Adiponectin Gene Variant Predicts Cardiovascular Risk

BY BRUCE JANCIN
Denver Bureau

BARCELONA — A variant of the adiponectin gene may have a future as a novel predictor of cardiovascular risk. Dr. Stefan Aczel reported at a joint meeting of the European Society of Cardiology and the World Heart Federation.

The G alleles of the –11377 promoter polymorphism of the adiponectin gene proved strongly predictive of increased risk of cardiovascular events independent of all standard risk factors in a prospective study involving 402 men with coronary artery disease (CAD) followed for 4 years, according to Dr. Aczel of the Academic Teaching Hospital at Feldkirch (Austria).

Serum adiponectin has been inversely associated with cardiovascular risk in some studies, but not in others. The inconsistency probably results from the fact that adiponectin levels can fluctuate widely depending upon the presence of illness, obesity, and other factors. Dr. Aczel and his coworkers decided to study promoter polymorphisms of the adiponectin gene as a potential risk predictor because the genotype—unlike serum adiponectin—remains constant, he explained in an interview.

The adiponectin gene has three different promoter variants identifiable by polymeric chain reaction (PCR): CC, GC, and GG. In the prospective study involving 402 consecutive men with CAD referred for angiography, the prevalence of the –11377 CC variant was 56.5%. The GC variant was present in 37.1%, and the GG variant occurred in 6.5%. Coronary stenosis of at least a 50% was present at baseline in 64% of men with the CC variant, in 73% with the GC, and in 89% with GG.

In all, 24% of subjects experienced one or more vascular events during follow-up. After adjustment for diabetes, lipids, age, smoking status, and other standard cardiovascular risk factors, the presence of a G-containing allele was an independent risk factor for future vascular events. Men with the GC genotype were 1.6-fold more likely to experience an event than were those with the CC genotype. Men who were GG were at an adjusted 2.4-fold increased risk.

Dr. Aczel and coworkers are interested in developing a commercial test for the GC allele. First, however, they want to confirm the association in other populations, including women. They are also studying whether other gene variants associated with adiponectin—at least 13 are known—confer increased risk and might further boost risk prediction.

> photocredit: Courtesy of Aczel.

Ezetimibe/Simvastatin Lowered LDL Better Than Rosuvastatin Alone

BY MIRIAM E. TUCKER
Senior Writer

COPENHAGEN — A combination of ezetimibe and simvastatin provides additional lipid-modifying benefits compared with rosuvastatin monotherapy among patients with type 2 diabetes or with metabolic syndrome without diabetes, Dr. Alberto L. Catapano reported at the annual meeting of the European Association for the Study of Diabetes.

“Overall, ezetimibe/simvastatin, a single-tablet, dual-cholesterol inhibitor (Vytorin, Merck), offers an effective and well-tolerated lipid-modifying treatment for the prevention of macrovascular disease in patients with type 2 diabetes and metabolic syndrome,” said Dr. Catapano, of the department of pharmacological sciences at the University of Milan.

In a post-hoc analysis of data from a multicenter, double-blind, randomized, parallel-group, 6-week study sponsored by Merck & Co., 375 patients with type 2 diabetes, 840 with metabolic syndrome but without diabetes, 1,722 with neither condition, and 22 who could not be placed in a category because of missing data were randomized to one of six treatment groups: ezetimibe/simvastatin (E/S) in doses of 10 mg/20 mg (respectively), 10 mg/40 mg, or 40 mg/80 mg; or rosvastatin (Crestor, AstraZeneca) in doses of 10, 20, or 40 mg. All had hypercholesterolemia, defined as an LDL-cholesterol level of less than 100 mg/dL for the diabetes, 130 mg/dL for the nondiabatics with metabolic syndrome, or 160 mg/dL for the group with neither. A total of 88.2% of the E/S patients versus 81.9% of the rosvastatin patients achieved an LDL-cholesterol level of less than 100 mg/dL, whereas 45.3% vs. 29.5% reached an LDL-cholesterol level of less than 70 mg/dL. All of these differences were significant, he said.

Reductions in total cholesterol, non-HDL cholesterol, apolipoprotein B, and triglycerides were also significantly greater with E/S versus the placebo. However, there were no significant differences between the two treatments with HDL cholesterol, or high-sensitivity C-reactive protein.

Both drugs were well tolerated in all patient groups, with similar rates of drug-related adverse events (8.1% with E/S vs. 7.4% with rosvastatin) and discontinuations because of adverse events (2.2% for both drugs). Proteinuria was higher at baseline in the rosvastatin group and among those with diabetes, he said.