

Treatment with a sirolimus-eluting stent appeared safe, with stent thrombosis rates of 3.4% throughout all 12 months of follow-up, and 0.3% after the first 30 days following treatment. In the bare-metal stent group, the overall rate of stent thrombosis was 3.6%, which included a 0.6% rate after 30 days. Patients were directed to take aspirin and clopidogrel daily for at least 6 months after stent placement, said Dr. Spaulding.

The study of the paclitaxel-eluting stent (Taxus) was done at two hospitals in the Netherlands. The PASSION (Randomized Comparison of Paclitaxel-Eluting Stent Versus Conventional Stent in ST-

Segment Elevation Myocardial Infarction) study did not have any industry support.

During 2003-2004, researchers enrolled patients with symptoms of AMI who had a culprit lesion in a native coronary artery. The primary end point was the combined rate of cardiac death, recurrent MI, or need for target lesion revascularization during the first year of follow-up.

In the 309 patients who received a paclitaxel-eluting stent, the incidence of the end point was 8.7%, compared with 12.6% in the 310 patients who received a bare-metal stent. Although this was a 32% risk reduction associated with the paclitaxel-eluting stent, the difference was not sta-

tistically significant, reported Dr. Maurits T. Dirksen, a cardiologist at Onze Lieve Vrouwe Gasthuis Hospital, Amsterdam. In this study, patients treated with the drug-eluting stent had both a 26% reduced rate of death or MI and a 32% reduced rate of need for revascularization.

The 1-year rate of stent thrombosis was 1% in both treatment groups. Stent thrombosis after the first 30 days following treatment occurred in two patients who received paclitaxel-eluting stents and in none of the patients who received bare-metal stents. Patients were directed to remain on aspirin and clopidogrel for at least 6 months after stent placement. ■

3-Vessel CAD: More Stenting Than Surgery

ATLANTA — Since the introduction of drug-eluting stents in the U.S. market in 2003, percutaneous coronary intervention has become the predominant mode of revascularization in patients with non-ST-elevation acute coronary syndromes and triple-vessel disease in community practice, according to fresh national registry data.

Meanwhile, the use of coronary artery bypass graft (CABG) surgery in such patients has declined significantly, although the proportion managed medically has remained steady at one-fourth, Dr. Prospero B. Gogo Jr. reported at the annual meeting of the American College of Cardiology. Many surgeons and interventional cardiologists have suspected as much but Dr. Gogo was able to fill in the big picture by drawing on a large data set.

He analyzed the cases of more than 103,000 patients who presented with non-ST-elevation acute coronary syndromes from January 2002 through June 2005 at the 365 hospitals participating in the CRUSADE quality improvement registry. Of the total, 80% of patients underwent coronary angiography during their index hospitalization, and 25,068 proved to have triple-vessel coronary artery disease.

A particularly interesting observation from the CRUSADE data is the marked temporal shift in the means of revascularization in acute coronary syndromes patients with triple-vessel disease. Before the introduction of drug-eluting stents, the distribution was roughly 50/50. Since the introduction, it has been a very different story. Whereas 49% of such patients revascularized in 2002 underwent coronary artery bypass graft surgery, that proportion had fallen to 40% by the first half of 2005.





In the same period, the use of percutaneous coronary intervention (PCI) in such patients climbed from 51% to 60%. Of these patients, 80% received drug-eluting stents, said Dr. Gogo of the University of Vermont, Burlington.

By using a multivariate logistic regression analysis, Dr. Gogo and his coinvestigator, Dr. Harold L. Dauerman, identified a number of independent predictors suggesting that PCI is being used rather than CABG. For example, they found that patients who were cared for by a cardiologist while they were in the hospital were 51% more likely to undergo PCI than were those who were not under a cardiologist's care. They also found that PCI was used preferentially in patients with a history of previous revascularization, whether by surgery or PCI, and in those with transient ST elevation on their ECG.

Randomized comparative trials of contemporary drug-eluting stents and surgery in patients with triple-vessel disease would help ascertain whether this trend reflects a decrease in the use of complete revascularization in the drug-eluting stent era, said Dr. Dauerman, professor of medicine at the university. CRUSADE is funded by multiple pharmaceutical companies.

—Bruce Jancin

Brought to you by **sanofi aventis**

THE ECS IMPACTS THE METABOLISM OF LIPIDS AND GLUCOSE¹⁻³	<ul style="list-style-type: none">• ECS overactivity may be associated with the development of cardiometabolic risk factors including:<ul style="list-style-type: none">— Low HDL cholesterol— High triglycerides— High waist circumference— Elevated fasting glucose— Insulin resistance
THE ECS HELPS REGULATE PHYSIOLOGIC PROCESSES¹⁻⁴	<ul style="list-style-type: none">• The ECS consists of signaling molecules and their receptors, including the cannabinoid receptor CB₁²• Endocannabinoids bind to CB₁ receptors and trigger events that may have a negative impact on lipid levels and insulin sensitivity¹• CB₁ receptors are located in sites such as muscle, the liver, the brain, and adipose tissue^{1,2,4-6}
 RESEARCH CONTINUES TO INVESTIGATE THE ROLE OF CB₁ RECEPTORS IN MUSCLE*	<ul style="list-style-type: none">• Reduced glucose uptake has been observed in isolated skeletal muscle of genetically obese, insulin-resistant animals
 ENDOCANNABINOID TARGET FATTY ACID PRODUCTION IN THE LIVER³	<ul style="list-style-type: none">• May contribute to dyslipidemia and insulin resistance^{3,7}
 PRESENT IN MULTIPLE AREAS OF THE BRAIN²	<ul style="list-style-type: none">• Hypothalamus integrates signals from adipose tissue and other peripheral tissues^{8,9}
 ADIPOSE TISSUE—MORE THAN SIMPLY A FAT STORAGE DEPOT	<ul style="list-style-type: none">• Produces factors active in the metabolism of lipids and glucose¹⁰• Low levels of adiponectin negatively affect glucose and free fatty acids^{1,10}
EXPLORING THE EFFECTS OF THE ECS	<ul style="list-style-type: none">• This newly discovered physiologic system provides new opportunities for understanding cardiometabolic risk

*Data from animal model only.

References

1. Bensaid M, Gary-Bobo M, Esclangon A, et al. The cannabinoid CB₁ receptor antagonist SR141716 increases Acp30 mRNA expression in adipose tissue of obese fa/fa rats and in cultured adipocyte cells. *Mol Pharmacol*. 2003;63:908-914. 2. Harold JA, Williams G. The cannabinoid system: a role in both the homeostatic and hedonic control of eating? *Br J Nutr*. 2003;90:729-734. 3. Osei-Hyiaman D, DePetrillo M, Pacher P, et al. Endocannabinoid activation at hepatic CB₁ receptors stimulates fatty acid synthesis and contributes to diet-induced obesity. *J Clin Invest*. 2005;115:1298-1305. 4. Domenicali M, Ros J, Fernández-Varo G, et al. Increased anandamide induced relaxation in mesenteric arteries of cirrhotic rats: role of cannabinoid and vanilloid receptors. *Gut*. 2005;54:522-527. 5. Rhee M-H, Bayewitch M, Avidor-Reiss T, Levy R, Vogel Z. Cannabinoid receptor activation differentially regulates the various adenylyl cyclase isozymes. *J Neurochem*. 1998;71:1525-1534. 6. Upham BL, Rummel AM, Carbone JM, et al. Cannabinoids inhibit gap junctional intercellular communication and activate ERK in a rat liver epithelial cell line. *Int J Cancer*. 2003;104:12-18. 7. Flier JS, Maratos-Flier E. Obesity. In: Kasper DL, Braunwald E, Fauci AS, et al, eds. *Harrison's Principles of Internal Medicine*. 16th ed. New York, NY: McGraw-Hill; 2005:chap 64. Available at: <http://www.accessmedicine.com/content.aspx?alID=60099&searchStr=obesity>. Accessed December 5, 2005. 8. Badman MK, Flier JS. The gut and energy balance: visceral allies in the obesity wars. *Science*. 2005;307:1909-1914. 9. Devaskar SU. Neurohumoral regulation of body weight gain. *Pediatr Diabetes*. 2001;2:131-144. 10. Kershaw EE, Flier JS. Adipose tissue as an endocrine organ. *J Clin Endocrinol Metab*. 2004;89:2548-2556.