WHO to Release Absolute Fracture Risk Index

BY SHERRY BOSCHERT
San Francisco Bureau

SAN FRANCISCO — A yet to be released tool developed by the World Health Organization should help physicians calculate an individual's absolute risk for bone fracture and provide a basis for counseling patients regarding treatment, experts said at a meeting on osteoporosis sponsored by the University of California, San Francisco.

The expected WHO model will estimate an individual's risk of developing a fragility fracture over the next decade, based on factors that may include age, bone mineral density of the femoral neck, a history of previous fracture, family history of fracture, smoking and alcohol use, steroid use, and the presence of rheumatoid arthritis.

At this point no one knows exactly which factors will be included in the model, said Steven T. Harris, M.D., clinical professor of medicine at the University of California, San Francisco.

Calculating absolute risk for fracture greatly assists therapeutic decision making, he said.

For example, a 2001 model looked at the 10-year probability of fractures in the hip, forearm, humerus, or spine based simply on age and bone density. A 45-year-old with a T score of –3 (which is consistent with osteoporosis) has about a 10% risk of fracture over the next 10 years, but the fracture risk increases to 30% in a 75-year-old with the same bone density.

The WHO model "is going to be far better than telling someone they have osteoporosis, giving them a prescription, and saying goodbye," Dr. Harris said. "Getting people engaged in conversation about what their risk is, and what can be done with contemporary treatment, is going to make therapy a lot more rational."

The WHO model will be 'better than telling someone they have osteoporosis' and then saying goodbye.

DR. HARRIS

If a clinician could tell a 55-year-old patient who is osteopenic that the patient's absolute risk for fracture is 10% over the next 10 years, and that contemporary treatments could reduce that risk to 5%, that should help the patient decide whether the potential improvement is worth the cost or inconvenience associated with therapy.

Calculations of absolute risk also are likely to be used by insurers in the near future to decide whether to cover medical therapy for improving bone density. It may be that therapy for someone with a 20% risk of fracture will be covered, but patients with a 10% risk will have to pay for the medications themselves.

The new WHO index is due to be released "imminently," which probably means in the first half of 2006, Steven R. Cummings, M.D., said in a separate presentation at the meeting.

He noted that the WHO's fracture risk index is based on data from about 60,000 women in 12 cohorts of patients, mostly Europeans, and needs to be validated in other populations, including that of the United States.

He lauded the project's objective of establishing a set of universal factors that could be used to identify absolute fracture risk. "I think this is a very noble goal that will probably have important clinical value," said Dr. Cummings, professor emeritus of epidemiology and biostatistics at the university and director of clinical research at the California Pacific Medical Center Research Institute.

Some studies have been using the index to compare the value of bone density measurements with the value of other risk factors in predicting future fractures. Using the index alone without measuring bone density seems to be pretty good at predicting hip fractures, and is modestly valuable in predicting other fractures.

Having "an index of risk factors may be useful, particularly in places where you don't have bone density testing, or if you're deciding whether or not" to measure a patient's bone density, he said.

Adding bone density measurement to other factors in the index substantially strengthens the ability to predict hip fracture and mildly strengthens the ability to predict other fractures, but the opposite does not seem to be true.

"It's not clear that adding risk factors, once you know the bone density, will substantially improve the clinical judgments you can make about treatment with medication," Dr. Cummings said. ■

Don't Stop Bisphosphonates if Early Bone Readings Show Loss

BY SHERRY BOSCHERT
San Francisco Bureau

SAN FRANCISCO — If the first bone density reading after starting bisphosphonate therapy shows bone loss, don't stop or alter therapy, Steven R. Cummings, M.D., advised at a meeting on osteoporosis sponsored by the University of California, San Francisco.

'Stopping treatment in those patients who lose bone is exactly the wrong thing to do.'

DR. CUMMINGS

In all likelihood the therapy is working, but "noise" in the bone density test results in a lower measurement. The next time the patient's bone density is taken, it probably will be higher, said Dr. Cummings, professor emeritus of epidemiology and biostatistics at the university and director of clinical research at the California Pacific Medical Center Research Institute.

He and his associates analyzed data from the 6,459-patient Fracture Intervention Trial and found that among women who lost at least 4% of hip bone density in the first year of treatment with alendronate, 92% gained an average of 5% of hip bone density in the second year of therapy. The study involved postmenopausal women, aged 55-80 years, who were randomized to receive alendronate at 5 mg/day for 2 years and 10 mg/day thereafter, or placebo for up to 4.5 years.

"If you were to change treatment or add another drug" after that first follow-up, "they would gain bone and you would look like a hero, but in fact they would have improved even without" any changes, he said.

Among women who gained up to 4% of hip bone density in the first year on alendronate, 67% continued to gain an average of 1% bone density in the second year on therapy.

Of the women who gained a lot of hip bone—8% or more—the first year, 64% lost an average of 1% of hip bone the second year. So patients with the largest gains in bone density during the first year ought to be told: "Watch out—the next year you're likely to lose bone," he said.

Continuing therapy also is important for reducing the risk of fracture. A comparison of the 18% of women who lost bone after a year of alendronate with the 18% of women who lost the most bone while on placebo indicated a 50% reduction in fracture risk among patients who gained bone density on treatment. A slightly greater reduction in fracture risk was seen in women who lost up to 4% of bone if they were taking alendronate, compared with placebo.

The greatest overall benefits occurred in women who lost more than 4% of bone density in the first year. In this subgroup, taking alendronate reduced the risk of fracture by 80%-90%, compared with placebo. "Stopping treatment in those patients who lose bone is exactly the wrong thing to do," said Dr. Cummings, who is a consultant and speaker for two companies that make bisphosphonate medications.

If a patient consistently loses bone density over multiple follow-up measurements in a period of years, then it would be reasonable to reassess treatment options, he said. ■

Survey Focuses on Adherence Gap in Osteoporosis Therapy

BY BRUCE JANCIN
Denver Bureau

VIENNA — Most physicians remain unaware of the factors that motivate women to stay on osteoporosis therapy, according to the results of a new survey released by the International Osteoporosis Foundation.

As a result of this physician/patient disconnect, 85% of surveyed physicians reported having patients who have discontinued bisphosphonate therapy without consulting them, and 71% still didn't know why their patients had stopped, according to the findings, which were presented at the annual European congress of rheumatology.

The goal of the survey was to shed new light on the poorly understood adherence gap in osteoporosis therapy. "Adherence gap" is a term used to describe the phenomenon whereby nearly 80% of women who take a once-daily bisphosphonate and more than half who take a once-weekly agent discontinue therapy within the first year, despite the drugs' proven ability to reduce fracture risk.

The telephone survey, conducted earlier this year in five Western European countries, involved 500 primary care physicians and rheumatologists and 502 postmenopausal women with osteoporosis. Of the women surveyed, 38% were previously on a bisphosphonate but had discontinued it; the rest were currently on a bisphosphonate.

Overall, 64% of women cited a positive motivating factor—such as the desire to do something to help themselves, or a wish to stay independent—as their primary reason for staying on bisphosphonate therapy. But only 13% of physicians said they motivated patients by explaining the benefits of bisphosphonates. Instead, the majority of physicians indicated they emphasized the negative consequences of nonadherence. And 86% of physicians said they were unsure about how best to encourage patients to continue therapy.

Women cited drug side effects and the inconvenience of bisphosphonate therapy, especially the need to remain upright after taking the oral medication and the necessity of fasting before and after taking the drug, as the main reasons for discontinuing treatment. But lack of understanding on the patient's part was the reason for nonadherence most often cited by physicians. And they had a valid point:

Of the women surveyed, 27% said they thought their fracture risk was the same regardless of whether they took their medication. Another 17% didn't think their bisphosphonate had any benefit at all. Also, 51% of women couldn't recall being advised on how long to stay on their medication.

The congress was sponsored by the European League Against Rheumatism. The International Osteoporosis Foundation survey was funded by an unrestricted educational grant from GlaxoSmithKline and Roche. ■

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