Preventive Care Lacking for Diabetic Women

BY MIRIAM E. TUCKER

ATLANTA — Women with diabetes in the United States frequently are not receiving recommended and needed preventive services.

Women with diabetes who are at the extremes of the life cycle, are poor, and are poorly educated appear to be at the greatest risk for not receiving either diabetes-specific or general preventive care services, according to the findings of a report from the Agency for Healthcare Research and Quality and the Centers for Disease Control and Prevention.

Data on women aged 18 and older with and without diabetes were obtained from three large nationally representative databases: the Medical Expenditure Panel Survey, 2004; the National Health and Nutrition Examination Survey, 1999-2004; and the National Health Interview Survey, 2005. The report is one of the few such documents to examine any women's health issue by age across the lifespan, Michelle D. Owens-Gary, Ph.D., said at the annual meeting of the American Association of Diabetes Educators.

Although the data are a few years old, they still represent the current situation, coauthor Dr. Gloria L.A. Beckles said in an interview.

“The notion that this is any different in 2009 than in 2004 is a myth. Things change very slowly in chronic disease delivery of care, which depends on the organization of systems. It’s not just going to change overnight,” said Dr. Beckles, an epidemiologist, with Dr. Owens-Gary, a behavioral psychologist, at the University of California, Los Angeles.

“Over all, 91.8% of 1,276 women with diabetes surveyed in 2004 reported receiving a hemoglobin A1c measurement in the past year. However, there was a gradient with age, with older women having the greatest likelihood of an A1c test and the youngest having the lowest. The proportions for those aged 18-44 years, 45-64, and 65 and older were 83.3%, 91.3%, and 95.5%, respectively. The youngest adult women “could be a vulnerable population we need to pay more attention to,” Dr. Owens-Gary noted.

Compared with A1c testing, the proportion of diabetic women receiving recommended annual retinal eye exams and foot exams was under 50% for all age groups.

Receipt of all three diabetes-specific preventive care services—hemoglobin A1c, retinal exams, and foot exams—was under 50% for all age groups.

In a previously published study, Dr. Oyer demonstrated reproducibility of the CTF in 12 patients with diabetes on whom he performed the test 10 times on the same toe for each. Scores ranged from 3.4 to 18.8 seconds, with a mean of 10.2.

In a second part of that study, a single reading from the right foot versus the left foot was compared in 30 randomly selected patients with diabetes. The vibration duration sensation averaged was 10.9 seconds on the right foot and 11.7 seconds on the left. The two feet will almost always be nearly the same unless the patient has sciatica, Dr. Oyer noted.

Monofilament testing was done in patients whose mean vibration duration was 8 seconds or less, and was consistently reported as normal among the 26 patients who had vibration durations of 5 seconds or more. Only at vibration perceptions of 4 seconds or less did the monofilament testing begin to demonstrate abnormal results, but even then patients with abnormal CTF scores were missed. Of 32 patients with vibration perception of 4 seconds or less, 50% still had normal monofilament test results, including 5 of 17 (29%) with completely absent vibration sensation, Dr. Oyer and his associates reported (Endocr. Pract. 2007;13:5-10).

In a review of 81 patients with a history of diabetic foot ulcers (also reported in the Endocrine Practice article), among those with a CTF vibration perception duration of 4 seconds or less, 10 of 32 had diabetic foot ulcers, compared with 1 ulcer in 49 patients who had a CTF score of 5 seconds or more. Thus, there was a 15-fold increased relative risk for foot ulcers in patients with a CTF score of 4 seconds or less, compared with those having a vibration perception duration of 5 seconds or above, Dr. Oyer said.

In a second study, published as an abstract for the 2008 annual meeting of Diabetes Association’s annual scientific sessions, 68% of 148 patients with CTF scores of 8 seconds or less had normal monofilament test results.

In 112 patients with CTF scores indicating severe neuropathy (4 seconds or less), 68% had a normal monofilament test. And in 49 patients with CTF scores of 0 seconds, 16 (33%) still had a normal monofilament test. A history of a diabetic foot ulcer was present in 21 patients. All had CTF scores of 4 seconds or less, while 5 (24%) had normal monofilament tests. When the CTF score was 5 seconds or more, monofilament testing was normal in 96% of patients. Thus, a CTF score of 4 seconds or less was 100% sensitive for ulcer risk, whereas the 10-g monofilament was 92% sensitive.

The increased sensitivity of the CTF comes at the expense of identifying many at-risk patients who would not end up developing an ulcer if left untreated. Sensitivity is just 20%, compared with 75% for the monofilament. “But that doesn’t bother me. If you want to prevent ulcers, you have to identify everyone at risk, so you can do everything you can to prevent them,” he noted.

But Dr. Andrew J.M. Boulton, chair of the American Diabetes Association’s Foot Care Interest Group, said he believes that it’s too soon to replace the monofilament with the CTF as a first-line screening test for diabetic neuropathy. The CTF results are “of course very interesting, and I think that this is certainly a useful addition to the monofilaments,” he said in an interview.

Dr. Boulton, who divides his time between the Manchester (England) Diabetes Centre and the University of Miami, noted that data from prospective studies also support the monofilaments. In one review of six such studies, the increased risk of ulcer ranged from an odds ratio of 2.2 to 9.99, and the relative risk of amputation was 2.9 with an abnormal monofilament test (J. Fam. Pract. 2000;49[11 Suppl]:S17-29).

“What is needed with this test is a prospective study. …This new tuning fork test may well be useful but before it can replace the monofilament—if it is to at all—more work will be required,” Dr. Boulton said. And Dr. Boulton, who has received honoraria/consulting fees from Pfizer and Eli Lilly & Co.

Dr. Oyer and Dr. Saxon stated that they had no conflicts of interest to disclose.