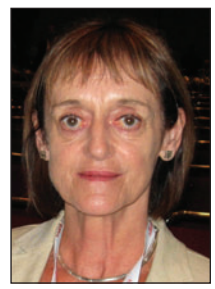
Obese Older Women Risk Ankle, Tibia Fractures

BY BRUCE JANCIN

FROM THE ANNUAL MEETING OF THE AMERICAN SOCIETY FOR BONE AND MINERAL RESEARCH

DENVER – New data indicate that obesity in postmenopausal women doesn't protect against fractures, contrary to the conventional wisdom.

Indeed, postmenopausal obesity actually appears to be a risk factor for fractures at selected sites, Dr. Juliet E. Compston reported at the meeting.



This is a finding with major public health implications because of the growing obesity epidemic. The ramifications are especially pressing in light of new evidence that obese postmenopausal women who experience a fracture are far less likely than nonobese women to be placed on bone-protective medication, said Dr. Compston, professor of bone medicine at the University of Cambridge (England).

She reported on a study of 44,534 postmenopausal women (mean age, 67 years) in the United States and nine other countries who are participating in the ongoing, prospective, observational GLOW (Global Longitudinal Study of Osteoporosis in Women). At enrollment, 23.4% of the women had a body mass index of 30 kg/m^2 or more, and 1.7% were underweight (defined as a BMI less than 18.5).

The prevalence of fracture at baseline was 23% in obese women, 24% in nonobese women, and 32% in the underweight study population. The incidence of one or more new fractures during 2 years of follow-up was 6.4% in the obese and similar at 6.8% in the nonobese women, compared with 7.3% in the underweight group.

Thus, nearly one in four postmenopausal women with a fracture is obese. As the obesity rate continues to climb in the developed world, fractures in the obese will increasingly contribute to the overall burden of fractures in the postmenopausal population, Dr. Compston observed.

The higher prevalence and incidence of fracture in underweight postmenopausal women comes as no surprise; low BMI is recognized as a major risk factor for fracture. What was surprising, though, was that only 27% of obese GLOW participants with an incident fracture were placed on bone-protective medication for secondary prevention.

In contrast, the treatment rate in nonobese women with an incident fracture was 41%, and in underweight women it was 57%. The likely explanation for the markedly lower treatment rate in the obese group is the widespread belief that obesity protects against fractures, according to Dr. Compston.

Only 27% of obese GLOW participants with incident fractures were placed on bone-protective medication.

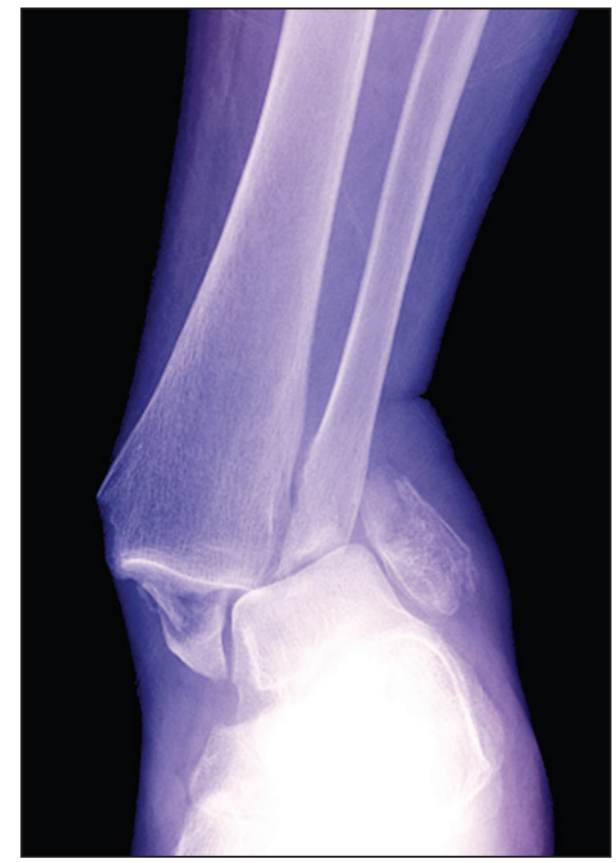
DR. COMPSTON

Incident fractures of the ankle and tibia were significantly more common and wrist fractures were less common in obese women, compared with nonobese study participants, she noted.

The obese subjects with an incident fracture had significantly higher rates of several comorbid conditions – asthma, emphysema, and type 1 diabetes – than did nonobese women. They also were more likely than nonobese participants with an incident fracture to have a baseline history of two or more falls within the past 2 years. They had more mobility issues as well, as reflected in their increased rate of self-reported need for arm assistance in standing up. It's likely that reduced mobility and increased risk of falling play an important role in the pathogenesis of fractures in obese postmenopausal women, although this is an issue that needs further study, she observed.

In a separate presentation, Helena Johansson presented an analysis of BMI and fracture risk in 281,637 women drawn from 27 prospective, population-based cohort studies that were conducted in more than two dozen countries. The women were aged 20-105 years (mean age, 63 years).

A total of 18,441 osteoporotic fractures occurred in the study population during a mean 4.8 years of follow-up. After adjustment for bone mineral density, obesity proved to be a risk factor for fracture. For example, women with a BMI of 34 had an adjusted 14% increased risk of osteoporotic fracture, compared with those having a BMI of 26, an elevation in risk that, while modest, was statistically significant. And women having a BMI of 34 had a more impressive adjusted 60% increased risk of humerus or elbow fracture, added Ms. Johansson, a statistician at the University of Gothenburg (Sweden).



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Incident fractures of the ankle and tibia were significantly more common in obese women.

Dr. Compston declared having no relevant financial disclosures. GLOW is supported by grants from Sanofi-Aventis and Warner Chilcott. Ms. Johansson declared having no relevant financial disclosures. ■

Reclast Cut Fractures by Two-Thirds in Osteoporotic Men

BY BRUCE JANCIN

FROM THE ANNUAL MEETING OF THE AMERICAN SOCIETY FOR BONE AND MINERAL RESEARCH

SAN DIEGO – Once-yearly intravenous zoledronic acid in men who have osteoporosis reduced their risk of vertebral fractures by 67% over a 2-year period, compared with placebo, in a large, multinational, phase III randomized clinical trial.

"This is the first clear demonstration of antifracture efficacy for an osteoporosis agent in male osteoporosis," said Dr. Steven Boonen in presenting the study results at the meeting.

"These findings suggest the use of zoledronic acid as a treatment option in male patients, particularly because annual infusions ensure that patients will have the full effect of treatment for at least the next year," added Dr. Boonen, who is professor of geriatric medicine and head of the gerontology and geriatrics section at Catholic University of Leuven (Belgium).

He reported on 1,199 men (mean age, 66 years) with primary osteoporosis or osteoporosis secondary to hypogonadism who were randomized in a double-blind fashion to a once-yearly 15-minute infusion of 5 mg of zoledronic acid (Reclast) or placebo at 134 centers. At enrollment, 32% of the men had one or more vertebral fractures.

Bone mineral density was roughly 6% greater at the spine in the zoledronic acid group.

DR. BOONEN

The primary end point of the study was the proportion of subjects with one or more new vertebral fractures during 2 years of follow-up. The rate was 1.6% in men assigned to zoledronic acid and 4.9% in the placebo-treated controls, which translated to a highly significant 67% relative risk reduction. The 12-month rate was 0.9% in the zoledronic acid group vs. 2.8% in controls, for a 68% relative risk reduction.

The incidence of moderate to severe vertebral fractures was similarly reduced by 63% in zoledronic acid recipients, compared with controls.

Men on zoledronic acid had a stable 60% reduction in levels of the bone turnover biomarker CTx, compared with the placebo group, throughout the study, Dr. Boonen said.

At 2 years, bone mineral density was roughly 6% greater at the spine and 2% greater at the total hip in the patients who received zoledronic acid, compared with the controls.

"All of these findings are remarkably similar in magnitude to the risk reductions that have been documented with zoledronic acid in the pivotal fracture trial in postmenopausal osteoporosis," the geriatrician observed.

The men on zoledronic acid also experienced a smaller height loss, compared with controls (mean, 2.34 vs. 4.49 mm), he said.

No major safety issues arose in the study. Similar numbers of patients in both study arms dropped out of the trial because of adverse events.

At the present time, zoledronic acid's approved indications include treatment to increase bone mass in men with osteoporosis. ■

VITALS

Major Finding: New osteoporotic fractures occurred in 1.6% of men on zoledronic acid and in 4.9% of those on placebo after 2 years of either active treatment or placebo.

Data Source: Multinational, randomized, phase III clinical trial of 1,199 men with primary or secondary osteoporosis.

Disclosures: Dr. Boonen disclosed that he has received research grants from and serves as a consultant to Novartis.