Depression and the geriatric patient with diabetes mellitus: awareness and adherence issues

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Osteopathic physicians are treating an increasing number of older patients with diabetes mellitus, many of whom also have other medical issues. To identify possible obstacles to treatment adherence, it is important to consider the possibility of comorbid depression in this patient population.
Comorbid depression may lead to poorer glycemic control, increased functional disability, and increased health care costs. In this article, the authors discuss identification of adherence issues and development of strategies for effective communication to increase compliance in this population.

Osteopathic physicians serve as the primary care providers for an increasing number of Americans, including patients older than 65 years. The Centers for Disease Control and Prevention’s (CDC’s) Ambulatory Medical Care Utilization Estimates for 2007 revealed that from 1998 to 2008, the percentage of the population aged 45 years and older increased from 33% to 35%. At the same time, the percentage of physician visits made by patients aged 45 and over increased from 49% to 57%. Diabetes mellitus is one of the most common reasons for physician visits in this age group.

The CDC estimates that 53% of senior citizens will have diabetes mellitus by 2050. Add to that estimate the fact that as many as 10% of individuals with diabetes mellitus have comorbid major depression, and one can begin to understand the importance of addressing depression and other mood disorders in older patients with diabetes mellitus. Findings from the CDC’s 2006 Behavioral Risk Surveillance System show that individuals aged more than 60 years who have diabetes mellitus are at increased risk for depression, and that adults with diabetes mellitus in general are up to twice as likely to be depressed as those without diabetes mellitus.

Osteopathic physicians must consider all effects of any given disease process in patients to effectively treat not only their bodies, but their minds and spirits as well. The diagnosis of diabetes mellitus can be overwhelming to a patient. Older patients may have been diagnosed as having diabetes mellitus many years ago, increasing the chance that they have complications resulting from chronic disease. These older individuals may also be taking multiple medications, and they may be more likely to have other chronic medical conditions, which can further contribute to an increased incidence of depression and other mood disorders.

We begin the present article by discussing the biological relationship between diabetes mellitus and depression in older patients, as well as the need for physicians to consider screening for mood disorders in elderly individuals with diabetes mellitus to reduce the incidence of functional disability, to improve outcomes, and to reduce health care costs in this population. In the second part of the present review, we outline treatment and obstacles to treatment for this population, and we discuss strategies to communicate more effectively with these patients.

Effects on glycemic control
Depression decreases physical health through a combination of biological and psychological mechanisms. Psychological distress leads to neurohormonal and immunologic changes in the body that, in turn, lead to increased susceptibility to disease. In addition, a depressed mood may interfere with a patient’s physical recovery. Patients who are depressed are less likely to seek treatment and more likely to be noncompliant with treatment regimens than patients who are not depressed. Therefore, patients with both diabetes mellitus and depression are more susceptible to disease as a result of each of these diagnoses, and they are more likely to either not seek
treatment or be noncompliant with treatment regimens for both body and mind.

These and other factors contribute to poorer outcomes in patients with both diabetes mellitus and depression. It is well documented that these patients are less motivated to follow healthy lifestyles, including maintenance of physical activity and healthy eating habits.7-12 As a result, individuals with diabetes mellitus and concomitant depression have poorer glycemic control than individuals with diabetes mellitus and no depression.7,8,13,14 Poor glycemic control leads to an increased number of diabetes-associated complications, as well as higher morbidity and mortality.

**Functional disability**

In the care of older patients who may be dealing with more than one chronic illness, it is important to consider maintenance of function and independence. Identification of mood disorders is especially important for patients with diabetes mellitus, because the odds of functional disability are higher in individuals with diabetes and comorbid major depression than in individuals with either condition alone. Egede’s study revealed an increase in the adjusted odds of functional disability to 6.15 with a dual diagnosis than with either major depression (3.02) or diabetes (2.46) alone.15

Studies have shown that among various demographic factors (eg, female sex, older age, minority race/ethnicity, multiple chronic diseases), older age alone can increase the odds of functional disability in patients.16,17 In other words, older individuals are at higher risk of functional disability as a result of their age alone. Screening for depression in these individuals will help to identify at-risk patients so that appropriate treatment can be initiated early in the course of the depression. Although diabetes mellitus alone can lead to functional disability after years of illness (which may be the case in older patients), depression-caused functional disability starts early in the disease process and spans the course of the illness if left untreated.6,16,18,19

**Health care resources**

In addition to the functional disability that is compounded by the presence of both of these chronic conditions, the presence of diabetes mellitus and depression together may lead to increased use of health care resources. Such increased use, in turn, leads to greater health care costs.20,21 This cost factor alone may influence compliance in this patient population, as discussed later in the present article.

**Identification of patients at risk**

As noted, depression can increase patients’ susceptibility to disease, functional disability, and health care resource use. The result is an overall increased risk of adverse health outcomes for depressed patients with diabetes mellitus.13,22 It is only with careful screening for depression that inroads can be made into tempering this risk.

Some researchers have investigated the use of quick inventories, such as the Beck Depression Inventory, in screening for depression in the primary care setting.23 The overarching theme of the research findings is that physicians must remain aware that patients with such chronic conditions as diabetes mellitus are at higher risk for mood disorders, and physicians must communicate openly with patients about this matter.

**Treatment of elderly patients**

Treatment of the geriatric patient population with diabetes mellitus presents unique challenges and must include the consideration of many factors. The psychological, behavioral and emotional issues associated with a diagnosis of diabetes mellitus warrant a thorough and comprehensive assessment. However, standard assessment and treatment for this medical diagnosis may not be sufficient for the geriatric population, given that these patients typically have coexisting medical conditions, including depression that could lead to use of multiple drugs and drug-to-drug interactions.24

In addition, studies have documented an association between diabetes mellitus and cognitive decline.25 These compounding issues must be thoroughly examined during patient assessment to guide appropriate treatment in this population. Treatment for depression can be successful in later life with either medication or psychotherapy.26-28 Patients requiring treatment for mood disorders need to be identified and appropriately counseled and managed if treatment strategies are to be effective.
A common obstacle to adherence in this population consists of coexisting medical conditions that lead to a complex medical regimen, the need for multiple drugs, and adverse drug interactions. One can imagine the difficulty that a cognitively impaired patient might have with remembering to take numerous medications, whether those medications should be taken with or without food, and at what times of the day they should be taken—in addition to remembering to check their blood sugar levels. Coupled with these problems is the high potential for adverse effects and drug-to-drug interactions. If patients experience adverse effects, they may discontinue their use of the prescribed medications.

Other problems include the overdosing and underdosing of prescribed medications. In some cases, a patient may feel that he or she does not need the “full dose” prescribed by the physician and may take an abbreviated amount of the medication. Inversely, if a patient feels that a medication is helpful, he or she may choose to increase the dosage (incorrectly thinking “the more, the better”), which could lead to a host of new problems and adverse effects.

The cost of prescription medications may be a serious obstacle for adherence in the geriatric population, given that the majority of these patients are on fixed incomes and are retired or unemployed from the work force. There are times when financial issues force some geriatric patients to choose whether to purchase their medications or to pay their rent or heating bills. Physicians should be cognizant of this unfortunate fact, and they should recommend a generic prescription if one is available and appropriate. Physicians can also make elderly patients aware of various assistance programs that may enable them to obtain free or low-cost medications.

There are numerous treatment strategies that can be effective in helping geriatric patients with diabetes mellitus overcome obstacles to adhering to a complex medical regimen.
It is imperative that physicians verbally and clearly communicate information about diabetes mellitus and prescribed treatment regimens. In addition to ongoing verbal communication during visits with patients, physicians should provide pamphlets and other printed materials that patients could use as references after they leave the office. The text in these materials should be printed in large, clear fonts. Patient-friendly language and concise points will help patients understand the information. At the end of appointments, patients should be asked to “teach back” the information that was presented to them, so that physicians can assess how well they have comprehended it.\textsuperscript{34}

Certain cues can be extremely helpful for overcoming obstacles to adherence. For example, patients should be advised to keep their medications near objects that they use every day, such as next to the toothbrush or on the nightstand near the bed. These two locations are often suggested because patients typically access these areas in the morning and evening—times when many medications need to be taken.

Properly organizing their medications is essential for geriatric patients. Prescription medication bottles can be confusing, especially for an elderly patient who uses numerous medications that all look similar. A large plastic pill organizer labeled with days of the week can be purchased at low cost from a drugstore or pharmacy. Such a pill organizer takes the guesswork out of figuring out which pills to take and when and how often to take them. For example, if a patient does not remember if she has taken one of her pills on a given day, she could open the organizer to that day of the week to check if the pill has been consumed.

A final—though very important—aspect regarding adherence in geriatric patients with diabetes mellitus is social support from friends and family. Ideally, patients should have someone with them at appointments so that someone other than the patient and provider is involved in the treatment. Such support can be valuable in assisting the patient with organizing medications into a pill container and in explaining medical regimens at home.

Studies have shown that geriatric patients with diabetes mellitus have greater adherence to medical regimens when social support from a loved one or friend is available.\textsuperscript{36} Such a “support person” can check in with the patient on a regular basis to help manage medications by looking for signs of drug interactions, overdosing or underdosing and level of adherence. This support person can assist the patient with any troubleshooting of the medical regimen and can act as a liaison between patient and physician.

**Effective strategies for communication**

Physicians can use numerous effective communication strategies when interacting with elderly patients who have diabetes mellitus. These strategies are useful for all patient populations, but they are especially helpful for geriatric populations given the special needs of this group.

Robinson et al\textsuperscript{35} outlined effective communication strategies that include the following:

- Allow extra time for older patients.
- Minimize visual and auditory distractions.
- Sit face-to-face with the patient.
- Use and maintain eye contact with the patient.
- Listen without interrupting.
- Speak slowly, clearly and loudly.
- Use short, simple words and sentences (avoid medical jargon).
- Discuss only one topic at a time.
- Simplify and write down instructions for the patient.
- Use graphic elements, such as charts, models and pictures, to illustrate points.
- Frequently summarize discussion points.
- Allow time for the patient to ask questions.

Although all of these strategies can assist in effective communication with the geriatric patient population, it is important to remember that there is not a one-size-fits-all mentality among patients. For example, some patients may need more time than others and may ask many questions, while other patients may benefit more from the use of charts and models to help them understand points of discussion. In any case, the physician must remember to slow down, speak clearly and listen.

Travaline et al\textsuperscript{36} have suggested additional tips on effective patient-physician communication, including the importance of conveying empathy and hopefulness. Building a healthy and strong rapport with patients is essential to a successful and trustworthy relationship.

**Final notes**

Treatment of older patients with diabetes mellitus can be complex, because they often have chronic disease with complications and comorbid conditions. In addition, this population can also present with mood disorders that may reduce compliance, increase costs and contribute to functional disability. Identification of these patients and communication with these patients are important strategies for effective and holistic patient care.
References


