Diabetes Risk Appears Low Among Patients on Statins

BY DENISE NAPOLI

For every 255 patients on statins for 4 years, there is 1 additional case of diabetes—a risk too small to change current recommendations for statins in patients with cardiovascular disease, or with moderate to high risk of developing heart disease.

However, the increased risk "should be taken into account if statin therapy is considered for patients at low cardiovascular risk," Naveed Sattar, Ph.D., and colleagues wrote (Lancet 2010 Feb. 16 [doi:10.1016/S0140-6736(09)61965-6]).

Dr. Sattar of the Glasgow Cardiovascular Research Centre at the University of Glasgow, Scotland, searched Medline, Embase, and Cochrane Central Register of Controlled Trials for studies with the term "statin" as a title word and keyword between 1994 and 2009. The investigators included in their analysis English-language studies with at least 1,000 patients and a mean follow-up of at least 1 year, and excluded trials in patients with organ transplants, with diabetes, or on hemodialysis.

Overall, the researchers looked at 13 placebo-controlled and standard care-controlled trials with a total of 91,140 nondiabetic patients, including JUPITER (Justification for the Use of Statins in Primary Prevention: An Intervention Trial Evaluating Rosuvastatin), CORONA (Controlled Rosuvastatin Multinational Study in Heart Failure), and the MEGA trial (Management of Elevated Cholesterol in the Primary Prevention Group of Adult Japanese).

There were a total of 45,521 patients taking statin therapy, and 45,619 controls. Over an average follow-up of 4 years, 2,226 patients (4.9%) in the statin group developed diabetes, as did 2,052 control patients (4.5%).

The 174 extra cases amounted to a 9% increase in diabetes likelihood, or "one additional case of diabetes per 255 (95% [confidence interval] 150-852) patients taking statin therapy for 4 years," wrote Dr. Sattar and colleagues, for an incidence of 12.2 cases per 1,000 patient-years with statin treatment, and 11.3 cases per 1,000 patient-years for controls.

The risk was similarly elevated even in a subanalysis of only those patients in placebo-controlled trials (n = 75,507, odds ratio 1.10, 95% CI 1.01-1.20), though "the association weakened slightly … when we analysed only trials that used fasting glucose measurements [to identify diabetes patients]—possibly because of a loss of statistical power" (n = 75,033, OR 1.07, 0.97-1.17).

No mechanism has yet been implicated for the increased risk of diabetes among statin users. The authors of the current analysis postulate that the risk could be due to confounders—for example, patients not on statin therapy suffer cardiovascular events and subsequently are likely to change their diet and exercise habits.

In an accompanying editorial, Dr. Christopher P. Cannon of Brigham and Women's Hospital and Harvard University, Boston, pointed to a 2005 article by Dr. Sattar, which "estimated that 5.4 deaths or myocardial infarctions would be avoided over those 4 years [taking statins], and nearly the same number of strokes or coronary revascularisation procedures would also be avoided.

"Therefore the benefit in preventing total vascular events to the risk of diabetes is a ratio of about 9:1 in favour of the cardiovascular benefit," he wrote. ■

VITALS

Major Finding: Over an average follow-up of 4 years, 4.9% of the statin group developed diabetes, compared with 4.5% of the control patients.

Data Source: A meta-analysis of 13 placebo-controlled trials.

Disclosures: Although there was no funding for the meta-analysis, Dr. Sattar reported that the trials included in it were supported by the pharmaceutical industry. Many of the authors of the current study have financial ties to AstraZeneca, Merck & Co, Pfizer, Sanofi-Aventis, Roche, Bristol-Myers Squibb, and other drug manufacturers.

Aspirin Does Not Prevent Events in Low ABI Patients

BY MARY ANN MOON

©JIMDEL/FOTOLIA.COM

There were 13.7 events per 1,000 person-years in patients who took aspirin vs. 13.3 events in those who took placebo.

Prophylactic aspirin therapy did not reduce vascular events in a study of people who had a low ankle-brachial index but no clinical evidence of cardiovascular disease, according to results of a randomized trial.

"This trial is the first to report on the effectiveness of aspirin in reducing major cardiovascular and cerebrovascular events in individuals from the general population who were free of clinical cardiovascular disease but at higher risk as identified by ABI screening," said Dr. F. Gerald R. Fowkes of the University of Edinburgh and his associates in the Aspirin for Asymptomatic Atherosclerosis trial.

The randomized, double-blind trial involved 3,350 men and women aged 50-75 years when they were screened for a low (0.95 or lower) ankle-brachial index in 1998-2001. The subjects, all of whom were residents of central Scotland, had no clinical evidence of cardiovascular disease, but their low ABI put them at risk for coronary and cerebrovascular disease.

The study subjects were randomly assigned to receive 100 mg of enteric-coated aspirin or a placebo daily. They were followed at regular intervals for a mean of 8 years.

The primary end point—a composite of fatal or nonfatal coronary event, stroke, or revascularization procedure—was not statistically lower in subjects who took prophylactic aspirin (13.7 events per 1,000 person-years) than in those who took placebo (13.3 events per 1,000 person-years).

The secondary end point, which was angina, intermittent claudication, or transient ischemic attack in addition to the primary end point component, also did not differ between the intervention group (22.8 events per 1,000 person-years) and the placebo group (22.9 events per 1,000 person-years).

In addition, there was no significant difference in all-cause mortality between the aspirin group (12.8 deaths per 1,000 person-years) and the placebo group (13.5 deaths per 1,000 person-years).

"Although numbers were small, the trial results suggested an increased incidence of major hemorrhage and gastrointestinal ulcer, although not severe anemia, in the aspirin group, and more participants in the aspirin group than in the placebo group had fatal intracranial adverse events," Dr. Fowkes and his colleagues wrote (JAMA 2010;303:841-8).

Given the hazard ratios and confidence intervals in the data, the study could not rule out the possibility that aspirin prophylaxis might reduce cardiovascular risk by a small degree (16%) in healthy people found to have a low ABI.

"However, extrapolating from the [nearly 29,000 people] screened for participation in our trial, a risk reduction of this order means that between 500 and 600 people from the general population would need to be screened and prescribed aspirin to prevent a single major cardiovascular event over an 8-year period," they said.

The British Heart Foundation and Chief Scientist's Office, Scotland funded the study. Bayer HealthCare provided the aspirin and placebo tablets as well as funds for packaging and dispensing the drugs and conducting some statistical analysis. Dr. Fowkes reported financial ties to Bayer HealthCare, Sanofi-Aventis, and Bristol-Myers Squibb. ■

CT Angiography Deemed Tops for Evaluating Chest Pain

BY BRUCE JANCIN

SNOWMASS, COLO. — CT angiography has rapidly emerged as the most cost-effective imaging technique to exclude acute coronary syndrome in the emergency department.

The overall diagnostic accuracy of CT angiography is essentially equivalent to that of SPECT myocardial perfusion imaging, its main competition. But CT angiography is the winner in terms of time to diagnosis and cost, Dr. Christopher M. Kramer said at a conference sponsored by the American College of Cardiology.

"CT angiography is a very exciting new technology. There are still some issues in terms of insurance coverage, but in terms of the science it's clearly a very useful technique in the ED," said Dr. Kramer, professor of medicine and radiology and director of the cardiovascular imaging center at the University of Virginia, Charlottesville.

Chest pain accounts for more than 6 million ED visits annually, resulting in 1.24 million admissions for unstable angina/non–ST-elevation MI and another 330,000 for ST-elevation MI. Emergency physicians are eager for new ways to rapidly and reliably rule out acute coronary syndrome—and CT angiography has a lot to offer in this regard, according to the cardiologist.

In the 16-center CT-STAT trial, now in press, 701 low-risk patients with chest pain and a nondiagnostic ECG in the ED were randomized to CT angiography or the standard protocol, which typically included serial biomarkers along with SPECT myocardial perfusion imaging (MPI).

Time to diagnosis averaged 6.3 hours in the group who received the standard work-up compared to 2.9 hours with CT angiography, a 53% reduction. Median costs to obtain a diagnosis were $3,158 with the standard protocol and $2,137 with CT angiography, a 38% reduction.

Acute coronary syndrome was diagnosed in roughly 3% of patients in each study arm, and invasive coronary angiography was performed in 5%.

Dr. Kramer serves as a consultant to Siemens Medical Solutions and is the recipient of research grants from Astellas and GlaxoSmithKline. ■