**Don't Stop the Statin!**

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Lipid lowering with statins is one of the most beneficial therapies in cardiovascular medicine, with evidence from hundreds of randomized clinical trials, including >25 large cardiovascular outcomes trials in the Cholesterol Treatment Trialists (CTT) collaboration.Benefit is seen for reducing myocardial infarction (MI), stroke, need for revascularization, cardiovascular (CV) death, and total mortality. The benefits are seen in those with prior CV events (i.e. secondary prevention) and in primary prevention. Benefit is seen across all subgroups, without any statistical interaction, including by age.

As for all medicines, statins do have side effects, most prominent of which is myalgia. Other side effects have been suggested, such as dementia, but refuted in large randomized trials. The cost of statins used to be an issue, but now they are almost all generic and widely available for very low cost. Thus, a careful assessment of benefit vs. risk is very favourable on the usual metrics of CV events prevented vs. side effects.

A group in which questions have been raised is the elderly. Here, there are some reasons to raise the question. Is it worth using a long-term preventive therapy in someone who is >75 years—would they live long enough to gain the benefit? There are 'competing risks' of cancer and other major diseases, whereby those would dictate prognosis and the statin therapy might be moot. There are questions cited in guidelines about the strength of the evidence.Since most (but not all) data on this population would be derived from subgroup analyses of trials, there are not tens of thousands of patients in trials in this age category. In particular, for secondary prevention, there is strong evidence of benefit, but in primary prevention the modest number of patients enrolled has raised this question.

An important contribution to this discussion of whether benefit exists for elderly patients with statin therapy comes in the new analysis in this issue of the *European Heart Journal* by Giral and colleagues. They conducted an observational analysis with careful statistical adjustments, looking at a 'natural experiment' comparing patients who had their statins stopped vs. those who continued. They found consistently that those who stopped had higher rates of hospitalization for CV events, i.e. ~20–30% higher. This is consistent with what one would expect from the benefit of statins. These data are similar to those published from a nationwide cohort from Denmark. In this study, early statin discontinuation increased with negative statin-related news stories (and thankfully the opposite was true for positive statin-related news stories). As seen in the current study, early statin discontinuation was associated with increased risk of MI and CV death. The former US President Bill Clinton actually experienced this. As he did rehab for his knee, he exercised and lost weight, so he stopped his statin, but a few months later developed unstable angina and required coronary bypass surgery.

In conclusion, we have seen from randomized trials the benefit of statins across all age groups, with perhaps a bit less direct evidence in the elderly. However, the new observational study helps reinforce the notion that continuing statins for those over the age of 75 is beneficial.

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