Intensive Control Offers Little Benefit for Vision

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ROME — Eye and renal complications were no less frequent in older, difficult-to-treat patients with type 2 diabetes who were randomized to intensive rather than standard glucose control in the Veterans Affairs Diabetes Trial.

Furthermore, there was no difference between the two treatment approaches in the development of any new diabetic neuropathy, according to results presented at the annual meeting of the European Association for the Study of Diabetes.

These latest findings from the 7.5-year trial followed on from the primary end point data presented at the American Diabetes Association meeting in May 2008 just 8 days after the trial had ended. The latter showed that there was no difference between intensive and standard lowering of glycated hemoglobin A_{1c} (HbA_{1c}) in terms of overall cardiovascular protection.

The two cochairs of the Veterans Affairs Diabetes Trial (VADT)—Dr. William C. Duckworth, of the Veterans Affairs Medical Center in Phoenix, and Dr. Carlos Abraira of the Miami Veterans Affairs Medical Center—discussed the new secondary outcomes data.

Compared with standard glucose control, the intensive approach was associated with nonsignificant differences in the number of new eye procedures, which included cataract surgery (10.2% vs. 11.6%), photocoagulation (8.8% vs. 7%), and vitrectomy (3% vs. 3.3%).

"There were no differences in proliferative diabetic retinopathy or macular edema," said Dr. Abraira, and "no difference in new onset of retinopathy."

However, he noted that slightly more patients in the intensive therapy arm, compared with the standard control arm, required laser eye surgery overall (8.3/100 patients per year vs. 7.5/100 patients per year). In addition, the percentage of patients who developed retinopathy early—defined as a two-step increase in the Early Treatment Diabetic Retinopathy Study scale—was marginally higher in the less intensively treated patients than in the intensively treated controls (22.1% vs. 17%).

With regards to kidney complications, Dr. Abraira said that the decline in renal function was similar in both groups of patients, and severe renal disease—evidenced by doubling of serum creatinine, serum creatinine greater than 3 mg/dL, or end-stage renal disease—was "unaffected by glucose control."

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DR. ABRAIRA

Having a prior cardiovascular event, being a smoker, or having microalbuminuria or retinopathy at baseline were expected predictors of progression to macroalbuminuria, said Dr. Abraira. While progression from normal or microalbuminuria to overt proteinuria did not differ between standard and intensive glucose control, there was a significant decrease in progression from normal to micro- or macroalbuminuria in the intensively treated patients (31% vs. 38% for standard control, $P = .02$).

Dr. Abraira also showed that the percentage of patients in the standard vs. intensive treatment arms with neuropathy was similar: any neuropathy, 43.8% vs. 43.5%; mononeuropathy, 4% vs. 4.7%; and peripheral neuropathy, 40% vs. 38.4%. However, there was a slightly higher percentage of patients in the intensive glucose control arm that developed autonomic neuropathy (8.2% vs. 5.2%) though this was not significantly different.

Dr. Duckworth pointed out that the 1,791 patients enrolled in the VADT were a difficult-to-treat group, with a mean age of 60 years and a median duration of diabetes of 11.5 years. The mean HbA_{1c} at the start of the trial was 9.4% and fell to a median of 8.4% in the standard glucose control arm and 6.9% in the intensive glucose control arm.

Importantly, patients in the trial achieved good blood pressure control and "almost ideal" levels of LDL cholesterol and other lipids, Dr. Duckworth said. This suggests that in the presence of optimal risk factor management, it does little to add intensive glucose control in terms of the overall benefits that can be achieved. ■

Pages 10a—10b