

Cholesterol-lowering medications reduce the risk of age-related maculopathy progression

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TO THE EDITOR: Age-related macular degeneration (AMD) is the leading cause of blindness in elderly Australians. Currently, there are limited treatment options, and current research efforts are focused on determining the risk factors for AMD and developing effective treatment strategies.

Some risk factors for cardiovascular disease have been shown to be associated with AMD,¹ and one study has suggested that Alzheimer's disease is associated with age-related maculopathy.² It has also been suggested that alleles of the apolipoprotein E (ApoE) gene may be associated with AMD, cardiovascular disease and Alzheimer's disease.^{3,4} Given this, it is interesting that statins — cholesterol-lowering medications — have been shown to decrease the risk of dementia⁵ and diabetes mellitus.⁶

We investigated the role of cholesterol-lowering medication in the development and progression of age-related maculopathy in the Melbourne Visual Impairment Project (VIP), a population-based study of eye disease in Melbourne residents aged 40 years and older.⁷ Baseline examinations were conducted from May 1992 to December 1994, and five-year follow-up examinations from 1997 to 1999. Age-related maculopathy was graded from stereo fundus photographs.

2594 (85%) of the 3040 surviving baseline participants returned for follow-up. They ranged in age from 44 years to 101 years at follow-up and 1421 (55%) were female. There were 580 participants with age-related maculopathy at baseline, of whom 28 were taking blood cholesterol lowering medications at baseline.

The incidence of the maximum drusen size in participants at risk (ie, those with no drusen of that specific size at baseline) did not differ practically or significantly between the two groups. However, as shown in the Box, participants taking cholesterol-lowering medication at baseline were nearly four times less likely to experience progression of age-related maculopathy as people not

Progression of age-related maculopathy features (maximum drusen size) by self-reported use of blood cholesterol lowering medications at baseline

Blood cholesterol lowering medication	Progression of drusen since baseline (microns)	
	≥ 125	≥ 250
Yes (n=28)	1 (3.6%)	0
No (n=552)	72 (13.0%)	21 (3.8%)

taking such medication (13.0% v 3.6%; $P=0.11$, Fisher's exact test). Because of the small number taking cholesterol-lowering medications, it was not possible to analyse specific medication type or to conduct multivariate analyses to control for potential confounders.

To our knowledge, this is the first investigation of the relationship between the use of blood cholesterol lowering medications and age-related maculopathy. The major limitation of our study is the lack of statistical power. However, these preliminary data warrant further investigation. We advocate a randomised clinical trial to assess the effect of cholesterol-lowering medications (specifically, statins, given the recent findings for Alzheimer's disease⁵ and diabetes⁶) on the progression of age-related maculopathy in people with early signs of disease.

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