



Do Elderly Patients Benefit from Aggressive Lipid Lowering?

In today's world, no one disputes that cardiovascular disease (CVD) is a major problem—especially for older people—in Western societies. One need only look at age-specific morbidity and mortality figures to recognize that CVD is the largest single cause of death and disability in older populations.

Even so, some clinicians question whether aggressive lipid lowering therapy—with the chief goal of reducing low-density lipoprotein (LDL) cholesterol levels—is really appropriate for older patients. After all, isn't the proverbial horse already out of the barn? Aren't those devastating plaques already in place after years of high fat diets, inadequate exercise, and progressive obesity? At this stage, won't aggressive pharmacologic lipid lowering therapy do little more than subject elderly and possibly frail patients to the potential hazards of serious hepatotoxicity, myopathy, and even renal failure related to rhabdomyolysis?

These were reasonable hypotheses in the bygone days when there was only limited evidence available. But the last decade or so has witnessed the publication of a body of data that essentially has resolved the issue. In short, recent studies overwhelmingly suggest that no patient should be denied the cardiovascular risk reduction associated with aggressive lipid lowering therapy solely on the basis of age. Indeed, the absolute benefit derived over the course of a year from proper lipid management is somewhat greater in an older person than in a younger one, simply because the older person has a much higher absolute risk of having a cardiovascular event.¹

Such a conclusion is readily apparent when you consider this question:

Who is more likely to have an event in the next 12 months, a 40-year-old person with hypertension and elevated LDL levels or a 75-year-old person with the same problems? An older individual has a higher risk of adverse cardiovascular events because of the cumulative damage that has occurred over a lifetime—especially if he or she has concurrent CVD risk factors, such as diabetes, obesity, smoking, and physical inactivity.

So what are the data supporting aggressive treatment of hyperlipidemia in elders? The first line of evidence, of course, comes from the multitude of older studies—including those led by Rubin, Barrett-Connor, Benfante, and Aronow¹⁻⁴—that show strong correlations between elevated lipid levels and cardiac events in elderly patients. The 1984 study by Barrett-Connor and colleagues was particularly significant in that its findings (that high cholesterol levels remained a strong predictor of fatal ischemic heart disease in older as well as younger adults) refuted the suggestion of some earlier studies that the

Protection Study (HPS), in which researchers randomly assigned 20,536 patients aged 40 to 80 years who were at increased risk for cardiovascular events to receive simvastatin 40 mg or placebo.⁵ The 28% of participants who were over the age of 70 received just as large a proportional benefit—a 34% reduction in cardiovascular events—as those who were younger. The benefit was independent of the baseline LDL level, suggesting that some of the statin benefit relates to the so-called pleiotropic effects, including vasodilation, inhibition of thrombus development, and reduction in inflammatory substances such as C-reactive protein and cytokines.

The Prospective Study of Pravastatin in the Elderly at Risk (PROSPER) specifically focused on patients aged 70 to 82 years.⁶ The patients, who all had either a history of or risk factors for atherosclerosis, were assigned randomly to receive pravastatin 40 mg/day or placebo. There was a statistically significant 15% reduction in the primary endpoint—a composite of coronary

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influence of cholesterol levels on CVD diminishes with age.²

In the past few years, even more powerful support has emerged from randomized, prospective studies. A critical investigation was the Heart

death, nonfatal myocardial infarction, and fatal or nonfatal stroke.

Yet another study validating the use of aggressive lipid lowering treatment in older patients was the Collaborative Atorvastatin Diabetes Study (CARDS),

Continued from page 14

which set out to determine whether statins should be used for the primary prevention of CVD in type 2 diabetics.⁷ Of the study's 2,838 subjects, 50% were aged 60 to 70 years and an additional 12% were over the age of 70. The overall reduction in CVD risk in patients receiving atorvastatin 10 mg/day, as opposed to placebo, was an impressive 37%, with the risk reduction spread equally across all age strata.

These and other similar studies compellingly demonstrate that aggressive lipid lowering therapy is just as effective in older individuals as in younger individuals. The bottom line is that we should never hold a patient's age against him or her when assessing the need for effective and safe management of lipid levels. ●

Author disclosures

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REFERENCES

1. Rubin SM, Sidney S, Black DM, Browner WS, Hulley SB, Cummings SR. High blood cholesterol in elderly men and the excess risk for coronary heart disease. *Ann Intern Med.* 1990;113(12):916-920.
2. Barrett-Conner E, Suarez L, Khaw K, Criqui MH, Wingard DL. Ischemic heart disease risk factors after age 50. *J Chronic Dis.* 1984;37(12):903-908.
3. Benfante R, Reed D. Is elevated serum cholesterol level a risk factor for coronary heart disease in the elderly? *JAMA.* 1990;263(3):393-396.
4. Aronow WS, Herzig AH, Etienne F, D'Alba P, Ronquillo J. 41-month follow-up of risk factors correlated with new coronary events in 708 elderly patients. *J Am Geriatr Soc.* 1989;37(6):501-506.
5. Heart Protection Study Collaborative Group. MRC/BHF Heart Protection Study of cholesterol lowering with simvastatin in 20,536 high-risk individuals: A randomised placebo-controlled trial. *Lancet.* 2002;360(9326):7-22.
6. Shepherd J, Blauw GJ, Murphy MB, et al. Pravastatin in elderly individuals at risk of vascular disease (PROSPER): A randomised controlled trial. *Lancet.* 2002;360(9346):1623-1630.
7. Colhoun HM, Betteridge DJ, Durrington PN, et al. Primary prevention of cardiovascular disease with atorvastatin in type 2 diabetes in the Collaborative Atorvastatin Diabetes Study (CARDS): A multicentre randomised placebo-controlled trial. *Lancet.* 2004;364(9435):685-696.