Depression has long been recognized as an important aspect of having diabetes. Studies have found that the rate of depression among people with diabetes is two or more times that of people without chronic disease (1), the prevalence of depression in diabetes can be $\geq 40\%$ (2), and depression in diabetes persists and/or recurs over time (3,4). Depression generally has been regarded as a consequence of diabetes due to the burden of the disease, including its unrelenting demands and increased rate of debilitating and potentially fatal complications.

Recently, increased attention has focused on depression as an etiological factor in its own right (5). A small number of studies have found that depression predicts the later occurrence of type 2 diabetes (6,7). These findings are consistent with research outside the field of diabetes, which has shown that depression predicts subsequent morbidity and mortality (8). The study by Black, Markides, and Ray (9) in this issue of Diabetes Care demonstrates a similar pattern among individuals with diabetes; depression is shown to be a risk factor for microvascular and macrovascular disease, disability, and mortality among people with diabetes. While this finding is not unexpected, it is worthwhile to confirm it rather than having to infer it from other studies in nondiabetic populations.

This study goes beyond demonstrating what some would regard as obvious. It provides a precise quantification of the degree of risk associated with depression in conjunction with diabetes. We see that according to the worst-case estimate, the relative risk of macrovascular complications among those with diabetes and depression is $>2.5$ times that of those with neither condition. The risk for microvascular complications is $>11$ times higher, almost 7 times higher for disability, and almost 5 times higher for mortality. These are truly staggering numbers.

What is even more compelling about the findings of this study is the authors’ analysis of the nature of the combined effect of diabetes and depression. Their analysis indicates that the effects of the two conditions are synergistic rather than additive. That is, diabetes and depression have a much greater combined effect than the simple sum of their separate effects. From the perspective of individuals with diabetes and their care providers, this means that depression is even more of a risk factor than we would have thought based on earlier studies in nondiabetic populations.

The clinical implications of these findings are straightforward. It is vitally important that depression among people with diabetes be identified and treated effectively. The risk associated with untreated or ineffectively treated depression is on the order of magnitude of the risk of untreated or ineffectively treated blood pressure, which is substantially greater than that for poor glycemic control (10).

Unfortunately, depression is generally underrecognized, particularly among individuals with diabetes. It is estimated that only a third of depressed people with diabetes are diagnosed as depressed (11). However, there is reason for optimism. Once recognized, depression in diabetes can be effectively treated. Cognitive behavioral therapy and psychotropic medication do work for individuals with diabetes who are depressed (12–14). Furthermore, diabetes education that incorporates coping skills training can help many depressed people with diabetes (3,15).

It is equally clear that failure to treat depression results in poor outcomes. Diabetes education itself and improvement in glycemic control do not resolve depression (13), leaving depressed individuals with diabetes at increased risk. Depression must be addressed specifically, including helping the person with diabetes learn to cope more effectively with the burdens of diabetes and other life stressors that might lead to depression.

The study by Black, Markides, and Ray also teaches us an important lesson about how to measure depression and what to call it. Many researchers and clinicians believe that the terms depressed and depression should be reserved only for those who have received a medical diagnosis, e.g., major depressive disorder or dysthymia. These critics regard the use of symptom scores as an invalid way of detecting or defining depression, despite the fact that the risk of diabetes-attributable depression is similar using either symptom cutoffs or diagnoses (1).

This study demonstrates that symptom scores can function effectively as a way of identifying people whose depressive state increases their risk for adverse outcomes. Depression assessed using the conventional cutoff for a common symptom scale (16) represented roughly the same risk for adverse outcomes as a diagnosis of depression. What is even more impressive is the fact that even after excluding those with symptoms above the cutoff, the presence of any depressive symptoms, no matter how low the level, was associated with a significantly increased risk of adverse outcomes compared with those who report no symptoms.

We must be cautious in interpreting the latter finding—those with scores near the cutoff were combined with those having the lowest nonzero symptom level. There may be a threshold below which depressive symptoms do not represent an increased risk, but this study demonstrates that if such a threshold exists, it is a good deal lower than what we have assumed in our studies.

The finding that symptom scores predict adverse outcomes also has clinical implications. It validates the use of easily administered self-report measures of depression symptoms as a valuable clinical tool for identifying those at increased risk for adverse events. These instruments are readily available (several pharmaceutical companies provide them free of charge), take only a few minutes for a patient to complete, and can easily be scored in even less time. They yield a single number, representing the level of depressive symptoms, and provide a guideline for what constitutes an elevated score (although the present study suggests that this is a conservative estimate of risk).

We should recognize that these findings apply specifically to a particular subpopulation of individuals with diabetes, Mexican Americans aged $\geq 65$ years. This population is at higher risk for adverse outcomes and may generate higher risk...
estimates than a younger population containing lower-risk ethnic groups. However, this population may function much like the canary in the mineshaft, alerting us to dangers that might be missed in studying small samples from less vulnerable populations. This study shows that we need to find out more about the level of risk associated with depression in other population groups. And we need to push for better recognition and treatment of this potential killer, no matter how it is defined.

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