Letter to the Editor

Letter by Tsilakis et al Regarding Article “Subclinical Left Ventricular Longitudinal Systolic Dysfunction in Hypertension With No Evidence of Heart Failure”

To the Editor:

It was with great interest that we read the study by Nishikage et al. They found that the left ventricular systolic, long-axis function was impaired in 10% of asymptomatic hypertensive patients and that this reduction was closely correlated with impaired diastolic function. The investigators concluded that the assessment of left ventricular longitudinal function by tissue Doppler imaging (TDI) played an important role in identifying diastolic dysfunction and subclinical left ventricular systolic dysfunction in asymptomatic hypertensive patients.

The long-axis systolic function of the left ventricle has been studied extensively in the past via M-mode recording of mitral atrioventricular plane displacement (MAPD). More recently, the study of left ventricular long-axis systolic and diastolic function has gained new interest with the development of new echocardiographic techniques such as TDI.

Blendea et al used the M-mode to calculate the MAPD. They found between others that long-axis systolic dysfunction, as measured by MAPD, predicts the onset of hypertension. In our institution, we studied left ventricular long-axis systolic and diastolic function in hypertensive patients utilizing the M-mode of the mitral atrioventricular plane movement. We concluded that hypertensive patients, without overt systolic dysfunction, demonstrate left ventricular long-axis systolic dysfunction, while long-axis diastolic dysfunction always coexists with abnormal diastolic filling patterns. This suggests that, in hypertensive patients, long-axis systolic dysfunction precedes diastolic dysfunction at the same axis. As in the study of Nishikage et al, we did not find any significant left ventricular long-axis systolic dysfunction in hypertensive patients without hypertrophy.

In this letter we would like to note that our study was not referenced by Nishikage et al. Although the authors studied the systolic function of the left ventricle at the long-axis thoroughly in hypertensive patients, by means of TDI, they confirmed our previous findings from the study of left ventricular longitudinal function using the M-mode technique. They also underscore the important role of estimating left ventricular longitudinal function in hypertensive patients. Nevertheless, TDI is not the only means of performing such a measurement and, moreover, the point velocity of a specific left ventricular region as measured by TDI cannot discriminate between active contraction and passive drawing motion and rotation of the whole heart, or contraction of adjacent segments.

References


