Diabetes Elevates Hip Fracture Risk in the Elderly

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TORONTO — The risk for hip fractures appears to be elevated in elderly men and women with diabetes, Dr. Lorraine L. Lipscome reported in a poster at the joint annual meeting of the Canadian Diabetes Association and the Canadian Society of Endocrinology and Metabolism.

In a retrospective cohort study using population-based Ontario health care databases from 1994 to 2003, researchers compared the risk of hip fractures between individuals older than 65 years of age with and without diabetes. The study population comprised 207,252 diabetics and 414,504 nondiabetics, with a mean age of 71.7 years for the entire group, said Dr. Lipscome, of the University of Toronto.

After a mean of 6.1 years, the risk for hip fractures was significantly higher in those with diabetes, at 7.21 per 1,000 person-years, compared with 6.15 per 1,000 person-years among those without diabetes.

Those with diabetes had more comorbidity, were less likely to have had a bone mineral density test, and were more likely to be taking drugs that affected fall risk and bone density.

Women had a significantly higher risk for fracture than did men, but diabetes increased the risk in both genders, with hazard ratios of 1.22 for men and 1.19 for women. The increased risk remained significant (1.18 in men and 1.11 in women) after adjustment for age, comorbidity, and other factors, Dr. Lipscome reported.

Insulin use among the patients with diabetes increased the fracture risk, with hazard ratios of 1.34 in women and 1.64 in men compared with those not using insulin.

Until the phenomenon is better understood, bone fracture risk assessment and enhanced prevention strategies are warranted in all patients with diabetes, she said. ■

Vitamin D_3 Levels Flag Early Heart Disease

VERONA, ITALY — Vitamin D_3 deficiency was found to be highly prevalent in adults with type 2 diabetes and was strongly and independently associated with early signs of atherosclerosis in a study conducted in Italy.

The results add to a growing body of evidence suggesting that serum concentrations of 25-hydroxyvitamin D_3 may be inversely associated with cardiovascular disease, as well as with some cancers and metabolic syndrome.

Further follow-up and interventional studies are needed to determine whether hypovitaminosis D_3 predicts the development of atherosclerosis in people with type 2 diabetes, and whether vitamin D_3 supplementation would be protective against atherosclerosis, Dr. Giovanni Targher and colleagues reported in a poster presentation at a joint meeting of the Italian Association of Clinical Endocrinologists and the American Association of Clinical Endocrinologists.

Using a chemiluminescence immunoassay, the investigators compared winter serum levels of 25-hydroxyvitamin D ($25[OH]D_3$) in 390 consecutive patients with type 2 diabetes and 390 nondiabetic age- and gender-matched controls. Hypovitaminosis D_3 was defined as a $25(OH)D_3$ level of 37.5 nmol/L or lower. Common carotid intimal medial thickening was measured using ultrasonography only in patients with diabetes by a single operator who was blinded to patient details.

Significantly more patients with diabetes had hypovitaminosis D_3, compared with controls (33.3% vs. 16.4%, respectively), reported the authors, who are with the division of internal medicine, Sacro Cuore Hospital of Negrar (Italy). In addition, the 130 patients with diabetes and hypovitaminosis D_3 had a significant increase in carotid intimal medial thickening, compared with the 260 vitamin D–sufficient diabetics (1.10 mm vs. 0.87 mm, respectively).

Compared with their vitamin D–sufficient counterparts, the diabetic patients with hypovitaminosis D_3 were also slightly older (59 years vs. 57 years) and had significantly higher hemoglobin A_{1c} (7.5% vs. 7.2%), fibrinogen (4.7 g/L vs. 4.3 g/L), and high-sensitivity C-reactive protein (5.0 mg/L vs. 4.3 mg/L) concentrations.

—Patrice Wendling