Even With Low LDL Levels, HDL Affects Risk

BY BRUCE JANCIN
Denver Bureau

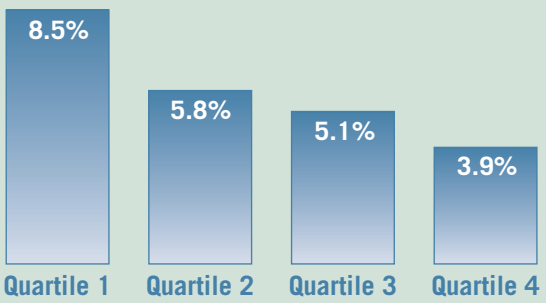
CHICAGO — A low HDL cholesterol level confers increased coronary risk even in patients with a low LDL cholesterol level of less than 60 mg/dL, Dr. Emil M. deGoma reported at the annual scientific sessions of the American Heart Association.

This observation suggests that HDL-boosting therapies may play an important role in primary and secondary cardiovascular prevention across the full range of LDL values, said Dr. deGoma of Stanford (Calif.) University.

He presented a retrospective observational study involving 6,357 consecutive patients with an LDL level below 60 mg/dL seen at the Palo Alto VA Medical Center or Stanford-affiliated community clinics. Their mean age was 65 years. Nearly half of them were diabetic and three-quarters were hypertensive. Overall, 42% had been diagnosed with ischemic heart disease, and 15% had heart failure.

Patients were grouped in quartiles by HDL level and followed for 1 year. The study end point was the combined 1-year incidence of acute MI or hospitalization for ischemic heart disease, which proved to be inversely related to baseline HDL. (See box.) Of particular note was the 1-year event rate of 8.5% in patients in the lowest HDL quartile, he said. After adjustment for patient age and other demographic variables, comorbid conditions, laboratory values, and, most important, statin use, the risk of the combined end point continued to increase in stepwise fashion with decreasing HDL. The adjusted odds ratio of MI or hospitalization for ischemic heart disease in patients in the top quartile for HDL was half that of those in the lowest quartile. ■

Combined 1-Year Incidence of MI or Hospitalization for Ischemic Heart Disease



Note: Data based on 6,357 patients with LDL cholesterol <60 mg/dL.
Source: Dr. deGoma

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Antioxidants of No Benefit for Secondary Prevention in Women

BY DEBRA L. BECK
Contributing Writer

CHICAGO — Antioxidant B vitamins and folic acid failed to slow the progression of cardiovascular disease in women at high risk or with established cardiovascular disease, according to results from the WAFACS trial presented at the annual scientific sessions of the American Heart Association.

"The combination of folic acid, vitamin B_6, and vitamin B_{12} did not reduce risk of total cardiovascular events or any of the individual secondary end points among 5,442 women at high risk for cardiovascular disease over a very long follow-up of 7.3 years," reported Dr. Christine M. Albert of the division of preventive medicine at Brigham and Women's Hospital, Boston.

In WAFACS (Women's Antioxidant and Folic Acid Cardiovascular Study), 5,442 female health professionals participating in another randomized trial of antioxidant vitamins (WACS) were randomly assigned to a combination of folic acid (2.5 mg daily), vitamin B_6 (50 mg daily), and vitamin B_{12} (1 mg daily).

They were considered to be high risk based on either a confirmed history of cardiovascular disease or the presence of at least three cardiovascular disease risk factors, including hypertension, hypercholesterolemia, diabetes, current smoking, a body mass index of higher than 30 kg/m^2, or a parental history of myocardial infarction before age 60 years.

After a mean follow-up of 7.3 years, 796 women (14.6%) experienced a confirmed cardiovascular event. In the intention-to-treat analysis, the cumulative incidence of the primary end point did not differ between those given active folate treatment and those given folate placebo.

"This absence of benefit was observed in all prespecified subgroups, including the high-risk primary prevention population," said Dr. Albert.

The researchers tested whether homocysteine lowering by background folic acid fortification in the food supply, which took effect between 1996 and 1998, might have accounted for the null findings, but found that was not so. Homocysteine levels were about 18% lower in the active treatment arm, compared with the placebo arm, but still there was no benefit.

Discussant Dr. Rita F. Redberg considered the question of whether the results of WAFACS can be generalized to men and to the primary prevention setting. If such studies were to be done in those populations, results would be unlikely to differ significantly from those seen in this trial, she said.

"Study after study has failed to find a benefit from dietary supplements, and I think there's just no getting away from an emphasis on a heart-healthy diet and regular physical activity," said Dr. Redberg, director of women's cardiovascular services at the University of California, San Francisco. ■

Medical Therapy After Coronary Bypass Key to Better Outcomes

BY MITCHEL L. ZOLER
Philadelphia Bureau

CHICAGO — Patients for whom an optimal panel of secondary-prevention drugs was not prescribed following coronary bypass surgery had a significantly higher risk of death or myocardial infarction than did patients who got all of their appropriate medications, according to an observational study with almost 3,000 bypass patients.

To improve the long-term outcomes of coronary bypass, "health-care systems must focus on using the appropriate discharge treatments and other secondary-prevention strategies" rather than relying on improved intraoperative care, Dr. Abhinav Goyal said at the annual scientific sessions of the American Heart Association. "If a health care system is to improve outcomes, it [should not] rely on [the actions of] individual physicians."

Dr. Goyal, a cardiologist at Duke University in Durham, N.C, and associates reviewed data on 2,970 patients who enrolled in the Project of Ex Vivo Vein Graft Engineering via Transfection (PREVENT) IV trial, which was designed to test the efficacy of ex vivo treatment of vein grafts with edifoligide before coronary bypass surgery. The drug had no effect on vein graft survival at 1 year after surgery, the study's primary end point (JAMA 2005;294:2446-54).

The researchers' post hoc analysis had a completely different focus than the primary goal of the PREVENT IV study. It used patient records to estimate which of the participants were ideal candidates for each of four categories of secondary prevention drugs that are often prescribed to patients with coronary artery disease, to determine what percentage of patients actually received these drugs at the time of their hospital discharge and at 1 year after surgery, and then to assess the link between drug use and clinical outcomes after 2 years of follow-up.

The four drug classes were antiplatelet drugs, specifically aspirin and clopidogrel; β-blockers; ACE inhibitors and angiotensin-receptor blockers (ARBs); and lipid-lowering drugs, including statins. The researchers defined the ideal recipients of each of the four categories, based on the absence of any absolute or relative contraindications for the drug class and on certain clinical criteria. For example, patients were considered ideal candidates for β-blocker treatment if they had a history of a myocardial infarction or symptomatic reduced left ventricular ejection fraction. Similar clinical criteria also defined patients as ideal candidates for treatment with an ACE inhibitor or ARB.

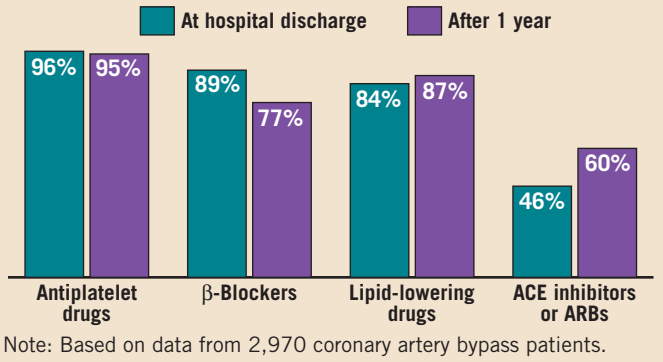
Of all patients evaluated, 98% were identified as ideal candidates for an antiplatelet drug, 29% were identified as ideal candidates for a β-blocker, 41% were ideal recipients of an ACE inhibitor or ARB, and 81% were ideal candidates to get at least one lipid-lowering drug. Because most were ideal candidates for more than one of these drug classes, the analysis also examined the total pattern of drug prescribing. Overall, 65% of patients received all of their appropriate prescriptions at hospital discharge, 19% received prescriptions for more than half but less than all of their appropriate medications, and 16% received prescriptions for no more than half of their appropriate drugs.

In patients who were ideal candidates, the rates of prescribing at hospital discharge and at 1 year after discharge were generally high: about 95% for antiplatelet drugs, about 80% for β-blockers, and more than 80% for lipid-lowering drugs. (See box.) But prescribing rates were "suboptimal" for ACE inhibitors and ARBs, with prescriptions written to about half of the ideal recipients.

Data also suggested a link between prescriptions for these drugs and 2-year outcomes. The 2-year incidence of death or myocardial infarction was 4% in patients who received all of the medications for which they were ideal candidates, 5% in patients who received more than half but less than 100% of their drugs, and 8% in patients who were prescribed half or less of their ideal medications.

In a multivariate analysis that controlled for age, gender, diabetes, renal function, and several other clinical features, bypass surgery patients who received no more than half of their appropriate medications were 69% more likely to die or have a myocardial infarction, compared with patients who received all of their appropriate medications, a statistically significant difference. ■

Prescription Rates of Secondary-Prevention Drugs to Ideal Recipients



Note: Based on data from 2,970 coronary artery bypass patients.
Source: Dr. Goyal

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