

# In Teens With Type 1, Early Statins Thin IMT

BY BETSY BATES

LOS ANGELES — Adolescents with type 1 diabetes who are treated with statins early in the course of their disease may have measurable improvement in their carotid intima-media thickness, an important risk factor for stroke and heart disease, preliminary data showed.

A pilot study of 26 children with type 1 diabetes found that those randomized to receive simvastatin (Zocor) for a year demonstrated a regression from baseline of the progression of carotid intima-media thickness (IMT), while those receiving a placebo had continued worsening of their IMT, Dr. Francine R. Kaufman reported at the annual meeting of the Society of Adolescent Medicine.

Two-dimensional ultrasound mea-

surement of the IMT of the carotid artery is an indirect but useful way to assess the presence and progression of atherosclerosis, said Dr. Kaufman.

An earlier, long-term study of carotid IMT in 115 adolescent subjects with diabetes and 87 controls was conducted at Children's Hospital Los Angeles, where Dr. Kaufman heads the center for diabetes, endocrinology, and metabolism, and is director of the comprehensive childhood diabetes center. Investigators found that individuals aged 12-21 years with diabetes had significantly thicker IMT measurements than did controls, and that there was an association between higher IMT and elevated levels of LDL cholesterol, apolipoprotein B, and lysophosphatidic acid (J. Pediatrics 2004;145:452-7).

The current study explored whether

early treatment of type 1 diabetes with statins would affect carotid IMT. Adolescents assigned to receive statins or placebo were similar in age (15-16 years),



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baseline hemoglobin A<sub>1c</sub> values (8.4%-8.5%), and baseline IMT (mean 0.5510-0.5656 mm); 70% were females. Mean LDL cholesterol levels were lower in the placebo group (133 mg/dL), compared

with the statin group (147 mg/dL).

After a year, IMT had increased in the control group by a mean 0.0065 mm, while it regressed among statin takers by 0.0156 mm, reported Dr. Kaufman, professor of pediatrics at the University of Southern California, Los Angeles.

The American Diabetes Association, American Academy of Pediatrics, and American Heart Association agree that children with type 1 diabetes should be screened for dyslipidemia, she said. The question is how to manage dyslipidemia in adolescents with type 1.

"Most people suggest that we should start thinking about treatment when LDL is over 100 [mg/dL], and we should treat when LDL is in the 130 range," she said.

Dr. Kaufman said she has had no relevant conflicts of interest. ■

## Diabetes Significantly Raises Stroke Tx Costs

BY PATRICE WENDLING

CHICAGO — Having diabetes significantly increases the cost of treating stroke, particularly for African Americans, new research suggests.

An analysis of 18,847 stroke patients discharged from Tennessee hospitals in 2006 showed that 31% had diabetes. The stroke rate was 7% among diabetic patients versus 4% for nondiabetic patients. The difference was statistically significant.

Among African American women, the stroke rate was significantly higher in those with diabetes than in those without (8% vs. 5%). This trend was also found among the subgroups of African American men and white females and males, Baqar Husaini, Ph.D., and his associates reported in a poster at a meeting sponsored by the International Society on Hypertension in Blacks.

The average total treatment cost was \$62,598 for diabetic stroke patients versus \$45,344 for nondiabetic stroke patients, a significant difference. This could be due to diabetes complications that required longer hospitalization, said Dr. Husaini, director of the Center for Health Research, Tennessee State University, Nashville. The average hospital stay was 16 days for diabetes patients versus 11 days for nondiabetic patients, a significant difference.

Overall, patients with diabetes were significantly more likely than were those without diabetes to have hypertension (87% vs. 75%), a previous MI (10% vs. 7%), and heart failure (26% vs. 15%), but transient ischemic attacks (TIAs) were significantly less common among diabetic patients (6% vs. 8%).

Both stroke cost and total cost

were significantly higher for African Americans than for whites within each diabetes subgroup, he reported. Among patients with diabetes, the stroke cost was \$37,964 for African Americans, compared with \$21,469 for whites. African American men had the highest stroke-related costs at \$39,685, compared with \$36,835 for African American women, \$25,464 for white women, and \$26,729 for white men.

"A higher rate of comorbidities



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among diabetic African Americans may contribute to longer hospitalization and additional clinical services, which constitute higher treatment costs," the researchers reported.

Black men and women had higher rates of hypertension, TIAs, and diabetes than did white, but whites of both sexes had higher rates of previous MI. Women of both races were more likely than were men to have heart failure. The average age of the cohort was 70 years; 55% were female. Because the clinical data did not indicate the severity of patients' comorbid conditions, it is difficult to determine which factors contribute to racial differences in stroke treatment costs, the authors wrote.

The authors disclosed no conflicts of interest. The study was sponsored by the Centers for Disease Control and Prevention and the National Institute of Mental Health. ■

## Guideline-Recommended Care Reduces Diabetic Vision Problems

BY MARK S. LESNEY

Patients diagnosed with diabetes who received guideline-recommended levels of care had substantially reduced levels of low vision or blindness over a 3-year period compared with similar individuals who did not receive such care, according to a large, retrospective, longitudinal cohort analysis.

This was true even though the incidence of background diabetic retinopathy (DR) was greater in the patients receiving recommended care. The increased incidence likely was the result of better diagnosis of the patients who had recommended care; they received more eye examinations than did their non-recommended counterparts, investigators reported in *Ophthalmology*.

"Better diabetes management, including stricter adherence by patients and doctors to best practice guidelines, could have an enormous protective impact on cases of vision loss caused by DR. More stringent testing would raise Medicare costs short term for both beneficiaries and the Medicare program, but may pay dividends long term both in medical costs incurred owing to the progression of DR, as well as improved quality of life," wrote Frank A. Sloan, Ph.D., and his colleagues at Duke University, Durham, N.C.

The investigators obtained data from Medicare claims and the Medicare Current Beneficiary Survey (MCBS), a random sample of Medicare beneficiaries aged 65 or older. During the study period (1991-2004), approximately 12,500 beneficiaries were surveyed for the MCBS; 5,989 met the study criteria of having a diagnosis of diabetes and no evidence of background DR, proliferative DR, any complication of proliferative DR, or blindness/low vision, the researchers stated.

Receipt of recommended levels of care was determined by evidence of annual use of five categories of service: physician exam, ophthalmologist or optometrist exam, hemoglobin A<sub>1c</sub> test, lipid test, and urinalysis.

Analysis revealed that people who were younger and had a history of cataracts, insulin dependence, lipidemia, and a body mass index greater than 30 were more likely to receive recommended levels of care. An increase in household income of \$10,000 also correlated with a greater likelihood of receiving recommended care. The authors postulated that patients with another health problem were more likely to be seen by physicians, and that younger persons were more likely to seek treatment.

Propensity analysis was used to match individuals in the population of patients not receiving recommended treatment with those individuals who did; this led to 849 pairs in the 2-month analysis and 119 pairs in the 3-year analysis. Differences in DR and vision were then compared (*Ophthalmol.* 2009;116:1515-21).

At 2, 3, and 6 months and at 1 and 2 years (but not at 3 years), patients in the recommended care group were significantly more likely to develop background DR than were those in the non-recommended care group. There were no differences in the appearance of PDR, PDR complications, or macular edema at any time period. The researchers postulated that patients with more frequent examinations were likelier to be diagnosed with the more subtle background DR than were those seen less often by a physician.

More importantly, persons receiving the recommended level of care had a significantly lower likelihood of developing vision loss or requiring a visual aid at 1, 2, and 3 years (a lowering of 0.016, 0.040, and 0.109, respectively), according to the researchers.

"To increase rates of receipt of recommended levels of care will require a multi-pronged strategy, including programs that stress the importance of these [eye] examinations and provide reminders to physicians to order all the recommended testing," the researchers concluded.

The authors reported having no relevant conflicts of interest. The study was funded in part by the National Institute on Aging. ■