

Secondary Causes of Bone Loss Are Often Missed

BY ELIZABETH MEHCATIE
Senior Writer

WASHINGTON — Primary care physicians are less likely than specialists to initiate a work-up for secondary causes of bone loss in patients with scans indicating low bone density, despite a recommendation to do so.

That finding emerged from a study presented in poster form at the annual meeting of the North American Menopause Society.

Some patients with scans indicating osteoporosis were premenopausal women who started treatment with a bisphosphonate after their physicians received the scan results. Eventually, however, these patients were diagnosed with vitamin D deficiency, according to Andrea Sikin, M.D., of the Cleveland Clinic Women's Health Center, and her associates.

The study involved a review of 1,114 consecutive dual energy x-ray absorptiometry (DXA) scans performed at the center from July 2002 to August 2003. Of these scans, 712 (64%) were considered indicative of osteopenia (a T score ranging from -1.1 to -2.4), or of osteoporosis (a T score of -2.5 or below), according to World Health Organization criteria.

An evaluation for secondary causes of low bone density was recommended by the interpreter reading the scans in 77 of the 712 women with z scores equal to or less than -1.5. These 77 women were aged 27 to 84 years, with a mean of 53 years. But only 49 (64%) of the 77 women actu-

ally had a secondary evaluation as recommended, and laboratory tests were drawn only in 42 (55%) of these women.

Most of the specialists—which included rheumatologists, osteoporosis specialists, and North American Menopause Society-certified women's health specialists—followed up with patients as recommended, compared with less than one-third of primary care physicians, which included general ob/gyns., internists, and family physicians at the Cleveland Clinic.

Most specialists followed up as recommended after DXA scans for bone density loss, compared with less than one-third of the primary care physicians.

Of the 41 women whose DXA scan had been ordered by a specialist, 39 (95%) had a secondary work-up initiated by the physician.

But among the 36 whose primary care physician had ordered the DXA scan, only 10 (28%) had a work-up.

Of the 42 women who had the full work-up, including lab tests, 23 (55%) were diagnosed with vitamin D deficiency, 4 (9%) were diagnosed with primary hyperparathyroidism, and 5 (12%) were diagnosed with premature ovarian insufficiency.

Concluding that specialists were more likely to perform the secondary evaluation, the authors recommended that vitamin D, 25-hydroxyvitamin D, and parathyroid hormone levels should be drawn on all women with z scores at or below -1.5.

In an interview with this newspaper, study investigator Holly L. Thacker, M.D., head of the Cleveland Clinic Women's Health Center, said it is unclear whether the physicians read the entire report or perhaps did not know which secondary work-up to conduct. ■

SSRI Use Tied to Bone Loss

BY TIMOTHY F. KIRN
Sacramento Bureau

SEATTLE — Use of selective serotonin reuptake inhibitors is associated with bone loss comparable to that associated with glucocorticoid therapy, according to the findings of two studies.

In the first study (involving nearly 6,000 men), the mean bone mineral density (BMD) at the lumbar spine for the 158 participants using an SSRI at the time of a baseline dual energy x-ray absorptiometry scan was 4.6% lower than in nonusers, Elizabeth McKinstry Haney, M.D., said at the annual meeting of the American Society for Bone and Mineral Research.

By comparison, the 240 glucocorticoid users had a mean baseline BMD 2.9% lower than that of nonusers.

Relative to nonusers, mean total hip BMD was 3.9% lower in the SSRI users and 2.6% lower in the glucocorticoid users, relative to nonusers. At the femoral neck, mean BMD was 4.5% lower for the SSRI users and 2.2% lower for the glucocorticoid users.

Use of tricyclic antidepressants or trazodone was not associated with significantly different BMD findings, compared with nonusers, said Dr. Haney of Oregon Health Sciences University, Portland.

Another study presented at the meeting reported similar findings in women. That study looked at a cohort of 2,556 elderly women who were part of longitudinal investigation of fracture risk. The study compared bone mineral density measurements taken about 5 years apart. The rate of BMD loss among women who

reported using an SSRI at the time of one or both of the bone density measurements was almost double that of women who were not taking an SSRI (0.81% vs. 0.47% per year), said Susan J. Diem, of the University of Minnesota, in a poster presentation.

Previous reports have suggested an association between SSRIs, bone loss, and fracture. However, it was unclear in those studies whether the SSRIs caused the bone loss or whether the bone loss was associated with depression, since the mood disorder itself has been tied to a number of factors that might lead to bone loss, such as altered cortisol levels and alcohol abuse, Dr. Haney said.

That is why Dr. Haney's study compared bone density in patients on SSRIs with patients taking other antidepressants.

The cause of the loss is probably related to osteoclasts' and osteoblasts' known expression of functional serotonin transporters, Dr. Haney suggested.

Studies that her group has conducted of SSRIs in mice have confirmed that SSRI treatment led to bone loss.

Dr. Haney said the strength of her study was that it collected very complete data, which permitted the researchers to control for everything from body mass to smoking and vitamin use in their analysis.

Still, the study was limited by the fact that SSRI dosages and duration of use were unknown.

"We don't rule out that other mechanisms might be involved as well, and that deserves further study" she said. ■

Alcohol Tied to Bone Density Gain

SEATTLE — Beer and wine increase bone mineral density in a dose-dependent fashion, according to data from the Framingham Offspring Study.

"I think the major effect is an estrogenic or hormonal effect of the alcohol itself," Katherine L. Tucker, Ph.D., said at the annual meeting of the American Society for Bone and Mineral Research.

The findings are based on 1,631 women and 1,295 men who gave information on their alcohol intake and had bone mineral density measured as part of their participation in the Framingham Offspring study.

At the trochanter, the mean bone mineral density in the men was 0.84-0.86 g/cm² if they did not drink, 0.9 g/cm² if they drank 1.2 beers per day, and 0.91 g/cm² if they drank 2 beers per day. Above the 2-beer-per-day level, bone density began to decline, said Dr. Tucker of Tufts University, Boston, in a poster.

For women, the bone mineral density at the trochanter was a mean 0.68-0.70 g/cm² if they did not drink,

0.70-0.72 cm² for those who drank 1.2 glasses of wine per day, and 0.72-0.74 cm² for those who drank 2 glasses of wine per day. Too few women in the study reported drinking more than 2 drinks per day for the researchers to perform a meaningful analysis on those women, Dr. Tucker said in an interview.

For both men and women, drinking daily appeared to have the most benefit, Dr. Tucker said.

The beneficial effects were seen for beer among men and wine among women, reflecting the types of alcohol most commonly consumed for each sex. Dr. Tucker added that wine would probably have been equally effective for men and vice versa.

Previous reports have suggested a positive association between alcohol intake and bone density. No other component of the beverages, aside from alcohol, appeared to account totally for the bone density improvement, according to the analysis.

—Timothy F. Kirn

BMI and Calcium Intake Can Help Predict Male Osteoporosis

BY TIMOTHY F. KIRN
Sacramento Bureau

SAN ANTONIO — If you want to identify the male patients who are most likely to have osteoporosis, look for the thin ones, and then ask them about their calcium intake, Bryan R. Whelan, M.D., said at the annual meeting of the American College of Rheumatology.

Dr. Whelan and his colleagues prospectively screened 350 men referred to an osteoporosis clinic in Cork, Ireland, for assessment using dual x-ray absorptiometry. The aim was to retrospectively assess whether the patients were being properly referred and to identify what, if any, clinical characteristics were associated with a higher risk for fracture.

Overall, 45% of the patients

were found to have osteopenia or osteoporosis. Weight turned out to be the most important predictor of who had low bone density, even more so than corticosteroid treatment, said Dr. Whelan of the department of medicine, University College of Cork.

Although 39% of the patients were on or had received corticosteroid treatment, which was why they received the referral, steroid treatment was not correlated with a significantly higher likelihood of a low T score or z score in the study, Dr. Whelan said.

Individuals with a body mass index of less than 25 kg/mg² were 2.5 times more likely to have a low, total-hip z score measurement than were those who had a BMI greater than 25 kg/mg². A low z score was defined as a

score of less than -1.

Patients completed questionnaires on lifestyle factors, such as whether they smoked, how much alcohol they consumed, and the amount of their calcium intake. Participants who took a calcium supplement, ate two or more servings of cheese a day, or drank at least a pint of milk a day were considered to have an adequate calcium intake.

Among men with low BMI and inadequate calcium intake, 70% were found to have a low z score.

"Even though we used such a crude tool to define adequate versus inadequate [calcium intake], it did stratify" patients by their risk, he said.

Even age and daily exercise, which were somewhat related to risk, were not as highly predictive, Dr. Whelan said. ■