

Abstract

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Depression and Leukocyte Telomere Length in Patients With Coronary Heart Disease: Data From The Heart and Soul Study.

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OBJECTIVE: Shortened telomere length has been associated with mortality in patients with coronary heart disease (CHD) and is considered as an emerging marker of biologic age. Whether depression is associated with telomere length or trajectory has not been evaluated in patients with CHD.

METHODS: In a prospective cohort study, we measured leukocyte telomere length in 952 participants with stable CHD at baseline and in 608 of these participants after 5 years of follow-up. The presence of major depressive disorder in the past month was assessed using the computerized diagnostic interview schedule at baseline. We used linear and logistic regression models to evaluate the association of depression with baseline and 5-year change in leukocyte telomere length.

RESULTS: Of the 952 participants, 206 (22%) had major depression at baseline. After the adjustment for age and sex, the patients with current major depressive disorder had shorter baseline telomere length than those without depression (mean [standard error] = 0.86 [0.02] versus 0.90 [0.01]; $p = .02$). This association was similar (but no longer statistically significant) after adjustment for body mass index, smoking, diabetes, left ventricular ejection fraction, statin use, antidepressant use, physical inactivity, and anxiety (0.85 [0.02] versus 0.89 [0.01], $p = .06$). Depression was not predictive of 5-year change in telomere length after adjustment for the mentioned covariates and baseline telomere length.

CONCLUSIONS: Depression is associated with reduced leukocyte telomere length in patients with CHD but does not predict 5-year change in telomere length. Future research is necessary to elucidate the potential mechanisms underlying the association between depression and telomere length.

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