## Calcium, Vitamin D Benefits Called Into Question

BY PATRICE WENDLING Chicago Bureau

alcium and vitamin D supplements do not appear to reduce the risk of fractures among older, community-dwelling women, according to David J. Torgerson, Ph.D., of the University of York (England), and his colleagues.

Although supplementation with calcium and vitamin D are routinely recommended for fracture prevention in the elderly, this is the second study to recently call this practice into question.

Results from a secondary prevention trial, also in the United Kingdom, failed to show any benefit of calcium or vitamin D,

## Multiple Drugs **Complicate Bone Rx Compliance**

WASHINGTON — With elderly patients taking more medications than ever before, convenient bisphosphonate regimen options may help reduce the overall medication burden and improve compliance with the osteoporosis therapy, suggest findings from a recent study of prescription trends.

In an investigation of prescription data for 250,286 postmenopausal women, about 65% of those prescribed daily or weekly bisphosphonates were also prescribed one to three concomitant medications, Deborah T. Gold, Ph.D., reported in a poster presented at an international symposium sponsored by the National Osteoporosis Foundation.

What's more, 12% of the study population received four concomitant medications, 7% received five, and 17% received six or more. On average, the women were taking more than three concomitant medications, a burden shown to increase the risk of noncompliance in elderly patients (Arthritis Rheum. 2004;15[Suppl.]:S513).

Compliance is a significant problem with bisphosphonate therapy, in part because the strict fasting and administration requirements of the osteoporosis drugs can conflict with those of other medications.

Dr. Gold of Duke University, Durham, North Carolina, and colleagues analyzed information from a longitudinal patient database to determine the degree of concomitant medication use among women prescribed bisphosphonates.

Overall, the mean number of concomitant medications among women who received daily bisphosphonates increased from 3.1 in November 1999 to 4.2 in June 2004.

The number of prescribed concomitant medications increased with patient age, from 2.7 to 3.2 among women aged 50-64 years, compared with 3.2 to 4.0 among women aged 75 years and older.

The most common medications prescribed in conjunction with bisphosphonates were levothyroxine, atorvastatin, atenolol, furosemide, amlodipine, potassium chloride, hydrochlorothiazide, lisinopril, celecoxib, and simvastatin.

—Heidi Splete

either alone or in combination, in preventing fractures (Lancet 2005;365:1621-8).

Dr. Torgerson's study randomly assigned 1,321 women to receive 1,000 mg calcium plus 800 IU cholecalciferol (vitamin D<sub>3</sub>) daily and a leaflet on calcium intake and prevention of falls, and 1,993 women were given the leaflet only.

The women were aged 70 years or older, and had one or more risk factors for hip fracture (BMJ 2005;330:1003).

Over an average follow-up of 25 months,

there were 149 clinical fractures, which was lower than expected. But the difference in fracture rates between the supplemented group and the control group was not significant (58 vs. 91). In the supplemented group, the odds ratio was 1.01 for all fractures and 0.75 for hip fractures.

There was no evidence that vitamin D supplementation reduced the incidence of falls, as previously hypothesized. A recent metaanalysis found a 22% reduction in falls in the elderly with vitamin D supplementation (JAMA 2004;291:1999-2006).

Calcium and vitamin D supplements have been shown to reduce hip fractures among women living in nursing homes. "People living in sheltered accommodation or nursing homes may be at more risk of a low calcium and vitamin D intake and at higher risk of fracture," the authors suggest. Limitations of the study were that it lacked a placebo preparation, was underpowered, and had relatively wide confidence intervals, the authors noted.

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