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LETTER TO THE EDITOR

Cardiac magnetic resonance imaging in cardiomyopathies that look alike

Ressonância magnética cardíaca nuclear em miocardiopatias parecidas

To the Editor,

We read with great interest the article by Mesquita et al.[1] entitled ''Cardiac amyloidosis: Diagnosis using delayed enhancement cardiac magnetic resonance imaging sequences'', recently published in the *Portuguese Journal of Cardiology*. The authors[1] presented 10 patients with the suspicion of a cardiomyopathy on echocardiography. Patients were diagnosed and managed with late gadolinium enhancement patterns on cardiac magnetic resonance (MR) imaging. Although we commend the authors for their valuable article and the management of the patients, some comments may be of interest.

Cardiac amyloidosis is characterized by diffuse global subendothelial late gadolinium enhancement.[2,3] Increased gadolinium washout from blood results in higher blood T1 over time, resulting in a dark blood pool, which does not occur in other cardiomyopathies.[2,4] If cardiac wall thickness is increased, a decrease in QRS amplitude associated with dyssynchronous activation of atrophic myocytes is an important finding.[2,3]

Fabry disease is characterized by symmetrical hypertrophy, and men are commonly affected due to X-linked inheritance. Progressive diastolic dysfunction is generally observed without a restrictive filling pattern on echocardiography.[2]

Hypertrophic cardiomyopathy is characterized by asymmetrical hypertrophy which can result in ventricular outflow obstruction.[2] Although cardiac myocytes are hypertrophic, they do not contribute significantly to effective contraction. Tagged MR images can show the disordered and ineffective contraction patterns in cardiomyopathies accompanied by septal hypertrophy, thereby distinguishing hypertensive cardiomyopathy.[2]

In conclusion, cardiomyopathies accompanied by increased wall thickness are characterized by impeded ventricular filling and progressive diastolic dysfunction.[2–4] They are relatively rare and usually tend to be overlooked or misdiagnosed. Comprehensive assessment of patients, including clinical manifestations, electrocardiography, and echocardiography in addition to MR imaging, play an important role in instituting appropriate management and therapy.[5]

References

1. Mesquita D, Nobre C, Thomas B, et al. Cardiac amyloidosis: diagnosis using delayed enhancement cardiac magnetic resonance imaging sequences. Rev Port Cardiol. 2013;32:941–5.
2. Seward JB, Casaclang-Verzosa G. Infiltrative cardiovascular diseases: cardiomyopathies that look alike. J Am Coll Cardiol. 2010;55:1769–79.
3. Oliveira Santos M, Brito D. Severe heart disease in an unusual case of familial amyloid polyneuropathy type I. Rev Port Cardiol. 2013;32:729–33.
4. Maceira AM, Joshi J, Prasad SK, et al. Cardiovascular magnetic resonance in cardiac amyloidosis. Circulation. 2005;111:186–93.
5. Yalçınkaya E, Bugan B, Celik M, et al. Differential diagnosis of cardiomyopathies: utility of cardiac magnetic resonance imaging. Anadolu Kardiyol Derg. 2013;13:722.

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