Cardiac MR imaging for the evaluation of autoimmune myocarditis

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To the Editor,

I read with great interest the article from Toong and colleagues regarding the use of cardiac magnetic resonance (MR) imaging to evaluate the presence of myocarditis in 3 cases with autoimmune myositis (1). In case number 2, cardiac MR imaging was performed and showed “patchy mid-wall late gadolinium enhancement in the basal aspect of the lateral and septal walls of the left ventricle, consistent with localized myocarditis”. However, Fig. 2 demonstrates a static frame of a balanced-steady state free precession image (b-SSFP) of a 2-chamber view and, in contrary to the figure description, it does not reveal localized myocarditis and does not show the septal or lateral walls, where, according to the authors, there were abnormalities on late gadolinium enhancement (LGE) acquisitions.

Cardiac MR imaging has an established value in the evaluation of suspected myocarditis, particularly in patients with elevated troponins and normal coronary arteries (2). Myocardial edema and hyperemia, as assessed by T2-weighted images and early myocardial gadolinium enhancement, respectively, and, in more severe cases, irreversible myocardial damage, as assessed by LGE, have demonstrated its usefulness in the diagnosis of myocarditis (3). Cine b-SSFP sequences, the working horse of cardiac MR imaging, can demonstrate global or regional wall

motion abnormality (WMA) but, in isolation, cannot demonstrate localized myocarditis, since regional WMA has a low specificity for the underlying pathophysiology. All these sequences, in conjunction, are indicated for the evaluation of patients with myocarditis (3). It would have been more useful if the authors had shown the abnormal MR images of the reported cases (cases 2 and 3), particularly the LGE images, since, as the authors point out, cardiac MR imaging with the use of gadolinium in cases of autoimmune myocarditis is still limited to small case series.

References

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