ABSTRACT

Objectives: Affective temperaments (depressive, anxious, irritable, hyperthymic, cyclothymic) are regarded as the biologically stable core of personality, and accumulating data implies their relationship with cardiovascular diseases. There are currently limited data on the association of affective temperaments and early vascular aging. The aim of our study was to assess the potential relationship of affective temperaments and vascular age, as assessed by coronary CT.

Methods: In our current cross-sectional study, 209 patients referred to coronary computed tomography angiography (CCTA) due to suspected coronary artery disease (CAD), were included. After the evaluation of medical history and demographic parameters, all patients completed the Temperament Evaluation of Memphis, Pisa, Paris, and San Diego Autoquestionnaire (TEMPS-A) and the Beck Depression Inventory (BDI). Vascular age was estimated using coronary artery calcium (CAC) score and we calculated its difference from chronological age for each patient. Linear regression analysis was applied to identify predictors of early vascular aging in the entire cohort and in male and female sub-populations, separately.

Results: The independent predictors of early vascular aging were female sex ($B = -10.82$ [95% CI: $-15.30$ – $-6.33$]), diabetes mellitus ($B = 7.16$ [95% CI: 1.20 – 13.12]) and dyslipidemia ($B = -8.28$ [95% CI: 3.94 – 12.62]). Further assessing gender differences, cyclothymic temperament score proved to be an independent predictor of early vascular aging in women ($B = 0.89$ [95% CI: 0.04 – 1.75]), while this association was absent in men.

Conclusions: Our results suggest that cyclothymic affective temperament contribute to early vascular aging in women.

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Corresponding author. Email: vnagymil@milan.com