Watch Bone Density in Breast Cancer Survivors

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MONTEREY — Aromatase inhibitors can wreak havoc on bone mineral density and increase the risk of fracture in patients being treated for breast cancer, Dr. Eugene McCloskey said at the annual meeting of the International Bone and Mineral Society.

Breast cancer has long been known to be linked with poor bone health, said Dr. McCloskey of the metabolic bone center at the University of Sheffield (England). In fact, results of the Women’s Health Initiative Observation Study revealed that postmenopausal women with breast cancer have a higher risk for clinical fractures than women with no such cancer history, even after adjusting for factors related to hormone levels, risk of fall, fracture history, medication use, comorbidity, and lifestyle (Arch. Intern. Med. 2005;165:352-8).

Although some of this might be explained by the fact that women with a history of breast cancer avoid hormone replacement therapy (which helps bone metabolism and increase the risk of cancer relapse), it appears that the link between poor bone health and breast cancer is mediated mainly by the treatment used.

In premenopausal women, chemotheraphy for breast cancer has been associated with reductions in bone mineral density when it induces ovarian failure, resulting in early menopause. Women who have already undergone menopause naturally do not generally experience ill effects of chemotherapy on bone.

Cancer treatments that induce ovarian failure have the worst effects on bone, Dr. McCloskey said, but these are followed closely by aromatase inhibitors (AIs), which have a lower risk for both joint pain and fractures. Because of their superior efficacy and safety, these agents are becoming the standard treatment for early breast cancer, replacing tamoxifen, a drug that may have a beneficial effect on bone.

One solution to the effect of AIs on bone health that has been put forward is to combine these agents with tamoxifen. Unfortunately, adding tamoxifen to an AI has been shown to wipe out the additional cancer-fighting effect of the AI.

It is possible that currently available AIs have at least some negative effect on bone health. Both letrozole and anastrozole have been shown to increase the risk of fracture by about the same amount. There was some hope that the newest AI, exemestane, would have bone-sparing properties because of its aromatase inhibitory metabolite. So far, however, evidence supporting that hope is, at best, weak. In fact, a 2007 update of a clinical trial with exemestane has shown a significantly increased risk of fracture among women taking exemestane, compared with those taking tamoxifen (Lancet Oncol. 2007;8:89-91).

Given that the benefits of AIs far outweigh the negative effect on bone health in women with breast cancer, ways to treat AI-related bone loss must be sought.