
Editorial

Cardiovascular disease and high cholesterol in old age

Serum cholesterol is a strong predictor of coronary heart disease (CHD) in men less than 60 years old,¹ and lowering cholesterol in this age group reduces CHD and total mortality.² Is this relevant to those over 65 years? We need to know: (1) whether high cholesterol is an important risk factor for CHD in the old; (2) how long the putative beneficial effects of lowering serum cholesterol take to appear; (3) whether old people can respond to cholesterol lowering regimens as well as the young; and (4) whether cholesterol-lowering programmes in the old can reduce overall mortality. The answers to some of these points are now clear.

- 1) Four good studies^{3–6} of men and women aged up to 80 years have now confirmed that those with a total serum cholesterol in the highest quartile of the population have an approximately 50% increase in the risk of both fatal and nonfatal CHD compared with those in the lower quartiles. By contrast, no link has been found between serum cholesterol and stroke.⁷ This is possibly because fatal coronary artery disease appears before clinically significant cerebrovascular disease.
- 2) Two lines of evidence suggest that the benefit

from lowering cholesterol in middle-aged men occurs quickly. An overview of 20 trials of cholesterol lowering in this age group⁸ showed that a 10% cholesterol reduction resulted in a 22% fall in CHD events in three years. In studies which used coronary angiography to measure outcome, a reduction of apolipoprotein-B by about 30% resulted in a significant improvement of angiographic appearance (and a reduction in coronary events) in just 2.5 years.⁹

- 3) In younger subjects, significant cholesterol lowering is easily achievable with diet and HMG CoA reductase inhibitors; CHD incidence falls by 2–3% for every 1% reduction in cholesterol.⁸

The answer we now await is whether cholesterol-lowering programmes will reduce overall mortality in the elderly – these trials are under way. In the mean time it seems clear that we should give advice on smoking,¹⁰ diet¹¹ and exercise¹² and the finding of a very high cholesterol in an elderly patient should prompt screening of younger blood relatives. Although there is no reason to suppose that the elderly will benefit less from cholesterol lowering than

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the young we should await more conclusive evidence before embarking on a widespread programme of screening and treatment. Some gerontologically interesting questions will still remain:

- Should those receiving treatment for raised lipids in middle age continue treatment for life?
- Do people develop hyperlipidaemia late in life, and if so are they different from those who develop it earlier?
- Are those who survive into old age with raised lipids different from those who do not?

After years of uncertainty we now know that treatment of hypertension in the old is important – the next few years will tell us whether the same is true for lipids.

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