

Color M-mode propagation velocity as a valuable but neglected parameter

Değerli fakat gözardı edilen bir parametre olarak renkli M-mode akım yayılma hızı

Dear Editor,

We intentionally read the article "Association of aortic flow propagation velocity with ankle-brachial blood pressure index in patients with hypertension: an observational study," written by Güneş et al. (1) with great interest. They aimed to investigate the association between aortic flow velocity propagation (AVP), and ankle-brachial index (ABI) in patients with newly diagnosed hypertension. They concluded that AVP is directly associated with ABI.

Color M-mode propagation velocity as an index of left ventricular relaxation was first proposed by Brun et al. (2) in 1992. While standard pulsed-wave Doppler echocardiography provides the temporal distribution of blood flow velocities in a specific location, color M-mode propagation velocity provides the spatiotemporal map of these velocities of the blood flow along the scan line from the mitral annulus to the left ventricle (LV) apex. Therefore, color M-mode propagation velocity have provided useful insights in the assessment of diastolic function and have been shown to provide an accurate estimate of LV relaxation (3, 4). It seems to be relatively insensitive to the effects of preload (5).

Recently color M-mode propagation velocity of the descending thoracic aorta has been used in the assessment of arterial stiffness as aortic flow propagation (AVP) in several studies (1, 6). They showed that AVP is an easy method and it may be used for a noninvasive cardiovascular examination to improve cardiovascular risk estimation. However, further clinical studies should be conducted to demonstrate the advantage of this novel parameter in the risk stratification.

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Author's Reply

Dear Editor,

We appreciate well-written correspondence of Demirkol et al. (1) that was sent to journal regarding our manuscript "Association of aortic flow propagation velocity with ankle-brachial blood pressure index in patients with hypertension: an observational study" (2).

In our previous studies, we have established the association of APV and coronary artery disease (3), coronary artery disease in isolated hypertension (4), coronary and carotid atherosclerosis and flow-mediated dilatation (5). We also have revealed that the APV has improved the predictive role of exercise test (6).

All above-mentioned manuscripts have revealed association of APV with atherosclerosis and related disorders in cross-sectional study design. We are planning to study the role and predictive value of APV in various cardiovascular disorders in prospective follow-up studies as was mentioned by Demirkol et al. (1).

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