



Letter to the Editor

Cardiovascular magnetic resonance: A promising method for detecting myocardial scar in patients with cardiac implantable devices



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Dear Editor,

We have read a recently published study written by Anish N. Bhuva [1]. This study revealed that wideband late gadolinium enhancement (LGE) sequences can greatly reduce metal artifacts and increase the detection of myocardial scar (MS) in patients with cardiac implantable devices (CIEDs).

Myocardial infarction, characterized by myocardial cell damage and MS formation, is a serious threat to human health. While MS is a major risk factor for arrhythmia and sudden cardiac death [2]. Therefore, early accurate identification of MS is of great significance. Cardiovascular magnetic resonance (CMR) which has characteristics of multi-parameter and multi-sequence imaging can noninvasively evaluate the cardiac structure, function and tissue characteristics, including MS. But some patients with CIEDs have strong metal artifacts which heavily affect image quality. Recent research shows that non-contrast-enhanced T1W imaging with long inversion time and wideband LGE sequences can increase the detection rate of MS and reduce the metal artifacts [3,4], also whole heart dynamic CMR perfusion and LGE can accurately identify hypoperfused myocardium from MS [5]. It indicates that wideband LGE sequences have a wide application prospect in the

detection of MS, but there is a long way to go. Firstly, the area, location and depth of MS should be further discussed. Secondly, the selection of CMR parameters, patient's own factors, the location and material of CIEDs are the key factors affecting image quality. Collectively, it is necessary to carry out more large multi-center clinical study to determine the detective value of wideband LGE sequences in MS.

Conflict of interest

None.

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