with normal vitamin D levels had similar outcomes whether they were treated with exemestane or placebo: reductions of –3.7% and –3.3%, respectively.

“It has not fully been examined that breast cancer patients on average have a poorer vitamin D status in comparison to the normal population in general,” he added, calling for further investigation of the relationship between vitamin D and breast cancer.

An annual BMD loss of 0.5% is normal for postmenopausal women. According to Dr. Lønning and his fellow investigators from the Norwegian Breast Cancer Screening Program, interviewed during the poster session where he presented trial data, he said low vitamin D levels could be expected in about 50% of postmenopausal women in Norway.

However, he warned against assuming that low vitamin D levels are entirely explained by reduced sun exposure in northern latitudes, because people in other climates are spending more time indoors and out of the sun.

“You should not think of this as a preventive problem only in the far north,” he said. “This could be a problem to populations all over the world.”

While the investigators reported some significant differences in subgroups and a trend toward higher loss of BMD in the femoral neck among women with low vitamin D during the 2 years of exemestane treatment, low vitamin D did not appear to make as much of a difference in lumbar spine BMD.

The reductions were –3.4% for 52 vitamin D-deficient women who completed the study on exemestane and –2.5% for 59 women who completed the study on placebo. Dr. Lønning added, calling for further investigation of the relationship between vitamin D and breast cancer.

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