Depression Twice as Common in Diabetic Patients

BY BRUCE JANCIN
Denver Bureau

KEYSTONE, COLO. — Depression is twice as common in diabetic adults as in the general population, William H. Polonsky, Ph.D., said at a conference on the management of diabetes in youth.

Moreover, coexistent depression and diabetes is associated with significantly greater all-cause mortality risk than either condition alone, hence the need to regularly screen adult diabetic patients for depression and to promote vigilance among patients and their families regarding its signs and symptoms, added Dr. Polonsky of the department of psychiatry at the University of California, San Diego, and president of the Behavioral Diabetes Institute, also in San Diego.

Screening diabetic patients regularly for depression is a simple matter, even in a busy office practice.

DR. POLONSKY

Multiple large epidemiologic studies indicate that at any given time, 17%-20% of adult diabetic patients meet diagnostic criteria for moderate to major depression, a rate up to twofold greater than that in adults overall.

South Carolina investigators recently studied the impact of depression and diabetes on all-cause and coronary heart disease mortality in 10,025 participants in the population-based National Health and Nutrition Examination Survey–I Epidemiologic Follow-Up Study.

During 8 years of follow-up there were 1,925 deaths, including 522 due to coronary heart disease. Compared with subjects who were nondiabetic and nondepressed, adjusted all-cause mortality was increased by 20% in those who had depression but not diabetes, by 88% in subjects with diabetes but not depression, and by 150% in participants with both diabetes and depression.

Coronary heart disease mortality was increased by 29% in individuals with baseline depression, by 126% in those with diabetes but not depression, and by 142% in subjects with both conditions (Diabetes Care 2005;28:1339-45).

Several studies also have shown threefold greater rates of new-onset coronary artery disease and retinopathy over a 10-year follow-up period in depressed diabetic patients compared with nondepressed diabetic patients, Dr. Polonsky said at the conference, sponsored by the University of Colorado and the Children's Diabetes Foundation at Denver.

Other studies have demonstrated that depression makes it tougher to initiate and maintain constructive behavioral change. In persons with diabetes, depression is associated with worse glycemic control as reflected in hemoglobin A_{1c} levels 2.0%-3.3% higher than in nondepressed patients, along with an increased hospitalization rate, more lost work days, and greater functional disability. Screening diabetic patients regularly for depression is a simple matter even in a busy office practice.

Many screening questionnaires are available that patients can fill out in the waiting room. Or the physician can simply ask two straightforward questions:

► During the past month, have you felt down, depressed, or hopeless?

► Have you had no interest or pleasure in doing things?

A yes response to either screening question warrants further inquiry. By far the most widely used tool for this purpose in adults is the Patient Health Questionnaire–9. A Google search for "PHQ-9" will provide the scale itself for free, as well as the history of the test instrument, how to score the PHQ-9 properly, and other useful information.

Antidepressant therapy in diabetics is as effective as in nondiabetics. But if baseline glycemic control is good, antidepressant therapy will have little impact on diabetes-specific outcomes, Dr. Polonsky said.

That was shown in a preplanned subgroup analysis involving 417 depressed elderly patients with type 2 diabetes in the Improving Mood–Promoting Access to Collaborative Treatment (IMPACT) trial. This analysis compared usual antidepressant therapy in the primary care setting with enhanced care given in collaboration with a depression care manager who provided patient education, problem-solving treatment, and intensification of antidepressant medication as needed.

After 1 year, patients in the collaborative care arm were significantly less depressed and had better overall function than did those assigned to usual care; however, HbA_{1c} values in the groups didn't differ (Ann. Intern. Med. 2004;140:1015-24).

Dr. Polonsky, who works chiefly with adults, said the data regarding depression in diabetic adolescents are more limited and equivocal. "It's not clear that their depression rates are as high as in adults," he said. ■

Other Factors in 'Diabetes Burnout'

Depression is just one contributor—albeit a major one—to the broader problem of diabetes-related emotional distress, also known as diabetes burnout, according to Dr. Polonsky.

Other major factors in diabetes burnout are harmful health beliefs, including a sense of powerlessness about the disease, crippling fear about the long-term complications, anger, frustration, and discouragement. Longitudinal studies suggest diabetes-related emotional distress results in poor glycemic control.

Diabetes burnout is common. In a recent study Dr. Polonsky conducted with roughly 300 adults with type 1 or 2 diabetes, 36% of those with type 1 and 21% of those with type 2 diabetes indicated that hopelessness about diabetic complications was a serious problem for them. Additionally, 19% of those with type 1 and 14% with type 2 disease indicated they felt unmotivated about diabetes self-care. And one-third of those with type 1 disease felt that diabetes controlled their lives; so did 14% with type 2 disease.

The solution to diabetes burnout lies broadly in establishing a collaborative physician-patient relationship, identifying and treating depression, tackling counterproductive family dynamics, and addressing harmful health beliefs through patient participation in a structured diabetes education course, he said.

For tips on helping patients work through diabetes burnout, visit the Behavioral Diabetes Institute Web site at www.behavioraldiabetes.org.

Low Fracture Risk in Early Diabetes Dissipates at 5 Years

BY KERRI WACHTER
Senior Writer

PHILADELPHIA — Newly diagnosed diabetes seems to confer a protective effect against fracture that disappears with increased disease duration, ultimately leading to an increased fracture risk in patients with long-term disease, according to data presented at the annual meeting of the American Society for Bone and Mineral Research.

Patients with newly diagnosed diabetes had an 11% lower risk of osteoporotic fracture and an 18% lower risk of hip fracture, compared with controls, in a retrospective study of 82,094 diabetic patients and 236,682 control subjects. Individuals who have had diabetes for less than 5 years had the same risk as controls for an osteoporotic fracture. People with diabetes of longer duration had a significantly greater risk of osteoporotic fractures in general (9% greater) and hip fractures in particular (36% greater).

The data provide "compelling evidence that long-term diabetes is associated with increased fracture risk and that newly diagnosed diabetes shows some protective effect," said Dr. William D. Leslie, professor of endocrinology and metabolism at the University of Manitoba, Winnipeg.

A number of population-based studies have shown that bone density is increased in patients with type 2 diabetes. "Paradoxically, fracture risk [in diabetic patients] is much greater than can be explained on the basis of bone density," said Dr. Leslie. Diabetic complications leading to falls and possibly altered bone quality are thought to mediate these effects, but the exact relationship between diabetes and fracture risk has not been determined.

For this study, the researchers used fracture data from the Population Health Information System for the Province of Manitoba from 1984 to 2004. Each diabetic adult in the database who was at least 20 years old (as of Jan. 1, 1994) was matched with three nondiabetic control subjects based on gender, birth year, area of residence, and aboriginal or nonaboriginal ethnicity.

Diabetic patients were defined as those with at least one hospitalization or two physician claims for diabetes or a diagnosis of diabetes within a 3-year period. Diabetic patients were further classified by the duration of their disease. Long-term diabetics had the disease for more than 5 years (before 1994). Short-term diabetics had the disease for less than 5 years (prior to 1994). Newly diagnosed diabetics were those who were diagnosed between 1994 and 2004. To be considered nondiabetic, controls had to be continuously nondiabetic between 1984 and 2004. Fractures were determined from ICD-9 codes. Combined osteoporotic fractures included vertebral, wrist, or hip breaks. Hip fractures were also analyzed as a predefined subgroup.

A total of 16,457 osteoporotic fractures were identified among controls and 5,591 among diabetic patients. A total of 5,224 hip fractures were identified among controls and 1,901 among diabetic patients. Overall, there was no statistical difference between diabetics and controls in terms of osteoporotic or hip fracture rates. Both types of fracture risk increased exponentially with age. In addition, longer duration of diabetes was associated with a greater fracture risk for both types of fractures.

The researchers also tried to account for comorbidity by using the number of ambulatory diagnostic groups (ADGs), developed at Johns Hopkins University. In this tool, ICD codes are grouped into 32 different ADGs, based on clinical and expected utilization criteria. Increasing number of ADGs corresponds with increasing comorbidity. The researchers used a regression model including age and comorbidity (represented by ADG number).

For diabetic patients within each age group (younger than 50, 50-59, 60-69, 70-79, and 80 years and older), fracture risk increased with increasing duration of diabetes. Interestingly, the highest fracture rates for each diabetes subgroup were among the youngest age group. In fact, there was a fourfold increase in hip fracture risk for long-term diabetics younger than 50 years, compared with nondiabetic controls. The strongest protective effect of being newly diagnosed was seen among the oldest patients.

The researchers hypothesize that the opposing effects of overweight or obesity provide short-term protection from fractures, but with time, this effect is overcome by diabetes-associated complications. ■

Pages 22a—22b◊