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Authors' contributions: GL identified the research question, with support from RFH. GL developed the statistical methods, with supervisory support by PMcE. PL and MH have over a number of years helped run the Stockport Cardiovascular Risk Factor Screening Programme, and collect and collate data that enabled the analysis to be carried out. GL wrote the first draft of the manuscript. All authors contributed to the writing of the paper and read and approved the final manuscript. The work leading to this report has been carried out as partial fulfilment of study for the degree of MD, University of Manchester, for GL. RFH is GL's supervisor for the named degree and P McElduff is GL's advisor

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IMAGES IN CARDIOLOGY

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Cardiac magnetic resonance directed intervention following right ventricular infarction

A 45 year old man presented 30 hours after suffering an inferior ST elevation myocardial infarction (MI). On admission he was in cardiogenic shock with signs of severe right ventricular compromise, a junctional rhythm and acute renal failure. Initial creatine kinase was 4000 iu/l and echocardiography confirmed an akinetic right ventricle and inferior wall of the left ventricle. He was stabilised with supportive medical treatment and a cardiac magnetic resonance (CMR) scan performed to look for viability in the infarct zone and ischaemia in the non-infarcted territory. The late gadolinium images provided a graphic illustration of a right ventricular full thickness MI with no evidence of viability. The dobutamine stress MR images revealed reversible ischaemia in the territory supplied by the left anterior descending artery. This information was used to recommend interventional therapy only to the territory that evidence suggested would benefit from revascularisation. In this case, the right coronary artery was occluded at angiography and, since this supplied non-viable myocardium, it need not be opened. The left anterior descending artery had a severe stenosis and, in view of the reversible ischaemia, revascularisation was recommended. This case provides a rare image of right ventricular infarction and illustrates the valuable use of CMR in directing appropriate interventional therapy.

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