Letter Regarding Article by Leeper et al, “Statin Use in Patients With Extremely Low Low-Density Lipoprotein Levels Is Associated With Improved Survival”

To the Editor:

In the August 7, 2007, issue of Circulation, Leeper and colleagues report that statin therapy is associated with 35% improved survival in patients with low-density lipoprotein (LDL) values <60 mg/dL. The authors suggest that benefits are derived from the pleiotropic effects of statins, such as a reduction in inflammation, restoration of endothelial function, and plaque stabilization. We believe that high-density lipoprotein (HDL) effects may account for some of the benefit shown in statin-treated patients.

It is well known that HDL-C is an independent risk factor for coronary heart disease. A meta-analysis of prospective studies suggests that a 1% decrease in HDL-C increases coronary heart disease risk by 2% to 3%. Results from the Statin Therapies for Elevated Lipid Levels compared Across doses to Rosuvastatin (STELLAR) trial comparing the lipid-modifying efficacy of statins showed that HDL-C levels increased with rosuvastatin, atorvastatin, simvastatin, and pravastatin at all doses studied. On the basis of these findings, any statin use may have increased HDL-C by 2% to 10%. The Air Force/Texas Coronary Atherosclerosis Prevention Study compared lovastatin 20 mg to 40 mg/d versus placebo and showed an HDL-C increase of 6% and LDL-C decrease by 25%. A significant reduction in coronary events in the lovastatin group was most marked in patients with lower baseline HDL-C (<40 mg/dL). In addition, post hoc analysis from 4 prospective randomized trials by Nicholls and colleagues found that statin therapy is associated with regression of coronary atherosclerosis when LDL-C is reduced below 87.5 mg/dL and HDL-C increased by >7.5% when compared with smaller changes in HDL. In the study by Leeper et al, it would be interesting to know if HDL increases accounted for improved survival specifically in patients with very low LDL-C.

Disclosures

None.

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References

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