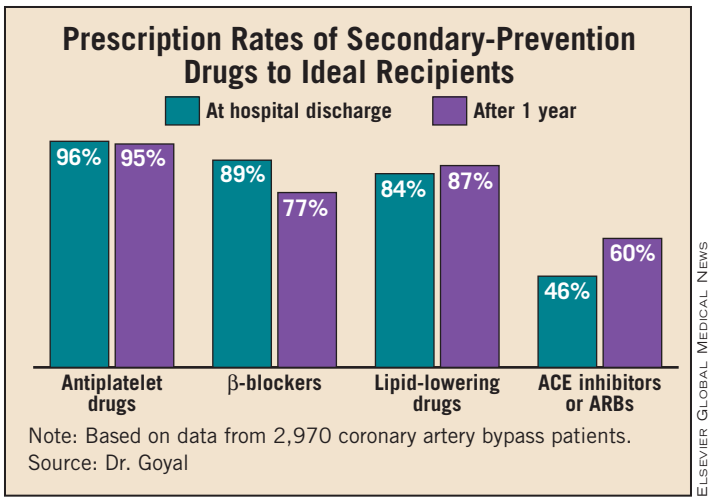

Note: Based on data from 2,970 coronary artery bypass patients.
Source: Dr. Goyal

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Secondary-Prevention Drugs After CABG Linked to Better Outcomes

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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 MI than did patients who got all of their appropriate medications, according to an observational study with almost 3,000 bypass patients reported at the annual scientific sessions of the American Heart Association.

Dr. Abhinav Goyal and his associates reviewed data collected on 2,970 patients who were 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 prior to 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 post hoc analysis by Dr. Goyal, a cardiologist at Duke University in Durham, N.C., and associates 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 studied were antiplatelet drugs, specifically aspirin and clopidogrel; β-blockers; ACE inhibitors and angiotensin-receptor blockers (ARBs); and lipid-lowering drugs, including statins and other lipid-lowering agents.

The researchers defined the ideal recipients of each of these four categories, based on the absence of any 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 an MI or symptomatic reduced left ventricular ejection fraction.

Of all patients evaluated, 98% were identified as ideal candidates for an antiplatelet drug, 29% were identified as ideal candidates to receive 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 patients 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. Among the patients who were ideal candidates, the rates of drug 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 the prescribing rates were "suboptimal" for ACE inhibitors and ARBs, with prescriptions written to about half of the ideal recipients, Dr. Goyal said.

The 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. ■