

# Statins underused for primary prevention in older patients

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**A TREATMENT-RISK PARADOX WHERE PATIENTS BECOME LESS LIKELY TO RECEIVE APPROPRIATE treatment with advancing age has been observed in the secondary prevention of cardiovascular disease (CVD).<sup>1</sup> This is particularly apparent for cholesterol-lowering treatment with one study showing the likelihood of statin treatment was 6% lower with each year increase in age.<sup>2</sup>**

Furthermore, sex inequalities exist in the secondary prevention of CVD. Women are less likely to be prescribed both antihypertensive and lipid-lowering drugs.<sup>3</sup> This observation becomes even more pertinent in view of the fact that a higher proportion of women studied were above the recommended target cholesterol level.

However, it is not clear if such a paradox exists in primary prevention and a recent UK study published in the *BMJ* addresses this issue.<sup>4</sup> The authors assessed the impact of age and sex on the prescription of antihypertensive drugs and statins for primary prevention of CVD in a typical primary care population.

The researchers carried out a cross-sectional retrospective study of primary care medical records. A total of 41,250 anonymised records of patients aged  $\geq 40$  registered at 19 general practices in the West Midlands were extracted and analysed. The practices were selected to represent different practice sizes and different levels of deprivation. Patients with a history of CVD were excluded.

Demographic data, risk factors for CVD (blood pressure, total cholesterol concentration), and prescriptions for primary prevention drugs were extracted from records. Patients were subdivided into five-year age bands up to 84 (patients aged  $\geq 85$  were analysed as one group).

There were 36,679 patients (89%) with no history of CVD who could therefore be considered for primary prevention. The proportion of these receiving antihypertensive drugs increased with age (from 5% aged 40–44 to 57% aged  $\geq 85$ ) as did the proportion taking statins up to the age of 74 (from 3% aged 40–44 to 29% aged 70–74).

However, in those aged 75 and above, the odds of being prescribed a statin relative to the 40–44 age

group decreased with every five-year increase in age, odds ratio (OR) 12.9 (95% CI:10.8–15.3) at age 75–79;  $P < 0.001$ , and 5.7 (95% CI: 4.6–7.2) at age  $\geq 85$ ;  $P < 0.001$ . The authors found no consistent differences in prescribing trends by sex.

The study therefore showed that there was no observed sex paradox in primary prevention but there was a clear treatment-risk paradox when it came to statin therapy in elderly patients. However, the authors were unable to assess the impact of contraindications or

intolerance of drug treatment, the GPs' judgement in individual cases or patients' choice.

They also highlighted the difficulties in defining eligibility for primary prevention and that scoring algorithms used to establish CV risk are only validated in patients aged up to 74<sup>5</sup> although it is probably safe to assume that most people aged  $\geq 75$  will have an absolute risk  $\geq 20\%$ . The Department of

Health has introduced a programme of NHS Health Checks for everyone aged 40–74 without existing CVD. Patients with a 10-year absolute risk of CVD in excess of 20% will be given lifestyle advice and pharmacological treatment in accordance with the relevant guidelines.

The study findings are even more relevant if one considers that there is evidence that statins should be used at least up to the age of 80 (Heart Protection Study, MEGA trial and ASCOT-LLA) but there is still a need for specific trials of statins in patients  $> 80$ .

The findings of this study should encourage us to increase our statin prescribing in elderly patients particularly as the population is ever aging and the beneficial effects of such primary prevention drugs could be felt within 12 months of initiation.<sup>6</sup>

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