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Letter to the Editor

# Reply letter to: 'Ventricular arrhythmias and myocardial inflammation detection methods'

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We thank Dr. Ganga for his valuable comments on our recent report [1]. We agree with Dr. Ganga on the significance of cardiovascular magnetic resonance (CMR) regarding non-invasive detection of myocardial inflammation and fibrosis in myocarditis. As mentioned, CMR can help to distinguish between myocardial inflammation and fibrosis, which both can be potential arrhythmic substrates [2]. However, one should be aware of the limitations of CMR. Despite its important role in diagnosis of acute myocarditis, various studies such as the MyoRacer-Trial have shown that CMR lacks specificity and sensitivity particularly in patients presenting with chronic symptoms [2,3]. Moreover, differentiating between diverse aetiologies that might result in different therapeutic approaches is only possible by endomyocardial biopsy (EMB). For instance, patients with giant cell myocarditis typically suffer from poor prognosis, which may improve after immediate initiation of immunosuppressive therapy [4]. On the contrary, immunosuppressive treatment in viral myocarditis is contraindicated. As a consequence, EMB is recommended, in order to ensure diagnosis of myocarditis [2]. Nevertheless, we concur with the proposed combination of EMB and CMR in patients with suspected myocarditis. CMR helps to minimize the risk of a sampling error and therefore enhance diagnostic accuracy of EMB [5]. Furthermore, CMR can be used for follow-up investigations to monitor persistence or resolution of myocardial inflammation and development of post-inflammatory fibrosis [2]. We share Dr. Ganga's opinion, that more research is needed to get a better understanding of the relevance of ventricular arrhythmias (VA) in myocarditis and to identify the responsible pathophysiological mechanisms.

## Conflict of interest

The authors report no relationships that could be construed as a conflict of interest.

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