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Letter to the Editor

Confirming the diagnosis of amyloid cardiomyopathy: usefulness of non-invasive techniques

Dear Editor,

We read the article by Nucci, et al[1] entitled "The role of 3D and speckle tracking echocardiography in cardiac amyloidosis: a case report," which is recently published in European Review for Medical and Pharmacological Sciences. The authors[1] presented a patient with cardiac amyloidosis, and the diagnosis of which was confirmed by speckle tracking echocardiography and a three-dimensional (3D) echocardiography. We thank authors for their noteworthy management and valuable article but we have some comments about the diagnosis and the management of cardiac amyloidosis.

Infiltrative cardiomyopathies such as amyloidosis, Danon disease, Fabry disease, Friedreich ataxia, oxalosis and mucopolysaccharidoses are characterized by the deposition of abnormal substances which could increase the ventricular wall thickness[2]. Reduced transmitral doppler atrial (A), mitral annulus tissue doppler sistolic (S') and diastolic (E') wave velocities, indicating increased LV filling pressures; biatrial dilatation, reduced atrial ejection fraction and atrial fibrillation due to amyloid infiltration of the atrium and impaired atrial contraction could be observed in infiltrative cardiomyopathies which are characterized by restrictive pathophysiology[3,4].

The authors mentioned that cardiac amyloidal cardiomyophathy was differentiated from the other hypertrophy groups by longitudinal strain value <12%. The degree of longitudinal axis dysfunction is far greater than seen in conditions associated with true left ventricular hypertrophy[5]. Although longitudinal axis systolic dysfunction could be referred as an useful parameter in discriminating infiltrative cardiomyopathies from true left ventricular hypertrophy such as hypertrophic cardiomyopathy and aortic stenosis, severe impairment of basal longitudinal strain with preserved strain in the apical segments is more typical and more spesific for amyloid cardiomyopathy compared to impairment of global longitudinal strain[5].

Infiltrative cardiomyopathies should be considered in any adult with unexplained heart failure and an echocardiogram showing increased wall thickness[2]. 3D echocardiographic analysis as well as global longitudinal strain imaging compared to basal longitudinal strain imaging has low sensitivity and specificity in discriminating amyloid cardiomyopathy from other infiltrative cardiomyopathies, alike two-dimensional (2D) and tissue doppler echocardiography[2,3,6-8]. Since the definite diagnosis of cardiac amyloidosis should be confirmed by tissue biopsy[6-8], particularly when cardiac magnetic resonance imaging cannot be performed, it is conceivable that high suspicion of either cardiac amyloidosis or other infiltrative cardiomyopathies on 2D or tissue doppler echocardiography could provide enough evidence to perform tissue biopsy in an easier and more cost-effective manner[6-8].

Conflict of Interest

The Authors declare that they have no conflict of interests.

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