Osteoporosis Patients Fail to Grasp Increased Fracture Risk

BY MICHELE G. SULLIVAN

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.”

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 an episode 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 woman will fracture her hip in the next 10 years. The fractures considered are femur and distal radius.

Among female patients, only 18% correctly attributed their fracture risk to osteoporosis, while 32% thought their risk was due to other factors, such as aging, frailty, or height loss. Women were asked to rate their risk of fracture on a scale of 0 to 10, with 0 representing no risk. Women with a FRAX score of 5 or more were significantly more likely to rate their risk of hip fracture as 8 or higher than women whose FRAX score was less than 5.

“Women need to understand their risk and act on that information.”

Bone Loss May Contribute To Benign Positional Vertigo

BY MICHELE G. SULLIVAN

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

Compared to controls, patients with osteopenia or osteoporosis were three times as likely to experience the disorder, Dr. Ji Sook Kim and colleagues wrote. “This finding suggests a deranged calcium metabolism in idiopathic benign positional vertigo.”

The researchers used data from a large national registry that tracks new-onset vertigo, 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 138 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 greater than –2.5 and less than –1.0) and 25% had osteoporosis (T score less than –2.5). Among female controls, normal bone mass was found in 57%; 33% had osteopenia and 9% had osteoporosis.

More research is needed, however, to determine whether treating osteopenia or osteoporosis would reduce the risk of BPV.

Researchers are primarily concerned with the coordination of the otoconia in the inner ear that help us maintain balance, Dr. Kim said. The otoconia are a little bit loose when you develop BPV. We think that it disengages the otoconia from the utricle and the otoliths, and it’s a struggle between the otoconia contacting the utricle and the utricle regaining that contact.”

In men older than 45 years, the mean low 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, the investigators wrote. In men, the weakening may be the result of bone loss initiated by a combination of hormone deficiency, poor nutrition, and decreased physical activity.

Keeping Steroid-Induced Bone Loss in Check

BY PATRICE WENDLING

CHICAGO — Fracture risk increases in arthritis patients within about 3 months of starting corticosteroids and remains high, according to Dr. Nelson Watts.

“How much of this is steroids and how much of this is the underlying disease is unanswered,” said Dr. Watts, director of the bone health and osteoporosis center at the University of Cincinnati.

Glucocorticoid-induced osteoporosis results from a variety of systemic effects of corticosteroids, but it’s the combination of reduced bone formation and increased bone resorption that causes a “double whammy” for patients—a troubling aspect for rheumatologists, who regularly dispense corticosteroids for their patients, Dr. Watts said at a symposium sponsored by the American College of Rheumatology.

The exact dose at which corticosteroids increase fracture risk is also difficult to tease out because of the underlying disease. One study observed that fracture risk was dose dependent and significantly higher with 2.5 mg/day or more of oral prednisone, with increases of 61% in hip and 160% in vertebral fractures (J. Bone Miner. Res. 2000;15:993-1000).

“It may well be that people who need 2.5 mg/day of prednisone are at increased risk for fracture not because of prednisone, but because of their rheumatoid arthritis;...clearly, as the dose goes up, the risk increases,” he said.

The American College of Rheumatology just began the process of revising its 2001 guidelines for the prevention and treatment of glucocorticoid-induced osteoporosis. The current guidelines highlight lifestyle modifications, such as calcium and vitamin D supplementation, weight-bearing exercise, and minimization of alcohol intake.

There is at least one supportive trial for virtually all therapies, but several intervention trials have produced conflicting results for some agents, according to a recent review of glucocorticoids and the risk of osteoporosis (Expert Opin. Drug Saf. 2009;8:33-47).

The value of calcium and vitamin D supplementation is unclear, Dr. Watts said. In a relatively small trial in 96 RA patients on prednisone, daily supplementation with 500 IU of vitamin D and 1,000 mg of calcium carbonate per day significantly improved bone mineral density, at a rate of 0.72% in the lumbar spine and 0.85% in the trochanter per year, compared with losses of 2% and 0.9%, respectively, among patients on placebo (Ann. Intern. Med. 1996;125:961-8).

In four prospective studies in 173 patients who recently started corticosteroid therapy, however, bone loss occurred at a rate of 3%-5% per year, despite daily supplementation with 500-800 mg of calcium.

Two other studies that Dr. Watts highlighted reported no bone loss in patients who were given up to 1,000 mg per day of calcium and up to 500 IU per day of vitamin D, although he noted that these patients had been on corticosteroid therapy for at least 1 year and in most cases almost 5 years.

“It’s not clear to me how much of a role vitamin D and calcium will play in preventing bone loss,” he said.

Studies show that the risk for spinal fracture falls within a year or two of stopping therapy, although hip fracture risk remains increased over baseline.

Dr. Watts disclosed that he has relationships with Amgen Inc., Eli Lilly & Co., Procter & Gamble Co., Sanofi-Aventis, Novo Nordisk Inc., and Novartis Pharmaceuticals Corp., which manufactures Reclast.