

# Myocarditis Masquerading as Myocardial Infarction with Non-obstructive Coronary Arteries (MINOCA): A Doubly Deceptive NSTEMI Presentation



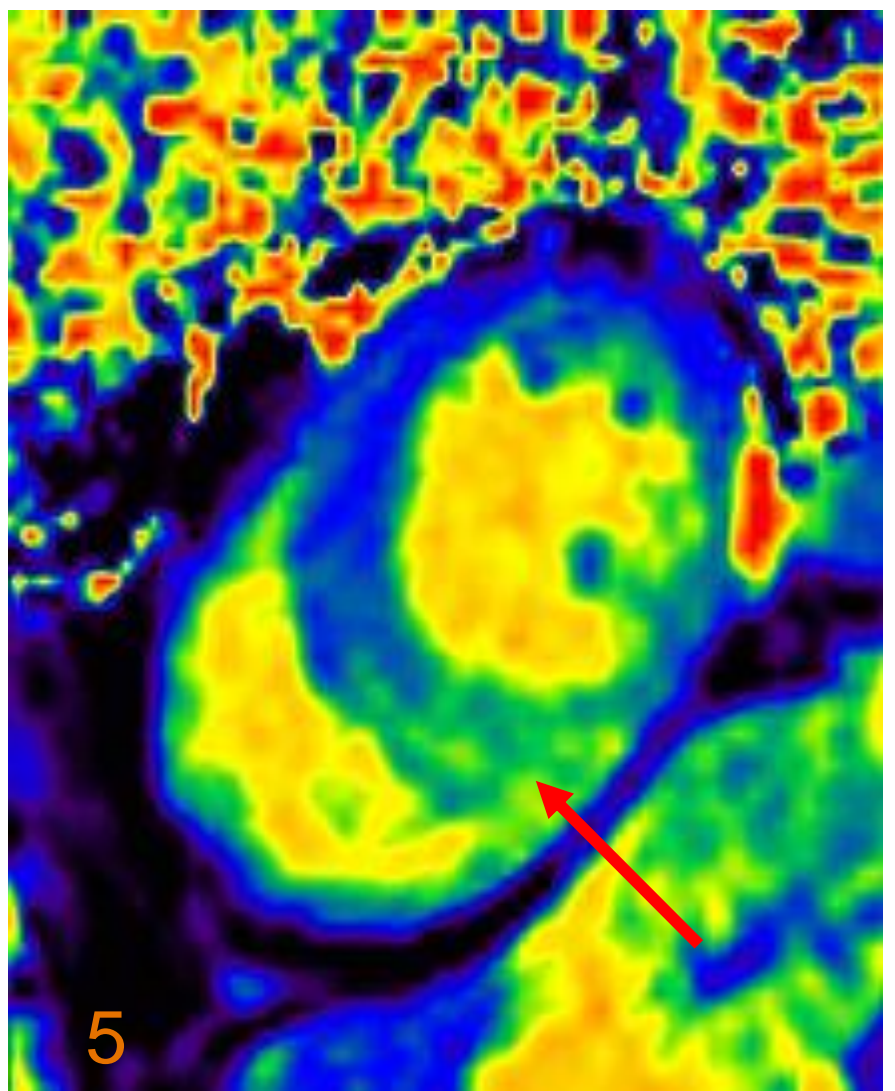
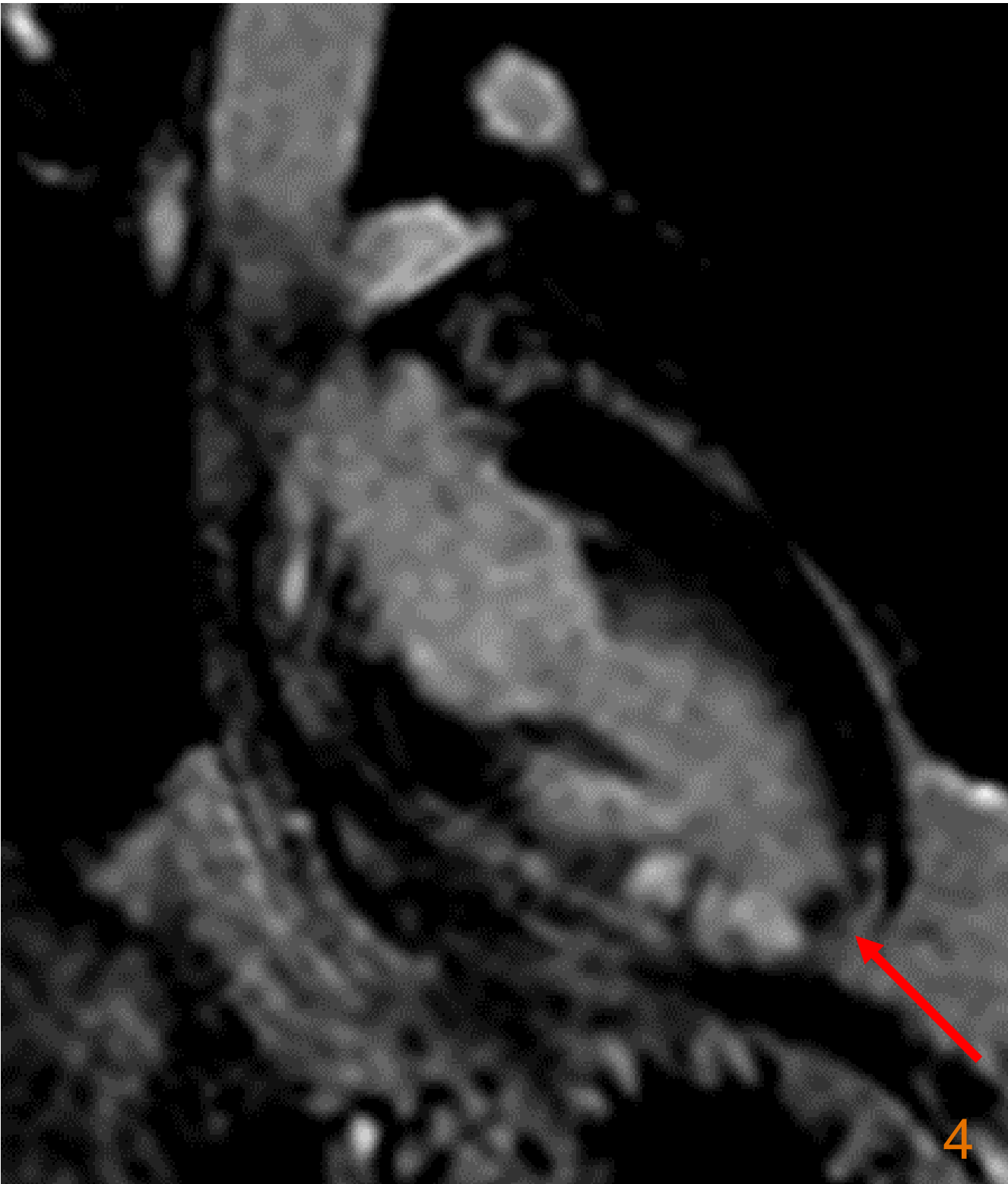
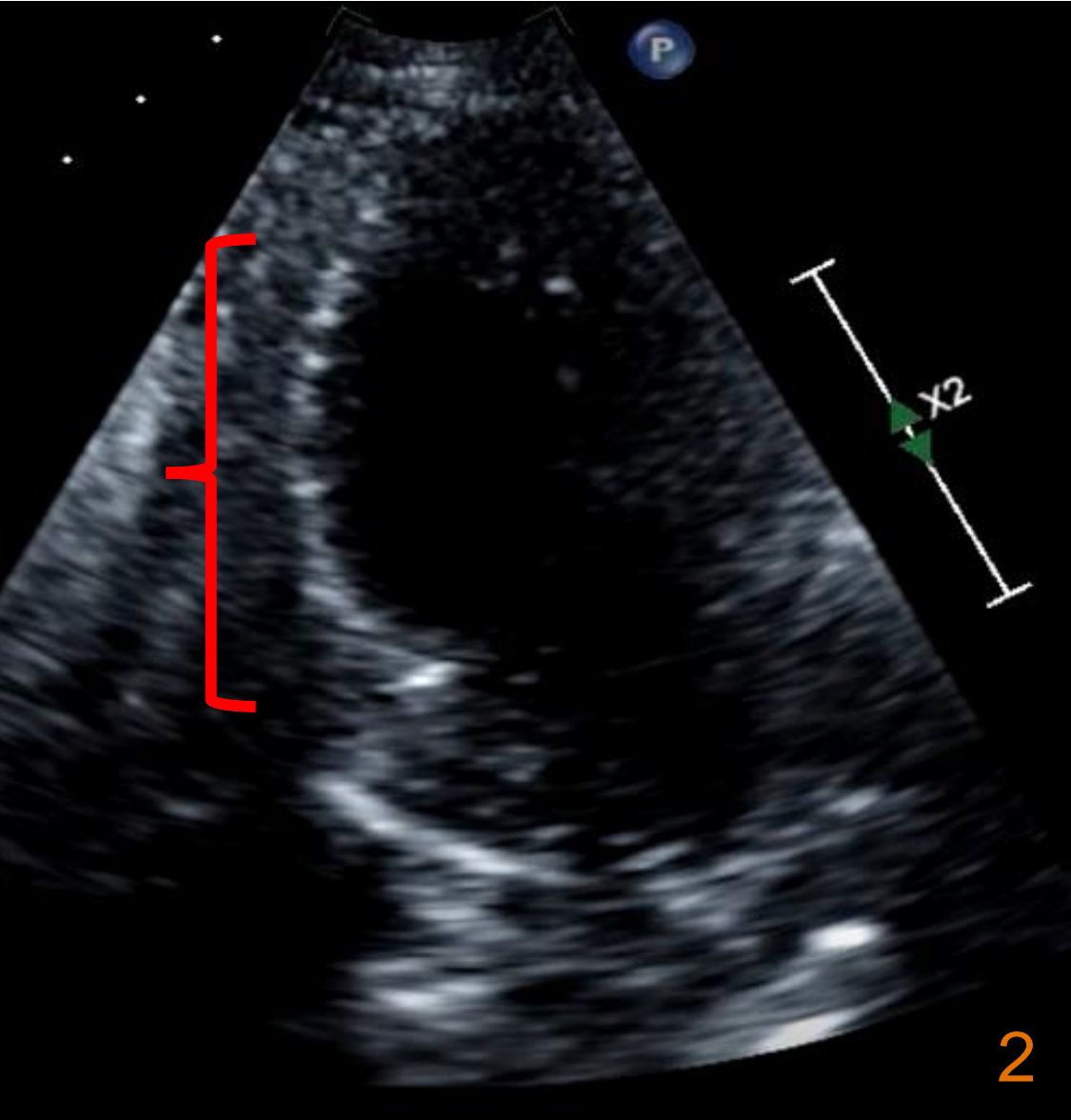
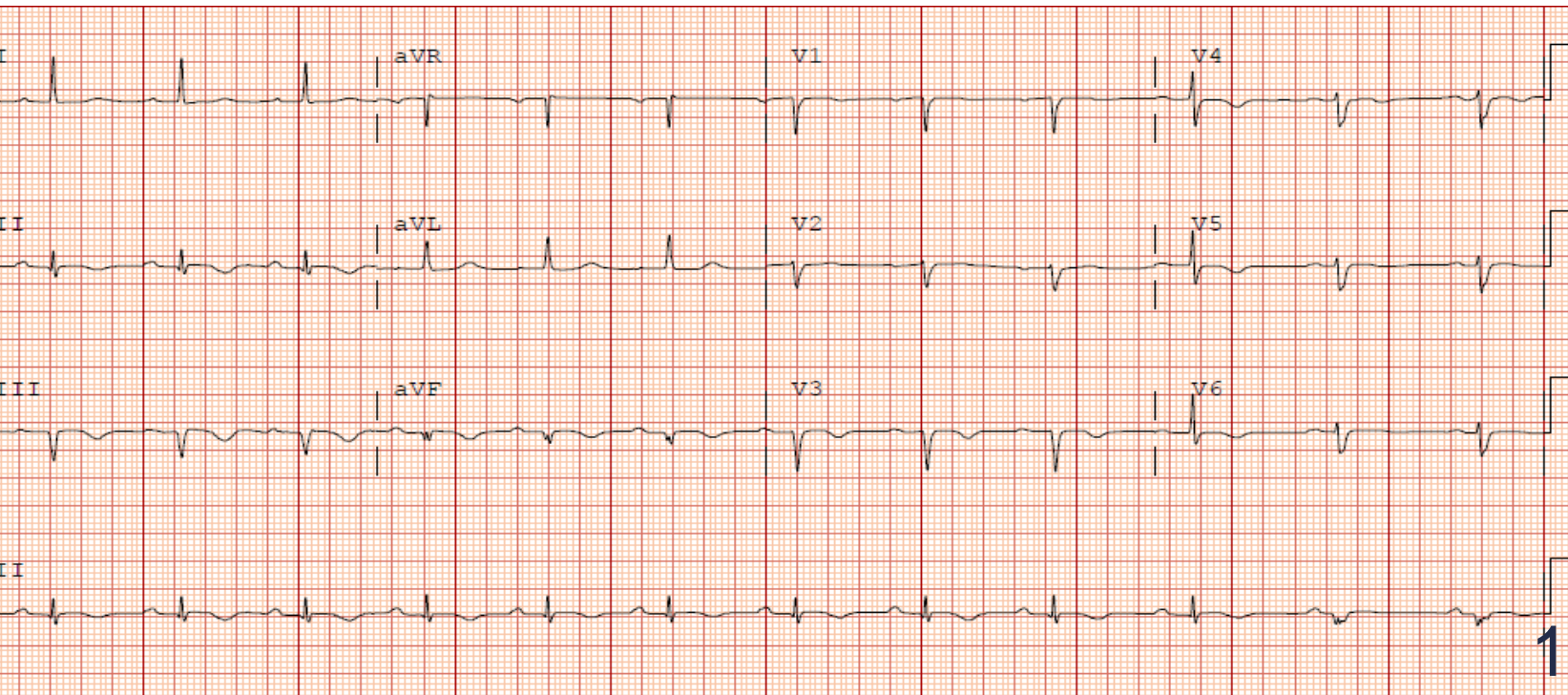
Nisha Hosadurg, MBBS, Patricia Rodriguez Lozano, MD, Nishtha Sodhi, MD, Christopher Kramer, MD; Division of Cardiovascular Medicine, University of Virginia.

## Background

Myocarditis can mimic myocardial infarction with non-obstructive coronary arteries (MINOCA), and is seen in about one-third of cases with that working diagnosis. Multimodal imaging, particularly with cardiac MRI (CMR), is essential in determining the etiology of MINOCA and excluding alternative diagnoses.

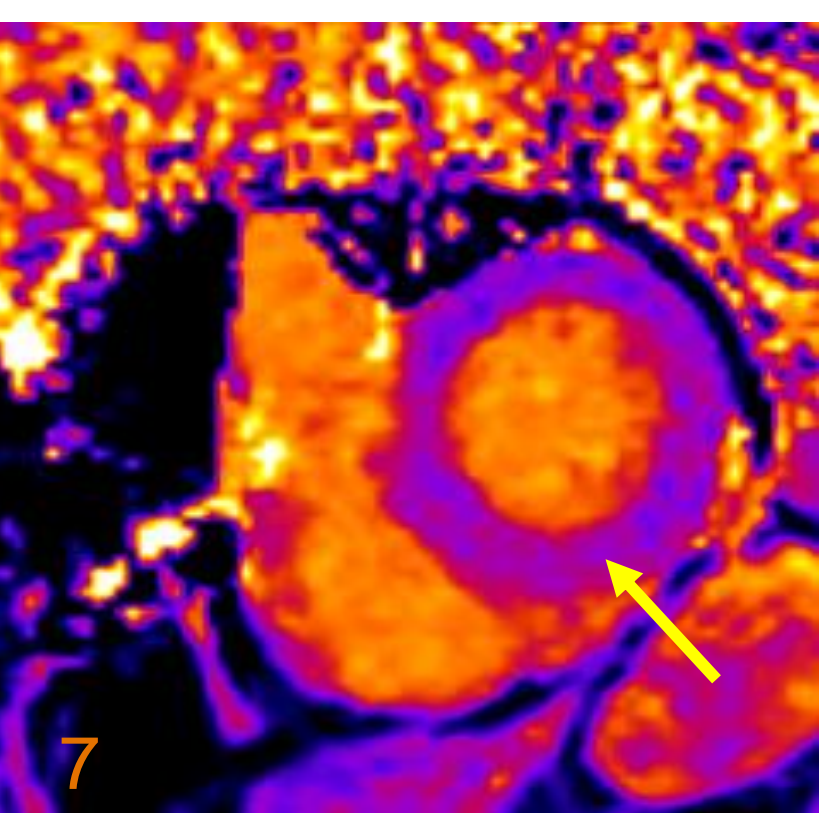
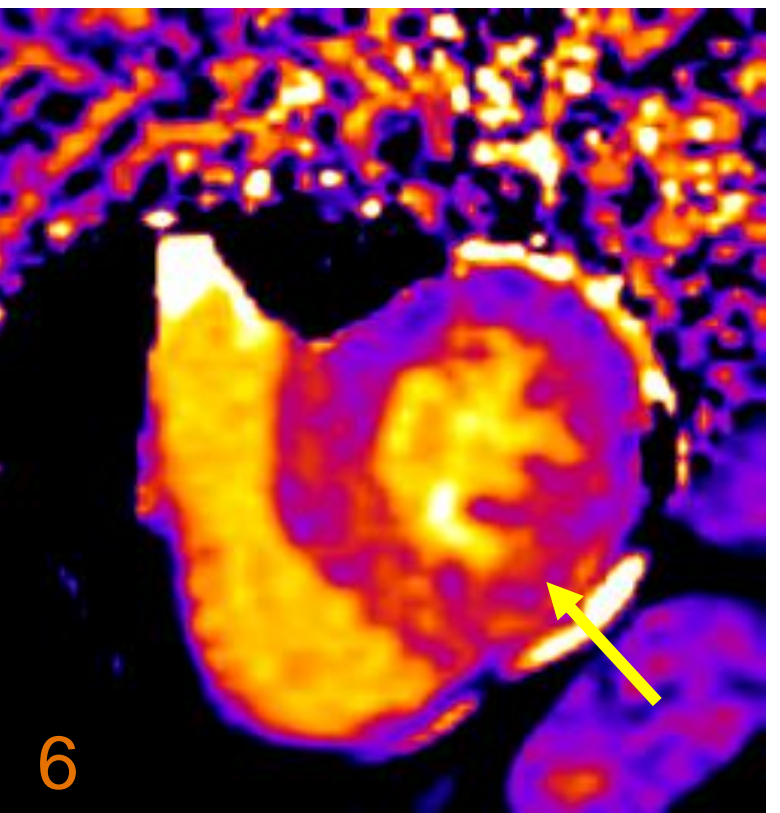
## Case

A 69 year old female, prior smoker with peripheral arterial disease, presented with 3 days of right flank pain, a troponin-I peak of 0.56 ng/mL (on presentation), and new inferior Q waves on EKG (Figure 1). Echocardiography showed a left ventricular EF of 45%, infero-apical hypokinesia and mid-inferior, infero-septal akinesia (Figure 2). Angiography showed no coronary artery disease. CT abdomen showed acute multi-focal splenic infarcts.



## Decision Making

As the 4<sup>th</sup> Universal AMI Criteria were met and she had no evidence of CAD, MINOCA was considered. CMR, done per recent ESC guidelines, showed mid-wall late gadolinium enhancement (LGE) in mid-inferior, infero-septal segments, patchy LGE in the infero-apical segments (Figure 3-4), increased extracellular volume (Figure 5), T1 (Figure 6) and T2 (Figure 7) mapping values consistent with myocarditis by the 2018 Lake Louise Criteria. We postulated that LV dysfunction due to myocarditis may have led to cardiac thromboemboli to the spleen with resultant infarcts.



## Conclusion

This case highlights the utility of CMR in the accurate diagnosis and reclassification of suspected MINOCA, a critical early step given the non-benign nature of true MINOCA.