

Cardiac magnetic resonance in patients with elevated troponin and normal coronary angiography.

Bhatia S¹, Anstine C¹, Jaffe AS², Gersh BJ², Chandrasekaran K², Foley TA^{2,3}, Hodge D⁴, Anavekar NS^{2,3}.

⊕ Author information

Abstract

BACKGROUND: Invasive angiography in the setting of cardiac troponin elevation may reveal non-obstructive coronary arteries leading to uncertainty in diagnosis. Cardiac MR (CMR) may aid in diagnosis, however, the spectrum of diagnostic findings in the patient presenting with symptoms of cardiac ischaemia, elevated cardiac biomarkers and a negative invasive coronary angiogram is yet to be completely described.

METHODS: We queried the Mayo Clinic, Rochester inpatient record from 1 January 2000 to 31 December 2016 to identify patients who: (1) had an elevated troponin T during admission, (2) underwent coronary angiography within 30 days of troponin T elevation which was considered negative for obstructive coronary arterial disease and (3) underwent CMR within 30 days of troponin T elevation. CMR diagnoses were classified as either (1) myocarditis, (2) small area myocardial infarction, (3) stress cardiomyopathy, (4) non-ischaemic cardiomyopathy or (5) normal.

RESULTS: Of 215 patients, the spectrum of disease seen on CMR was myocarditis (32%), small area infarction (22%), non-ischaemic cardiomyopathy (20%) and stress cardiomyopathy (9.3%).

CONCLUSION: In the largest single-centre study assessing the role of CMR in patients admitted with elevated troponin T with a non-obstructive coronary disease on an angiogram, small area infarction was seen in 22% of patients.