

Deferred Revascularization Best for Most Patients

BY MITCHEL L. ZOLER

FROM THE ANNUAL SCIENTIFIC SESSIONS OF
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ORLANDO – Virtually no patients with type 2 diabetes and documented coronary artery disease and coronary ischemia benefit from immediate coronary revascularization, as long as they receive intensive medical management, based on the outcomes of more than 1,000 patients who were randomized to the deferred revascularization arm of the BARI 2D trial.

The only possible exception to this approach are the rare patients who initially present with severe or unstable angina and proximal left anterior descending (LAD) artery disease, a small group accounting for just 2% of these patients, Dr. Ronald J. Krone said at the meeting. Even in this small subgroup with the worst chance of avoiding revascularization,



eventual coronary bypass surgery or percutaneous coronary intervention (PCI) is not an absolute. Among the 21 patients with this initial presentation at study entry (of the total 1,192 who were randomized to the deferred revascularization arm), 50% continued to avoid revascularization 6 months later, and 29% had still not undergone revascularization 5 years after the study began, said Dr. Krone, an interventional cardiologist and professor of medicine at Washington University, St. Louis.

“What it comes down to is that there is no group you can identify up front” that unequivocally needs immediate revascularization,” Dr. Krone said in an interview. “We could not identify patients who will need revascularization at a high enough rate to warrant initial revascularization, with the possible exception” of the small proximal LAD and severe angina subgroup. “Even in the worst patients, you can intervene later. We used to be afraid that if we didn’t [revascularize these patients] they would drop dead or have a big myocardial infarction, but that didn’t happen. These results give us confidence that you don’t need to intervene on every tight lesion.”

Today, a physician or surgeon can’t say “I have to revascularize, because it’s the best I can do” for these patients. Instead, the onus is to intensively treat these patients medically, especially patients with diabetes, Dr. Krone said.

This strategy includes optimal control of hypertension, lipids, glycemia, and intensive lifestyle intervention

with exercise, diet, and smoking cessation, he explained.

The analysis he presented focused on patients enrolled in the BARI 2D (Bypass Angioplasty Revascularization Investigation in Type 2 Diabetes), which randomized a total of 2,368 patients with diabetes and documented coronary ischemia and stenosis suitable for an elective intervention. The researchers put all these patients on an intensive medical management regimen, and also randomized them to either immediate or deferred revascularization. The study’s primary results showed absolutely identical 5-year outcomes in the two groups, with a mortality rate of 12% in each arm of the study, and a combined rate of death, MI, or stroke of 23% in the immediate revascularization patients and 24% in those with deferred intervention (N. Engl. J. Med. 2009;360:2503-15).

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DR. KRONE

Among the 1,192 patients in the deferred subgroup, 13% required PCI or bypass surgery after 6 months, and 40% needed revascularization after 5 years of follow-up. Within the group who eventually had revascularization, 47% required it for worsening angina, 23% because of an acute coronary syndrome event, 18% for worsening ischemia, 6% for progression of their coronary disease, and the remaining 6% for another reason. The current analysis aimed to determine whether “we can identify patients with such a high likelihood of needing revascularization that it need not be deferred,” Dr. Krone said.

The average age of the patients in the deferred revascularization group was 62 years; 30% were women, 28% were on insulin treatment, 17% had a left ventricular ejection fraction below 50%, and 13% had proximal LAD coronary disease. Their average duration of type 2 diabetes was 11 years.

A multivariate analysis that controlled for age, sex, race, and nationality identified five factors that were linked with a significantly increased rate of revascularization after 6 months: class III or IV stable angina, unstable angina, a systolic blood pressure of 100 mm Hg or less, a blood triglyceride level of 100 mg/dL or greater, and proximal LAD disease. These factors were linked with anywhere from a 3.8-fold increased rate of revascularization (in patients with systolic hypotension, compared with patients with a systolic pressure greater than 100 mm Hg) to a 75% increased rate (in patients with proximal LAD disease, compared with those without LAD disease). However, none of these increased

VITALS

Major Finding: Few patients with diabetes and documented ischemic coronary disease suitable for elective revascularization have features that predict a high risk for eventually requiring a procedure during the subsequent 5 years. The only possible exception is the 2% of patients with both proximal LAD coronary disease and severe or unstable angina at baseline, who had a 71% revascularization rate.

Data Source: A subgroup analysis of the BARI 2D study, which randomized 2,368 patients with type 2 diabetes and documented ischemic coronary disease suitable for elective revascularization to an immediate or deferred procedure. The new analysis focused on 1,192 patients initially randomized to the delayed revascularization arm.

Disclosures: Dr. Krone said that he had no disclosures.

rates appeared to justify performing routine, upfront revascularization.

The 5-year multivariate analysis produced similar results. It identified nine baseline factors that each significantly linked with a significantly increased rate of revascularization during 5-year follow-up: class I or II stable angina, class III or IV stable angina, unstable angina, systolic blood pressure of 101-120 mm Hg, a systolic pressure of 100 mm Hg or less, a blood triglyceride level of 100 mg/dL or greater, proximal LAD disease, having two diseased coronary regions, or having three diseased coronary regions. The increased rates associated with these features ranged from a 90% increased revascularization rate (in patients with class III or IV stable angina, compared with patients without angina), to a 28% increased revascularization rate (in patients with class I or II stable angina at baseline). Again, none of these increased rates appeared to justify uniform, upfront revascularization, Dr. Krone said.

The sole exception to this approach might possibly be the small number of patients who initially presented with both proximal LAD disease and either class III or IV stable angina or unstable angina, because eventually over 5 years 71% of these patients underwent revascularization. But these patients constituted only 2% of the total group studied, Dr. Krone noted. In general, more severe angina or stenosis was uncommon in these patients: Some 41% had no angina and 45% had class I or II angina at baseline, and 87% were free of proximal LAD disease at baseline. ■

Survey Shows a Drop in Visual Impairment Prevalence

BY LUIS MAZARIEGOS

FROM MORBIDITY AND MORTALITY
WEEKLY REPORT

The number of adults with diagnosed diabetes reporting visual impairment has increased, but the age-adjusted percentage has decreased significantly, according to the 14-year National Health Interview Survey conducted by the Centers for Disease Control and Prevention.

Respondents were asked if they had been diagnosed with diabetes, and then they were asked if they had trouble seeing even with eyeglasses or contact lenses. People who said yes to both questions were considered to have diabetes and visual impairment (VI).

Respondents also were asked if they had visited an eye-care provider within the last year. The percentage of people who answered yes to that question remained mostly constant, at around 63% throughout the 14-year period.

Demographic data, including sex, ethnicity, and race, were collected as well (MMWR Morb. Mortal. Wkly. Rep. 2011;60:1549-53).

The number of adults with diabetes and visual impairment grew from 2.7 million in 1997 to 3.9 million in 2010. Age-adjusted prevalence of VI dropped from 23.7% in 1997 to 16.7% in 2010, falling most sharply among whites, Hispanics, those with some college or higher education, those diagnosed with diabetes for at least 3 years, and people aged

45 years or older, according to the findings.

On the other hand, prevalence did not decrease significantly among blacks, people who had been diagnosed with diabetes for less than 3 years, and people aged 18-44 years. Among those with a high school education or less, the prevalence dropped significantly, from 26.4% in 1997 to 18.2% in 2005, but rebounded and increased – although not significantly – to 20.7% in 2010.

This decrease may be attributable in part to better control of VI risk factors (such as blood glucose, blood pressure, and lipid control), improved detection and treatment of eye problems, or other factors. Alternatively, the drop may be explained by the large and sustained in-

crease of new cases of diabetes since the 1990s, resulting in a large number of people who have not had diabetes long enough to develop VI.

This alternative explanation would mean that the encouraging trends may reverse in the coming years. Additionally, the number of people going for their recommended annual dilated-eye examination has languished. Continued monitoring for VI among people with diabetes as well as improving the level of care are recommended.

Response rates for the survey varied, ranging from a high of 80.4% in 1997 to a low of 60.8% in 2010, averaging at 70.5% for the 14-year period.

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