

Reversibility of hypertension-induced subclinical vascular changes: Do the new ACC/AHA 2017 blood pressure guidelines and heart rate changes make a difference?

To the Editor,

First, we would like to congratulate Czuriga-Kovács et al for their study,¹ which demonstrated that promptly initiated antihypertensive management can improve early vascular changes and altered cognitive function in newly diagnosed hypertensive patients. We would like to further discuss these findings under the light of the new ACC/AHA 2017 guidelines,² where the classification of blood pressure (BP) levels is redefined as: "normal BP" when systolic (SBP) and diastolic blood pressure (DBP) are <120/80 mm Hg; "elevated BP" for SBP 120-129 mm Hg and DBP < 80 mm Hg; "stage-1 hypertension" for SBP 130-139 mm Hg or DBP 80-89 mm Hg; and "stage-2 hypertension" for SBP/DBP \geq 140/90 mm Hg. Also, in the "Corinthia study", we found that patients with stage-1 hypertension according to the new ACC/AHA 2017 guidelines (previously defined as prehypertension) have a significantly increased aortic stiffness and higher prevalence in asymptomatic aortic damage compared with prehypertensive individuals.³ Taken the above into account, it would be very intriguing if the authors could further explore the observed outcomes (ie, vascular changes) in the reclassified hypertensive group in their study,¹ according to the new guidelines, separately. Also, heart rate changes may play a significant role on arterial stiffness measurement, especially for individuals with increased arterial stiffness.⁴ In this study,¹ heart rate changes after treatment are not reported but they might have confounded the observed nonsignificant change in pulse wave velocity. Generally, it should be recommended to employ heart rate in multivariate analysis of arterial stiffness response to any intervention, especially in hypertensive populations.⁵

CONFLICT OF INTEREST

None.

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