Depression Ups Mortality Risk in Type 2 Diabetes

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SAN DIEGO – Depression is a significant independent predictor of increased mortality and may increase the risk of subsequent macrovascular events in adults with type 2 diabetes, according to a data analysis.

The findings underscore the importance of detecting and effectively managing depression in people with type 2 diabetes, said Dr. Patrick J. O'Connor, a senior clinical investigator at HealthPartners Research Foundation, Minneapolis.

The findings were based on an analysis of 2,053 participants in the ACCORD (Action to Control Cardiovascular Risk in Diabetes) study's HRQL (Health-Related Quality of Life) investigation, all of whom completed the 9-item depression measure from the Patient Health Questionnaire (PHQ-9) at baseline and at 12, 36, and 48 months.

"The PHQ-9 exam is not a face-to-face mental health exam with a psychiatrist; it is nine questions on a piece of paper, so it's good but it's not perfect," Dr. O'Connor said at the meeting.

A score of 10 or more on the PHQ-9 has a sensitivity of 77% and a specificity of 94% for the diagnosis of major depression.

VITALS

Major Finding: Among adults with type 2 diabetes, total mortality was significantly increased both in those with a PHQ-9 score of 10 or more (HR, 1.84) and major depression (HR, 2.24), but not in those with minor depression (HR, 1.14).

Data Source: An analysis of 2,053 participants in the ACCORD Health-Related Quality of Life investigation who completed the nine-item depression measure from the PHQ-9 at baseline and at 12, 36, and 48 months.

Disclosures: Dr. O'Connor had no relevant conflicts of interest.

The researchers measured depression in three different ways: having a PHQ-9 score of 10 or greater (indicating moderate to major depression); scoring 2-3 points on five of the items (considered major depression), and scoring 2 or more points on three or four of the items (considered minor depression).

Cox proportional hazard regression modeling was used to estimate hazard ratios for the impact of depression status on ACCORD's clinical end points: the primary composite outcome (cardiovascular death, or nonfatal myocardial infarction or stroke), the macrovascular composite outcome (CV death, nonfatal MI or stroke, or heart failure), and the microvascular composite outcome (progression of retinopathy, nephropathy, and neuropathy).

The mean age of study participants was 62 years, and 39% were women. Of the 2,053 patients, 712 (35%) reported a history of depression at baseline. Compared with those who reported no history of depression, those who did were more likely to be women (46% vs. 36%, respectively), to be smokers (17% vs. 11%), to have a higher mean hemoglobin A_{1c} level (8.4% vs. 8.2%), and to require insulin (41% vs. 33%).

About a third of the study participants scored 10 or more on the PHQ-9, which indicated moderate to major depression; 15% were considered to have major depression and 18% minor depression.

After adjustment for numerous factors (including age, sex, race, cardiovascular status, HbA_{1c} levels, lipid levels, blood pressure, body mass index, and smoking status), total mortality was significantly increased both in those with a PHQ-9 score of 10 or more (hazard ratio, 1.84), and major depression (HR, 2.24), but not in those with minor depression (HR, 1.14).

"This shows that depression status is an independent predictor of mortality, even after you adjust for cardiovascular risk factors," Dr. O'Connor commented.

The relationship of major depression to ACCORD's macrovascular outcome reached borderline statistical significance (HR, 1.42), but major depression was not significantly related to ACCORD's primary composite outcome (HR, 1.53) or to ACCORD's microvascular composite outcome (HR, 0.93). ■

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