

Depressed Diabetic Patients Often Have More Symptoms

The findings add to growing evidence describing a strong relationship between physical symptoms and psychological distress among patients with chronic conditions.

REVIEWED BY EVETTE J. LUDMAN, PHD

Diabetic patients who suffer from depression have significantly more diabetes symptoms than those without depression. The depression-diabetes symptom association is stronger than the association of diabetes symptoms with measures of glycemic control and diabetes complications.

Evette J. Ludman, PhD, from the Center for Health Studies at the Group Health Cooperative in Seattle and colleagues reporting in *General Hospital Psychiatry* said

that patients with major depression were two to five times more likely to report each of the 10 symptoms of diabetes assessed, after controlling for disease severity measures.

The investigators mailed surveys to all patients with diabetes from nine primary care clinics of the nonprofit health maintenance organization Group Health Cooperative in Western Washington State. The Patient Health Questionnaire was used to diagnose major depression and the Self-Completion Patient Outcome instrument meas-

TABLE 1. RELATIONSHIP OF MAJOR DEPRESSION TO DIABETES SYMPTOMS ADJUSTED FOR COMPLICATIONS AND HBA1C LEVEL

Diabetes symptom	Major depression group with symptom (%), n=487*	No major depression group with symptoms (%), n=3,681†	Odds of symptom for those with major depression‡,	95% CI
Cold hands and feet	49.4	32.4	1.93	1.57-2.38
Numbness in hands/feet	51.3	32.6	1.98	1.61-2.43
Pain in hands/feet	46.0	25.2	2.23	1.81-2.75
Polyuria	54.5	33.7	2.24	1.82-2.75
Excessive hunger	44.7	20.3	2.66	2.16-3.28
Abnormal thirst	46.2	16.9	3.30	2.67-4.08
Shakiness	39.2	14.0	3.33	2.66-4.17
Blurred vision	38.2	14.2	3.42	2.74-4.27
Feeling faint	10.9	2.7	4.00	2.74-5.86
Daytime sleepiness	84.4	52.3	4.96	3.79-6.48

* n's range from 487 to 482

† n's range from 3,676 to 3,652

‡ Adjusted for age, gender, marital status, education, race, clinic, HbA1c dichotomized at 8, number of complications dichotomized at 2+, diabetes duration, diabetes type, treatment intensity and medical comorbidity

|| P<.001

ured nine diabetes symptoms. These nine symptoms included cold hands and feet, numb hands and feet, polyuria, excessive hunger, abnormal thirst, shakiness, blurred vision, feeling faint and feeling sleepy.

IMPORTANT ITEM ADDED

“We added one item, pain in hands and feet, based on perceived importance of this common symptom,” Dr. Ludman said.

Three distinct components of diabetes severity – diabetes complications, treatment intensity and glycemic control – were measured from automated medical records data from an 18-month period prior to survey completion, Dr. Ludman said. Lab tests were used to identify patients with nephropathy based on the presence of microalbuminuria.

TWO OR MORE COMPLICATIONS

“Approximately one-third of patients had two or more complications,” Dr. Ludman and colleagues wrote. Pharmacy data regarding the use of oral hypoglycemic agents and insulin were used to indicate treatment intensity. HbA1c was used to measure glycemic control and automated data were used to identify the HbA1c test that was closest in time to the return date of the questionnaire. Investigators used HbA1c to divide patients into two groups describing glycemic control (<8% and ≥8%).

Demographics including age, gender, race, years of edu-

cation, employment status, race/ethnicity and marital status were identified by the questionnaire. Clinical status questions were asked such as age at onset of diabetes, weight and height; and medical comorbidities were also measured.

The overall number of diabetes symptoms were related to the number of depressive symptoms patients said they had.

Among the 4,168 patients with diabetes who responded, those 487 with major depression reported significantly more diabetes symptoms (mean =4.40) than patients without depression (mean =2.46) after adjusting for demographic characteristics, objective measures of diabetes severity and medical comorbidity [F(1,4029)=339.31, P<.0001], Dr. Ludman and colleagues found.

SIGNIFICANT RELATIONSHIP

“The overall number of diabetes symptoms was related to the number of depressive symptoms endorsed by participants (P<.0001),” Dr. Ludman said. “Logistic regression analyses found that depression was significantly related to each of the 10 diabetes symptoms (all P<.0001).”

While depressed patients were approximately two to

MENTALLY DISORDERED DIABETIC PATIENTS AT INCREASED RISK FOR COMPLICATIONS

Diabetic patients with mental disorders do not have as good blood sugar control as diabetic patients free from mental illness. They are more likely to suffer from one or more diabetic microvascular complications than diabetics without mental illness, according to a study in *Medical Care*.

“This study provides a solid foundation for further work into understanding whether provider, patient or system factors can be modified to ensure better overall care of diabetic patients with mental disorders,” said Caroline Carney, MD, MSc, associate professor of psychiatry and medicine at the Indiana University School of Medicine and a research scientist at the Regenstrief Institute, Inc. Dr. Carney is the senior author of the study that looked at insurance claims data from over 26,000 diabetic adults living in Iowa who were between the ages of 18 and 64 years. About 25% had a coexisting mental disorder.

“Even when we controlled for utilization of health care services, diabetic [patients] with mental disorders did less well at controlling their diabetes and had more complications than [those] who had no mental health complaints,” Dr. Carney said.

The researchers found that diabetic patients with mental disorders were more likely to be young, female urban residents. They were more likely to make greater use of health care services than diabetic patients without mental illness. The mental disorders that diabetics in the study had included mood, adjustment, anxiety, cognitive, psychotic, substance abuse and sexual disorders.

“These findings underscore the need for physicians to treat the whole patient – not simply the mental disorders or the physical complaints,” said Dr. Carney, who is an internist and a psychiatrist.

Jones LE, Clarke W, Carney CP. Receipt of diabetes services by insured adults with and without claims for mental disorders. *Medical Care*. 2004;42:1167-1175.

five times more likely to report each of the 10 symptoms of diabetes assessed in this study, patients with elevated Hb1Ac levels were 1.7 to 1.34 times more likely to report 4 of the 10 diabetes symptoms. Dr. Ludman and colleagues said that patients with two or more diabetes complications were 1.27 to about 2 times more likely to report nine symptoms.

High levels of symptoms that do not correlate with laboratory findings should prompt clinicians to assess for depression.

NEUROPATHY SYMPTOMS

The researchers said that, as would be expected, having a greater number of diabetic complications increased the odds of reporting diabetes symptoms including numbness and pain in one's hands or feet that are associated with diabetic neuropathy.

"It was more surprising that having depression was associated with similarly large or larger odds ratios for these diabetic symptoms, even after controlling for complications," Dr. Ludman and colleagues wrote. "It should be noted that none of the elevated diabetes symptoms other than daytime sleepiness or hunger could be considered neurovegetative signs of depression."

They wrote that depression can be viewed as an integral part of any chronic disease that is accompanied by significant physical symptoms. Patients with comorbid chronic medical conditions and depression who report higher levels of physical symptoms than other patients with comparable severity of the disease may puzzle treating clinicians.

ASSESS FOR DEPRESSION

"High levels of symptoms that do not correlate with physical or laboratory assessments should prompt the clinician to assess for depression, so that inappropriate testing or treatment recommendations are avoided," Dr. Ludman said.

It will be important for future studies to test whether identifying and treating depression in patients with major diabetes and comorbid depression will result in decreased diabetes symptom burden. ■

Evette J. Ludman, PhD, is from the Center for Health Studies, Group Health Cooperative, Seattle. She can be reached at ludman.e@ghc.org.

Ludman EJ, Katon W, Russo J, et al. Depression and diabetes symptom burden. *General Hospital Psychiatry*. 2004;26:430-436.

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

visit www.diabeticmctoday.com for the current issue and complete archives

DiabeticMCToday.com

DiabeticMCToday.com