Osteoporosis Patients Fail to Grasp Fracture Risk

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WASHINGTON — A majority of women susceptible to fragility fractures fail to appreciate those risks, even if they have been told by a physician that they have osteoporosis, a large international survey-based study has concluded.

"We found a remarkable failure of many women to perceive that these clear-cut factors are putting them at increased risk for a fracture," said Dr. Ethel Siris, an investigator for GLOW (Global Longitudinal Study of Osteoporosis in Women). "It's really a critique of the medical profession. We have not adequately educated women that osteoporosis is a common disorder that increases future fracture risk. They are just not getting the message."

GLOW included more than 60,000 postmenopausal women who were recruited from 706 physician practices in 10 countries. The women completed questionnaires on demographic and medical information, risk factors for fragility fracture, any personal history of and treatment for osteoporosis, and health and functional status. Many of these questions were taken from the World Health Organization's Fracture Risk Assessment Tool (FRAX). A FRAX index score of 5 or more represents a 26% probability that a patient will experience a nonvertebral fracture within the next 5 years.

Comparing themselves with women of the same age, the majority of subjects with risk factors for fracture did not perceive themselves at increased risk, Dr. Siris said in an interview. "For example, 64% of women who had already had a fracture thought their risk of future fracture was lower than or the same as another woman of their age."

Even more surprising, she said, 55% of women who had been told by a physician that they had osteoporosis thought that they were not at increased risk. "There was an obvious disconnect between knowing that they had the disorder and recognizing that it put them at increased risk of a fracture in the future," she said. Of those with a FRAX index score of 5 or more, 75% also failed to identify themselves as being at high risk.

Women can take many steps to reduce their risk, such as not smoking, not drinking excessively, taking vitamin D and calcium every day, and taking bone-building medication.

Women with other risk factors displayed a similar ignorance, Dr. Siris noted. Of women whose mother had experienced a hip fracture, 74% thought they were at a lower fracture risk than their peers or had a similar risk, as did 74% of those with a low body mass index, 80% of current smokers, 77% of those who frequently consumed alcohol, 61% of those taking corticosteroids, and 71% of those with rheumatoid arthritis.

The replies were consistent across countries, she said at an international symposium sponsored by the National Osteoporosis Foundation. "There is apparently a worldwide problem with communicating these ideas to patients."

The failure to appreciate the implications of fracture risk may help account for the "lousy adherence" to osteoporosis therapy, said Dr. Siris, director of the osteoporosis center at Columbia University, New York. "People may simply just not comprehend the reason they are being treated."

Patients clearly need more risk counseling from their physicians, she said. "Bone health has to be something we, as doctors, pay constant attention to. And certainly as part of our discussions with patients, we need to collect information on risk factors and convey to patients that these factors do put them at increased risk for a fracture."

Similarly, she said, those discussions should include information about how to mitigate risk factors. "Patients can take a number of steps to reduce their risk, such as not smoking, not drinking excessively, taking vitamin D and calcium every day, and taking bone-building medication as directed."

Dr. Siris disclosed that she has receive consulting fees for her time working on GLOW from Sanofi-Aventis and Procter & Gamble Co., which funded the project. ■

Investigational Drug Built BMD In Postmenopausal Women

WASHINGTON — An investigational selective estrogen receptor modulator appears effective in increasing bone mineral density in postmenopausal women with normal or low bone mass.

The randomized, placebo-controlled phase III trial also concluded that the drug, arzoxifene, did not significantly increase endometrial thickness compared with placebo. However, a larger study is necessary to confirm uterine safety in women who were not prescreened for a normal uterus, Dr. Susan B. Broy said in a poster session at an international symposium sponsored by the National Osteoporosis Foundation.

Because selective estrogen receptor modulators (SERMs) have beneficial effects other than bone building, they may be an attractive alternative treatment for osteoporosis, Dr. Broy said in an interview. "The main advantage is that SERMs can prevent breast cancer. This is not yet proven for arzoxifene, since those trials are in progress, but it has been shown for other SERMS," said Dr. Broy, a rheumatologist and professor of clinical medicine at the Chicago Medical School, North Chicago. "This makes SERMS attractive for the younger postmenopausal woman who could benefit from breast cancer prevention and osteoporosis prevention from one drug."

SERMS have a shorter duration of action on bone than do bisphosphonates, and also cause fewer side effects, she added.

The 24-month study comprised 331 postmenopausal women whose bone mass was either normal or low (T-score 0 to –2.5). The subjects' mean age was 54 years. The cohort excluded women with vaginal bleeding, abnormal gynecologic findings, or an endometrial thickness of more than 5 mm.

Subjects were randomized to either 20 mg day arzoxifene or placebo. By 6 months, patients in the active group had gained a mean 1% in bone mineral density at the lumbar spine and in the total hip measurement, while there were no significant changes in BMD in placebo patients. By 12 months, active patients had gained a mean 2% at the lumbar spine and stayed steady at the total hip, while placebo patients had lost a mean of 0.5% at the lumbar spine and 0.25% at the total hip.

By 24 months, patients taking arzoxifene had maintained the mean 2% gain at the lumbar spine and the mean 1% gain at the total hip, while those taking placebo had lost a mean of 1.5% at both the lumbar spine and total hip.

Markers of bone turnover also improved significantly in the arzoxifene group compared with the placebo group at 24 months. The drug appeared to have no effect on endometrial hyperplasia or cancer. Endometrial thickness decreased by a mean of 0.191 mm in the placebo group and increased by a mean of 0.160 mm in the active group, not a significant difference.

Three percent of patients taking arzoxifene experienced a serious adverse event compared with 6% of those taking placebo. Hot flashes occurred in 12% of the active group and 11% of the placebo group. There were three cases of breast cancer in the placebo group and none in the active group.

Dr. Broy has been a speaker and consultant for Eli Lilly & Co., which conducted the trial. ■

Bone Loss May Contribute To Benign Positional Vertigo

Benign positional vertigo appears to strongly correlate with osteopenia and osteoporosis in both men and women, researchers in a case-control study have concluded.

Compared with controls, patients with osteopenia were twice as likely to experience positional vertigo, and those with osteoporosis were three times as likely to experience the disorder, Dr. Ji Sook Kim and colleagues wrote.

"These findings suggest a deranged calcium metabolism in idiopathic benign positional vertigo," Dr. Kim of the Seoul National University College of Medicine, Korea, said in an interview.

"Restoring normal calcium metabolism may prevent recurrences of BPV."

The study compared bone mineral density in 209 patients with a diagnosis of idiopathic benign positional vertigo (BPV) and 202 controls. Most of the patients (142) were female; their mean age was 60 years.

Among female patients, only 28% had normal bone mineral density, while 47% had osteopenia (T score > -2.5 and < -1.0) and 25% had osteoporosis (T score $= -2.5$). Among female controls, normal bone mass was found in 57%; 33% had osteopenia and 9% had osteoporosis. (Percentages do not add up to 100% due to rounding.) The differences were significant at all points measured (Neurology 2009;72:1069-76).

In male patients, 48% had normal bone mass, while 40% had osteopenia and 12% had osteoporosis. Among male controls, 67% had normal bone mass, 27% had osteopenia, and 6% had osteoporosis. The differences were significant at the femur and first lumbar vertebra, but not at the other lumbar measurements.

Recurrent attacks of BPV (defined as at least two previous attacks at least 1 month apart) had occurred in 40% of patients. Compared to patients with new-onset BPV, patients with recurrent BPV were older (62 vs. 60 years) and more likely to be women (77% vs. 62%).

In women older than 45 years, the mean lowest T-scores were lower in the recurrent group than in the new-onset group (–2.1 vs. –1.6). There were no between-group T score differences in younger patients. This finding supports the premise that estrogen deficiency may contribute to the development of BPV by weakening the bond of otoconia to the utricle, they wrote. In men, the weakening may be due to bone loss initiated by a combination of hormone deficiency, poor nutrition, and decreased physical activity.

BPV occurs when otoconia dislodge from the utricle and lodge in the semicircular canals. During head movement, the otoconia can stimulate the canals, which is interpreted as a sense of whirling dizziness and unbalance. ■