


**CLINICAL VIGNETTE**

Oedema in acute myocardial infarction

Chiara Buccarelli-Ducci¹,² and Dudley J. Pennell¹,²

¹Cardiovascular Magnetic Resonance Unit, Royal Brompton Hospital, Sydney Street, London SW3 6NP, UK and ²Imperial College, National Heart and Lung Institute, London, UK

* Corresponding author. Tel: +44 20 7351 8819, Fax: +44 20 7351 8816, Email: c.bucciarelli-ducci@rbht.nhs.uk

A 61-year-old man presented with inferior ST-segment elevation acute myocardial infarction and underwent prompt thrombolysis. Subsequent invasive coronary angiography revealed an occluded right coronary and no significant epicardial stenosis in the left coronary system. Cardiovascular magnetic resonance (CMR) with a T2-weighted sequence showed a large well-demarcated area of high signal intensity (bright signal) consistent with myocardial oedema of the basal inferior wall (Panel A, single white arrowhead), of the pericardium (Panel A, black asterisk), and of the right ventricle (Panel A, double white arrowhead). Imaging with an inversion recovery T1-weighted sequence 10 min after intravenous gadolinium showed enhancement indicating transmural inferior myocardial infarction (Panel B, single black arrowhead) with a complex pattern of microvascular obstruction (Panel B, white asterisks) and right ventricular myocardial infarction (Panel B, double black arrowhead). The limited bright signal observed in the mid-wall anteroseptum (Panel B, white arrows) represents the membranous portion of the interventricular septum.

The clinical course of the patient was subsequently uneventful and he was discharged with medical therapy after 1 week. CMR is unique in depicting the intramyocardial tissue characteristics of acute infarction.

Panel A. Myocardial oedema of the basal inferior wall.

Panel B. Transmural inferior myocardial infarction with a complex pattern of microvascular obstruction.