Statins May Improve Survival in Advanced HF

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ORLANDO, FLA. — Statin therapy may markedly improve survival in patients with advanced heart failure, regardless of whether the etiology is ischemic or nonischemic, Andrew D. Sumner, M.D., said at the annual meeting of the American College of Cardiology.

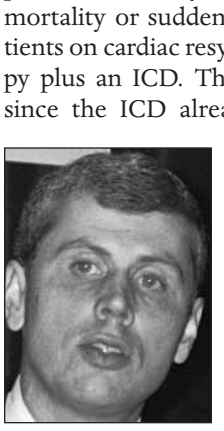
This enhanced survival appears to be due primarily to a reduced incidence of arrhythmic death, added Dr. Sumner of Pennsylvania State University, Hershey.

He presented a retrospective analysis of data from the previously reported prospective Comparison of Medical Therapy, Pacing, and Defibrillation in Chronic Heart Failure (COMPANION) trial. In COMPANION, 1,520 patients with advanced heart failure (HF) at 128 U.S. centers were randomized 1:2:2 to optimal drug therapy alone, in conjunction with a cardiac resynchronization pacemaker, or with a combined cardiac resynchronization pacemaker/implantable cardioverter defibrillator (ICD).

There were 313 deaths during a median 16 months of follow-up. Unadjusted all-cause mortality among the 40% of COMPANION participants on a statin was 18%, compared with 22% in those who weren't on a statin. After controlling for numerous variables—including New York Heart Association class, left ventricular ejection fraction, QRS duration, blood pressure, gender, age, diabetes and other comorbidities, HF duration and etiology, and treatment assignment—statin use was associated with a highly significant 28% reduction in all-cause mortality.

A closer look at the data showed that statin use was associated with an adjusted 33% reduction in all-cause mortality among patients randomized to device therapy, but with no gain in survival in patients who received only optimal pharmacologic therapy. Further analysis showed that statin-treated patients on cardiac resynchronization therapy without an ICD had a 46% relative risk reduction in all-cause mortality and a 63% reduction in sudden cardiac death, compared with those not on a statin.

In contrast, statin therapy did not appear to have any effect upon all-cause mortality or sudden cardiac death in patients on cardiac resynchronization therapy plus an ICD. This is to be expected, since the ICD already protects against sudden cardiac death, which together with pump failure constitute the two chief causes of mortality in patients with advanced HF.



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DR. SUMNER

Dr. Sumner stressed that COMPANION participants were not randomized to statin therapy, and as a retrospective analysis, his study must be considered hypothesis generating. "Hopefully, there will be a randomized, placebo-controlled trial to confirm these observations," he added.

Although statins are best known for their potent LDL-lowering effect, they have a number of other actions believed to be important in preventing cardiovascular events. The drugs reduce markers of inflammation, normalize endothelial dysfunction, and improve production of nitric oxide.

"Because heart failure is characterized by decreased cardiac performance, with activation of neurohormones, release of proinflammatory cytokines, and abnormalities in nitric oxide biosynthesis, treating patients with chronic heart failure with statins is potentially attractive," the cardiologist observed.

Several prior studies support the notion of statins having an antiarrhythmic effect that could spell reduced risk of sudden cardiac death in patients with advanced HF. For example, statin users have been reported to have a reduced risk of developing atrial fibrillation, and statin therapy favorably affects defibrillation thresholds in animal studies of ischemic heart disease. There are also data showing statins exert beneficial effects upon norepinephrine levels and sympathetic nervous system activity, which is also consistent with statins lowering the risk of arrhythmic death, Dr. Sumner said. ■