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VIEWS & REVIEWS

FROM THE FRONTLINE

Bad medicine: statins

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An old man told me how the two boys he sat beside at school died in a diphtheria outbreak in the 1920s. But diphtheria, tetanus, epiglotitis, measles—and hopefully soon, bacterial meningitis—are illnesses of the past. Today, infectious disease consultants are left playing table tennis in the doctors' mess. Vaccination is medicine's miracle, protecting the individual and public health. The anti-vaccination lobby is illogical.

Today's courageous public health idea is to offer statins to all middle aged people to prevent vascular disease. Critically, a recent Cochrane review stated that statins were safe and effective in primary prevention,[1] with another meta-analysis reporting that statins were effective even in low risk groups.[2] There is no longer a "normal" concentration of cholesterol in the blood, so is treating everyone over a specific age good medicine?

The cardiovascular disease model is a paradigm based on risk factors, all now morphed into "diseases"—cholesterol, glucose, and the elasticity of arteries based on assessment using a Victorian hearing aid. Yet you can fly a jumbo jet between the confidence intervals that support this model.[3 4] This simplistic thinking is driven by many paradoxes, such as the decline in vascular disease predating modern drugs by decades.[5] Also, we are told that vascular disease is a product of modern lifestyle, but a study irrefutably shows that ischaemic heart disease was common in prehistory.[6] And why has vascular disease not increased with the rise in diabetes and obesity?[7] Medicine believes in this model, worshipping at the educational cathedrals of the pharmaceutical industry.

The effects of statins need to be quantified. In low risk patients older than 60 and taking standard statin treatments, the number needed to treat per year (NNT) to prevent cardiovascular events is 450, and the NNT to prevent vascular death ranges from 1250 to 5000.[2] So, unlike with vaccination, almost none of these patients will actually benefit directly despite taking statins for the rest of their lives. Any benefits are seen only at a population level. This is the treatment paradox. Much research into statins is now 20 years old, and since then background incidence of vascular disease has halved, so these NNTs could have doubled. Finally, we already prescribe 60 million statins a year,[8] so why can't we categorically prove that statins work in the real world? What happens if there is some unforeseen long term side effect?

But scepticism is futile. Guidelines will be issued to expand statin use, and these orders dutifully followed. Patients trust doctors and will go along with this advice, eroding societies' wellbeing and fanning health anxiety. Soon the natural extension of this logic will see a clammer for statins in ever younger age groups and for more aggressive treatment. Is "statins for all" bad medicine? Time will tell.

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