

# Stent Thrombosis Occurs More Often in Blacks

BY HEIDI SPLETE

FROM CIRCULATION

**B**lack patients who received drug-eluting stents were significantly more likely to develop stent thrombosis than were nonblack patients, based on data from more than 7,000 adults.

To determine the incidence of early, late, and very late stent thrombosis (ST) in black patients compared with nonblack

blacks vs. nonblacks was 1.71% vs. 0.59%. At 1, 2, and 3 years, the ST rates in blacks were 2.25%, 2.78%, and 3.67%, respectively. In nonblacks, the ST rates were 0.79%, 1.09%, and 1.25%, respectively.

In a multivariate analysis, black race was the strongest significant independent predictor of ST more than 30 days after PCI, and it was a significant predictor of early ST at 30 days.

“Black race is an independent predictor of ST even when accounting for potential confounders such as socioeconomic status and comorbidities,” the researchers said.

Black patients were more likely to be taking clopidogrel at the time of the ST (88% vs. 78%), although the difference was not significant.

In a univariate analysis, black patients were significantly more likely than were nonblack patients to have a history of hypertension, chronic renal insufficiency, diabetes, and heart failure. Black patients were significantly younger (average age, 63 years vs. 65 years), and the median household income was significantly lower for black patients, the researchers noted.

The results support data from studies suggesting that black patients are more likely to experience ST, but this study is the first to control for variables typically associated with racial disparities in health care, the investigators noted.

“Further mechanisms such as genetic polymorphisms and responsiveness to antiplatelet therapy must be pursued,” they said. ■

**VITALS Major Finding:** Black patients receiving drug-eluting stents were significantly more likely than nonblack patients to develop stent thrombosis.

**Data Source:** Retrospective study of 7,236 adults who underwent PCI between 2003 and 2008.

**Disclosures:** The researchers said they had no financial conflicts to disclose.

patients, Dr. Sara D. Collins and her colleagues at the Washington (D.C.) Hospital Center reviewed data from 7,236 adults who underwent percutaneous coronary intervention at a single hospital from April 2003 through December 2008. The study group included 1,594 black patients and 5,642 nonblack patients (*Circulation* 2010 Aug. 30 [doi:10.1161/CIRCULATIONAHA.109.907998]).

For all patients, the incidence of early ST at 30 days was 0.83%. The cumulative incidence of late ST was 0.24% per year between 30 days and 1 year, which rose to 0.36% per year between 1 and 2 years.

The rates of ST were more than twice as high in blacks vs. nonblacks across all time points. At 30 days, the rate of ST in

# Nebivolol Reduced High Blood Pressure in Hispanic Adults

BY HEIDI SPLETE

FROM THE ANNUAL MEETING OF THE INTERNATIONAL SOCIETY ON HYPERTENSION IN BLACKS

**C**RYSTAL CITY, VA. — Nebivolol monotherapy significantly reduced high blood pressure in obese and nonobese Hispanic adults with stage I and II hypertension, based on data from 277 patients.

Prevalence of hypertension is similar in Hispanic and non-Hispanic adults in the United States, but studies have shown that Hispanics are less likely to be aware of their hypertension, or to have it under control, said Dr. Henry Punzi of Trinity Hypertension and Metabolic Research Institute in Carrollton, Tex.

In a post hoc analysis of data from a phase IV, double-blind placebo-controlled trial, Dr. Punzi and his colleagues reviewed the safety and efficacy of nebivolol as a monotherapy for Hispanics with stage I or stage II hypertension. They also stratified the study participants based on obesity status. Obesity was defined as a body mass index of 30 kg/m<sup>2</sup> or higher.

The mean baseline blood pressure was 157/101 mm Hg in the obese participants and 155/100 mm Hg in the nonobese participants. After 8 weeks, the mean blood pressure in the nebivolol-treated obese and nonobese participants was 142/90 mm Hg and 141/88 mm Hg. The improvement in blood pressure was significant compared with the placebo groups of both obese and nonobese participants.

VITALS

**Major Finding:** A single dose of nebivolol of up to 40 mg/day significantly improved blood pressure in Hispanic adults with stage I or II hypertension.

**Data Source:** A post hoc analysis of 277 patients from a phase IV randomized, double-blind placebo-controlled trial.

**Disclosures:** The study was funded by Forest Laboratories. Dr. Punzi had no financial conflicts to disclose, but one of his study collaborators is employed by the Forest Research Institute.

The starting dose of nebivolol was 5 mg/day, with titration up to 10 mg/day after week 2, 20 mg/day after week 4, and 40 mg/day after week 6.

Nebivolol had no significant effect on fasting plasma glucose levels, regardless of obesity status, which is important given the high rates of diabetes in Hispanics in the United States, compared with non-Hispanics, Dr. Punzi noted in a poster at the meeting. After 8 weeks of treatment, the average fasting plasma glucose levels in the obese participants who took nebivolol and placebo were 5.86 and 6.13. In nonobese participants, the average fasting plasma glucose levels for nebivolol and placebo were 6.10 and 5.61. None of these numbers changed significantly from the baseline measures.

Adverse events were mild, and were reported by 23% of the nebivolol group and 24% of the placebo group, Dr. Punzi reported. ■

# To Diagnose Carotid Stenosis, Start With Duplex Ultrasound

BY ROBERT FINN

FROM RADIOLOGY

**T**he most cost-effective strategy to diagnose carotid artery stenosis for most patients with recent transient ischemic attacks or minor strokes is duplex ultrasound, followed (if the results are positive) by CT angiography. Patients with 70%-99% stenosis should then undergo carotid endarterectomy, according to a study based on a meta-analysis, a review of the literature, and a prospective diagnostic cohort study.

This strategy yields the lowest costs and the largest number of quality-adjusted life-years (QALY) for the average patient, according to analysis by Aletta T.R. Tholen, M.Sc., and colleagues from Erasmus University Medical Center, Rotterdam, the Netherlands (*Radiology* 2010;256:585-97).

For the typical 60-year-old

VITALS

**Major Finding:** In the work-up of a patient with a recent transient ischemic attack or minor ischemic stroke, the most cost-effective strategy is duplex ultrasonography as the initial test, followed by CT angiography if the results are positive. Patients with 70%-99% stenosis should then undergo carotid endarterectomy. For the average 60-year-old man, this strategy had the lowest cost (39,826 euros) and yielded the largest number of quality-adjusted life years (14.38).

**Data Sources:** Meta-analysis of 41 studies, review of the literature, and a prospective diagnostic cohort study involving 351 patients.

**Disclosures:** The study was supported by the National Healthcare Insurance Board of the Netherlands and the Revolving Fund of Erasmus University Medical Center. The investigators stated that they had no financial relationships to disclose.

man, this strategy would cost 39,826 euros (roughly US \$51,730 at current exchange rates) and would yield 14.38 QALY. For the typical 60-year-old woman, it would cost 45,911 euros (US \$59,634) and would yield 16.46 QALY.

The optimum strategy would differ somewhat for patients

with higher risk profiles or a high probability of carotid artery stenosis, or for those who can undergo surgery without delay. In those cases, the duplex ultrasonography can be dispensed with in favor of CT angiography and surgery for 50%-99% stenosis.

For both men and women,

the least cost-effective diagnostic strategy was duplex ultrasonography performed as a solo test. Duplex ultrasonography followed by contrast-enhanced MR angiography was intermediate in cost effectiveness, but was clearly dominated by duplex ultrasound followed by CT angiography.

The investigators used a decision-tree model to assess all feasible strategies in normal practice. They based their estimates of the prior probability of carotid artery stenosis on the results of a cross-sectional prospective diagnostic cohort study of 351 patients with a transient ischemic attack or minor stroke who were admitted to Erasmus University Medical Center between November 2002 and January 2005. Of those patients, 9.8% of the males and 2.2% of the females had 70%-99% stenosis. Another 2.1% of the male patients and 1.4% of

the female patients had 50%-69% stenosis.

In estimating the performances of the diagnostic tests, investigators relied on a meta-analysis that included 2,541 patients in a total of 41 studies published between January 1987 and April 2004. They based their information of the disadvantages of the various tests on their diagnostic cohort study and from a review of the literature.

“Our results suggest that if the patient cannot undergo surgery in a timely fashion, an initial duplex US examination and a 70%-99% stenosis criterion for surgery is indicated. On the other hand, if the patient can undergo surgery in a timely fashion, immediate CT-angiography and the use of a lenient criterion (50%-99% stenosis) as the surgery indication is beneficial,” the researchers concluded. ■