

Statins may worsen symptoms in some cardiac patients

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Although statins are widely used to prevent heart attacks, strokes, and other cardiovascular disorders, new research shows that the class of drugs may actually have negative effects on some cardiac patients. A new study presented at CHEST 2009, the 75th annual international scientific assembly of the American College of Chest Physicians (ACCP), found that statins have beneficial effects on patients with systolic heart failure (SHF), but those with diastolic heart failure (DHF) experienced the opposite effect, including increased dyspnea, fatigue, and decreased exercise tolerance.

"Systolic heart failure is most often due to [coronary artery disease](#) and appears to have more of an inflammatory component than diastolic heart failure," said Lawrence P. Cahalin, PhD, PT, Northeastern University, Boston, MA. "It is possible that statins would help patients with systolic heart failure more than patients with diastolic heart failure due to the cholesterol-lowering and antiinflammatory effects of statins."

Researchers from Northeastern University and Massachusetts General Hospital, Boston, MA, retrospectively reviewed the charts of 136 patients with heart failure in order to examine the effect of statins on pulmonary function (PF) and exercise tolerance (ET) in patients with DHF vs. SHF. A non-statin group (82 percent of patients had DHF) of 75 patients was compared with a statin group (72 percent of patients had DHF) of 61 patients. Atorvastatin was prescribed in 75 percent of the patients on statins.

Results of the analysis showed that overall PF and ET of patients in the statin group were significantly lower than patients in the non-statin group. Further subgroup analyses revealed that PF measures in the DHF statin group were 12 percent lower than PF measures in the DHF non-statin group. Furthermore, the amount of exercise performed by patients with DHF who were on a statin was almost 50 percent less than patients with DHF not on a statin.

"Some patients with diastolic heart failure may be more prone to the adverse effect of statins on muscle. It may be that patients with particular preexisting factors will experience unfavorable results from statin therapy, including exercise intolerance, dyspnea, and fatigue," said Dr. Cahalin.

Although the PF and ET measures in the SHF statin group were not significantly greater than in the SHF non-statin group, the PF measures were 11 percent to 14 percent higher, and the peak ET measures were 2 percent to 7 percent higher than the PF and ET measures of the SHF non-statin group, suggesting that statins did benefit patients with SHF.

"Not all statins are alike and not all patients are alike. Some statins are stronger than others and are likely to act differently, given particular patient characteristics, and produce different degrees of wanted and unwanted effects," said Dr. Cahalin. "In our continuing study, we hope to identify patient characteristics that are associated with favorable and less than favorable results from statin therapy."

Although the new data suggest that statins may actually worsen symptoms in patients with DHF, researchers feel that the benefits of using statins in patients with SHF and DHF outweigh the risks.

"Due to beneficial effects on lipids and other cardiovascular factors, statins are becoming a standard treatment for many patients with or

without systolic or diastolic [heart failure](#). It is likely that the use of statins for these conditions will continue to increase," said Dr. Cahalin. "However, if patients taking a statin are short of breath, fatigued, and unable to exercise or perform functional tasks, then exams of muscle strength and endurance, as well as pulmonary function and exercise tolerance, are warranted."

"Statins provide significant benefits for patients with cardiovascular disease, said Kalpalatha Guntupalli, MD, FCCP, President of the American College of Chest Physicians. "However, as for any new medication prescribed, clinicians should closely monitor the effects that different types of statins have on individual patients."

Source: American College of Chest Physicians

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