**Vitamin D Supplementation May Up Heart Risks**

**BY BRUCE JANCIN**

Snowmass, Colo. — Serious questions exist about the safety and efficacy of the popular practice of high-dose vitamin D supplementation across a broad swath of the population.

One of these concerns is that not all of the extra calcium absorption promoted by boosting vitamin D is going into bone to prevent fractures. Some of it may actually be taken up by atherosclerotic plaque, increasing the risk of cardiovascular events, Dr. Lenore M. Buckley cautioned at a symposium sponsored by the American College of Rheumatology.

This is of particular concern in patients with known coronary disease and for those at high risk, including individuals with rheumatoid arthritis, systemic lupus erythematosus, diabetes, or psoriasis, added Dr. Buckley, professor of medicine at Virginia Commonwealth University, Richmond.

Discussing findings from a recent cross-sectional study involving 340 blacks with type 2 diabetes, Dr. Buckley said that serum 25-hydroxyvitamin D levels were positively associated with increased calcified atherosclerotic plaque in the aorta and carotid arteries (J. Clin. Endo. Metab. 2010 Jan. 8 [Epub ahead of print]).

There is a noticeable, if anecdotal, increase in the number of physicians ordering serum vitamin D tests to screen for deficiency. The vitamin D assay has become one of the most-ordered lab tests in the United States, despite the assay’s questionable reliability, its $40-$200 cost, and considerable unresolved debate as to what constitutes an optimal blood level. Medicare is considering changing its policy such that vitamin D tests for screening purposes would no longer be covered, according to Dr. Buckley.

There is solid evidence that vitamin D supplementation reduces fracture risk in the elderly, especially in those with low serum levels. But that’s not what’s driving the astounding recent growth in serum vitamin D screening and supplement use, according to the rheumatologist.

The impetus for the upsurge in screening is the hope that it might protect against a broad range of chronic diseases, including cancers, dementia, autoimmune diseases, and cardiovascular disease.

The trouble is, that hope is driven mostly by epidemiologic data, which must be viewed as hypothesis generating rather than definitive. The classic example of how misleading epidemiologic associations can be is the expectation that estrogen replacement would reduce cardiovascular risk in postmenopausal women; when the Women’s Health Initiative and other prospective trials were eventually carried out, it turned out that just the opposite was true, Dr. Buckley noted.

The question we have to ask is: What does that low serum vitamin D level mean? Is it the thing that predisposes, or is it somehow a byproduct of illness?

**Dr. Buckley**

‘What does that low serum vitamin D level mean? ... Is it somehow a byproduct of illness?’

Another new part of the NAMS statement recommends that postmenopausal women obtain 800-1,000 IU/day of vitamin D3, up from the recommended dosage of 400-600 IU/day contained in the 2006 statement. “There is more and more evidence that even in temperate areas, there isn’t enough sun exposure to guarantee vitamin D sufficiency, particularly during the winter months,” said Dr. Harris of the University of California, San Francisco. “I think that the recommended allowance of 800-1,000 IU/day will be increased again at some point, but I think it’s a reasonable starting point.”

As for choice of a specific osteoporosis state for drug therapy, the state emphasizes that no head-to-head trials comparing the effectiveness of pharmacologic therapies to reduce fracture risk have been conducted. Current approved osteoporosis options include bisphosphonates, selective estrogen-receptor modulators (SERMs), parathyroid hormone, estrogens, and calcitonin.

According to the statement, bisphosphonates “are the first-line drugs for treating postmenopausal women with osteoporosis. They have reduced the risk of vertebral fractures by 40%-70% and reduced the incidence of nonvertebral fracture, including hip fracture, by about half this amount.”

The SERM raloxifene “prevents bone loss and reduces the risk of vertebral fractures, but its effectiveness in reducing other fractures is uncertain. Extraskelatal risks and benefits are important when considering raloxifene therapy.”

Disclosures: The development of the statement was supported by an unrestricted educational grant from the Alliance for Better Bone Health, a collaboration between Warner Chilcott and its affiliates and Sanofi-Aventis US. Dr. Utian and Dr. Harris disclosed relationships with multiple pharmaceutical firms.

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**FRAX, Vitamin D Considered Key to Osteoporosis Care**

**BY DOUG BRUNK**

The FRAX tool to calculate the risk of major osteoporotic fracture and recommendations increasing vitamin D intake are key components of the North American Menopause Society’s updated position statement on the management of osteoporosis in postmenopausal women.

Last updated in 2006, the 2010 statement (www.menopause.org/aboutmeno/consensus.as) is meant to be a guide for clinicians regarding the diagnosis, prevention, and treatment of postmenopausal osteoporosis. “It’s the most current and practice-oriented, evidence-based statement that’s out at the moment,” Dr. Wulf H. Utian, executive director emeritus of NAMS, said in an interview.

Among the new recommendations is the use of the World Health Organization’s FRAX (Fracture Risk Assessment) tool to calculate a patient’s 10-year risk of major osteoporotic fracture (hip, shoulder, wrist, and spine). Developed by researchers led by Dr. John A. Kanis of the University of Sheffield (England), FRAX is based on individual patient models that integrate the fracture risks associated with clinical risk factors as well as bone mineral density at the femoral neck. “People have been intimidated by the language associated with bone density reports over the years,” Dr. Steven T. Harris, a member of the editorial board that drafted the updated position statement, said in an interview. “It’s distressing to be told that you have osteopenia or osteoporosis. To be able to use the FRAX tool to reduce that to a number—some reasonable estimate of fracture risk—is very helpful.”

Dr. Utian, a member of the 2008-2009 NAMS Board of Trustees who reviewed the position statement, said that FRAX was included because clinicians have come to realize “some of the limitations of DXA and the overuse of DXA, which could lead to inappropriate therapies.” While DXA is a valuable tool, the FRAX gives you an ability to speak to individuals and actually give them an idea of what their risk is. It also gives health care organizations the ability to set parameters at what level of risk they would consider therapy to be indicated.

According to the statement, drug therapy is indicated for postmenopausal women with osteoporotic vertebral or hip fracture; BMD values consistent with osteoporosis (a T score of −2.5 or lower); or a T score from −1.0 to −2.5 and a 10-year FRAX risk of major osteoporotic fracture (hip, shoulder, wrist, and spine) of at least 3% or hip fracture of at least 3%.

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**What is your approach to advising patients about vitamin D and calcium supplementation?**

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