Self-Monitoring Falls Short in Type 2 Diabetes

BY PATRICE WENDLING
Chicago Bureau

CHICAGO — Self-monitoring of blood glucose did not significantly improve hemoglobin A1c levels in a trial of patients with type 2 diabetes not receiving insulin.

Although patients with type 1 and insulin-treated type 2 diabetes benefit from self-monitoring, this trial does not provide convincing evidence of benefit in non-insulin-treated type 2 diabetes," lead researcher Dr. Andrew J. Farmer said at the annual scientific sessions of the American Diabetes Association. His team conducted the trial, known as DGIEM (Diabetes Glycemic Education and Monitoring).

Health costs and quality of life data have yet to be presented from the three-arm, randomized, parallel group trial of 453 patients managed in U.K. general practices with diet and oral hypoglycemic agents alone.

"In the meantime, the results do not support recommendations for routine self-monitoring of blood glucose in reasonably well-controlled patients with type 2 diabetes," said Dr. Farmer, division of public health, University of Oxford (England).

The trial had an 80% power at a 5% level of significance to detect the primary outcome—a change in hemoglobin A1c of 0.3 percentage points among three groups. Patients were randomized to a control group with no blood glucose monitors and 3 monthly hemoglobin A1c measurements; a less intensive self-monitoring group with the Diabetes Management Program as well as VA medications; and a more intensive self-monitoring group with the program and 150 in the less intensive self-monitoring group at admission. The average duration of diabetes was 3 years, and the mean HbA1c was 7.5% overall. 67.5%-73% of patients in each of the groups had had no prior experience with self-monitoring.

At 12 months, the mean HbA1c value was 0.14 percentage points lower in the less intensive self-monitoring group than in the control group. The differences between groups were not statistically significant.

Among patients older than 65 years, there were no significant differences between groups in blood pressure control. Surprisingly, there was a significant difference between groups in change from baseline of total cholesterol, with a decrease of 0.14 mmol/L in the control group, 5.2 mmol/L in the less intensive group, and 5.4 mmol/L in the more intensive group.

Hypoglycemia was reported by patients in all three arms of the trial, with the number of reports significantly higher in the self-monitoring groups than in the control group. This finding may be attributable to increased awareness of low blood glucose more than a true biochemical difference arising from the use of the monitor," Dr. Farmer said.

Over the 12 months of the trial, between one-third and one-half of patients stopped using their monitors. In all, 57 patients (13%) were lost to follow-up.

Dr. Farmer speculated that for many patients, the small day-to-day improvement in glucose results may have been obscured by the measurement variation from day to day, and may have contributed to the reason some people gave up. "It's well-recognized that in some people, when the readings don't vary—or seem uninterpretable—[there is] a loss of motivation," he said.

Interpretation of the DIGIEM data will be hotly debated, in part because of the financial implications of self-monitoring on health care agencies and insurers. The study moves the field ahead, but leaves some questions unanswered. Dr. Bernard Zinman, director of diabetes at Mount Sinai Hospital, Toronto, said in an interview. "This study proves definitively that self-monitoring of blood glucose does not seem to have an impact on changing an individual's lifestyle...and therefore [on improving] control," Dr. Zinman said. But he added that the study raises the question of "if you give physicians instructions on how to modify their oral hypoglycemia or give their physicians the opportunity to modify it," self-monitoring of blood glucose may be very valuable in this population.

Fewer Kinds of Drugs Used to Treat Diabetic Peripheral Neuropathy Pain in Older Patients

BY KERRI WACHTER
Senior Writer

WASHINGTON — Older patients with pain resulting from diabetic peripheral neuropathy are more likely to be treated with fewer categories of pain medications in this age group than younger patients, a study shows.

Roughly half (51%) of patients aged 65 years or older with diabetic peripheral neuropathy (DPN) were prescribed only one category of drugs on average to treat their pain each year, compared with 40% of those younger than age 65 years, wrote Stephen Able, Ph.D., a researcher at Eli Lilly & Co., and his colleagues. Lilly makes Cymbalta ( duloxetine) —used in the treatment of pain associated with DPN.

"In the meantime, the results do not support recommendations for routine self-monitoring of blood glucose in reasonably well-controlled patients with type 2 diabetes," Able, who was also scientific director of research at Providence Kidney Disease and Hypertension Initiative, said in an interview.

"We recommended a spot urine sample for albumin-to-creatinine ratio in a spot urine sample, and measurement of serum creatinine to estimate the glomerular filtration rate. "We recommended a spot urine sample rather than 24-hour urine collection so that this [measurement] can actually be done in an in-patient’s or other primary care provider’s office. Plus, it’s cheaper," said Dr. Tuttle, medical and scientific director of research at Providence Medical Research Center, Spokane, Wash.

The guidelines are available online at www.kdqi.org.

Characteristics of VA Diabetic Population

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<th>Characteristics</th>
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<tr>
<td>At least 65 years old</td>
<td>64%</td>
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<td>With diabetic peripheral neuropathy</td>
<td>18%</td>
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<td>DPN patients on pain medication</td>
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Source: Dr. Atei