Correspondence


To the Editor:

We read with great interest the recent article by Lopez et al.1 in Circulation Arrhythmia and Electrophysiology, on roles of blood lipid levels and lipid-lowering therapy for the incidence of atrial fibrillation. Their conclusion that higher levels of total cholesterol and low-density lipoprotein (LDL) cholesterol are associated with a lower incidence of atrial fibrillation is consistent with the results of our previous study indicating the existence of “cholesterol paradox” in atrial fibrillation.2,3 Their findings that lipid-lowering therapies do not decrease the incidence of atrial fibrillation further support the hypothesis.

Atrial fibrillation is a heterogeneous disease with complex mechanisms, and the incidence of atrial fibrillation varies by age and sex. Furthermore, blood lipid levels also vary by age and sex. Therefore, there may be age and sex differences in the roles of blood lipids for the susceptibility of atrial fibrillation, although Lopez et al1 did not study the issues. We have previously reported that the inverse relationship between LDL cholesterol levels and risk of atrial fibrillation is more significant in women than that in men. Because blood lipid levels change after menopause, we repeated analyses after dividing women into 2 groups according to age and found that low LDL cholesterol is associated with the risk of atrial fibrillation in women ≥50 years of age but not in those <50 years of age. Furthermore, we and others have recently shown that low high-density lipoprotein cholesterol increased the risk of developing atrial fibrillation, and in our study the association is present in women ≥50 years of age but not in women <50 years of age or in men.2,4,5 However, high-density lipoprotein cholesterol levels are not associated with atrial fibrillation in the study by Lopez et al.1 The association might not be found because the analysis was conducted in the entire cohort, although the multivariate models were adjusted with covariates including age and sex. It would be of particular interest to know whether age and sex differences in the association of lipids with risk of atrial fibrillation exist in their and other cohorts.

Disclosures

None.

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References

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Circ Arrhythm Electrophysiol. 2012;5:e80
doi: 10.1161/CIRCEP.112.971051

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