

Cardiac Imaging

Arrhythmogenic Right Ventricular Dysplasia with Extensive Myocardial Fibrosis and Concomitant Coronary Artery Ectasia

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A 63-year-old man with a history of syncope was referred for cardiovascular magnetic resonance (CMR) evaluation. He had previously suffered two cardiac arrests and declined invasive evaluation. Recurrent ventricular tachycardia was controlled by amiodarone. CMR revealed arrhythmogenic right ventricular dysplasia (ARVD) and ectatic coronaries (Figures 1 and 2).

Main findings in ARVD include global and local dilation of the right ventricle, aneurysms, loss of myocardium and replacement by adipose and/or fibrous tissue.¹ CMR is able to identify these abnormalities; however, the coexistence of ARVD morphology and ectatic coronaries in a single case has not been previously reported.

Ectatic coronaries can be thrombosed

or, rarely, ruptured and can contribute to myocardial infarction in some cases. CMR angiography is a reliable non-invasive technique for evaluation of ectatic coronaries.² In this patient the main clinical finding was recurrent ventricular tachycardia. The coexistence of ectatic coronaries was an incidental finding.

References

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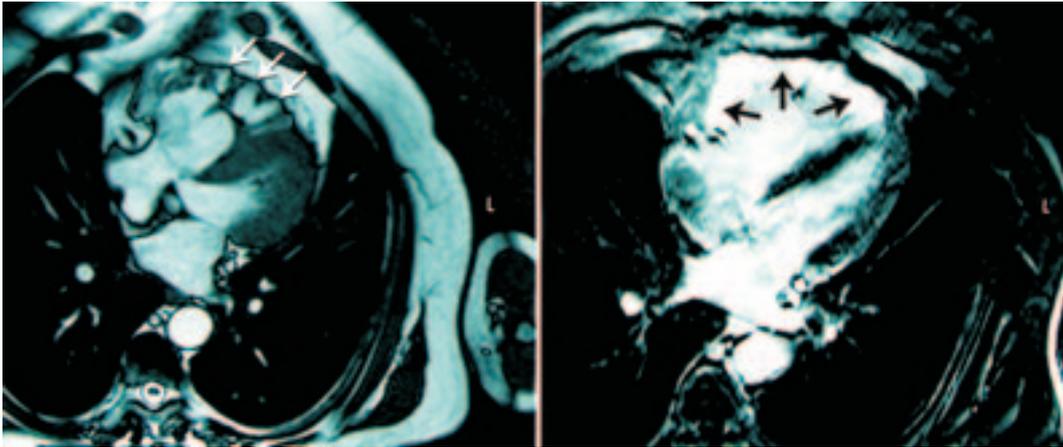


Figure 1. Balanced-FFE four-chamber view (left) shows global enlargement of the right ventricle (RV) with multiple aneurysms (arrows) and normal left ventricle (LV). RV and LV ejection fractions were 25% and 60%, respectively. In four-chamber view following the intravenous injection of gadolinium-DTPA (right), late enhancement was observed in the RV free wall, consistent with extensive myocardial fibrosis (arrows).

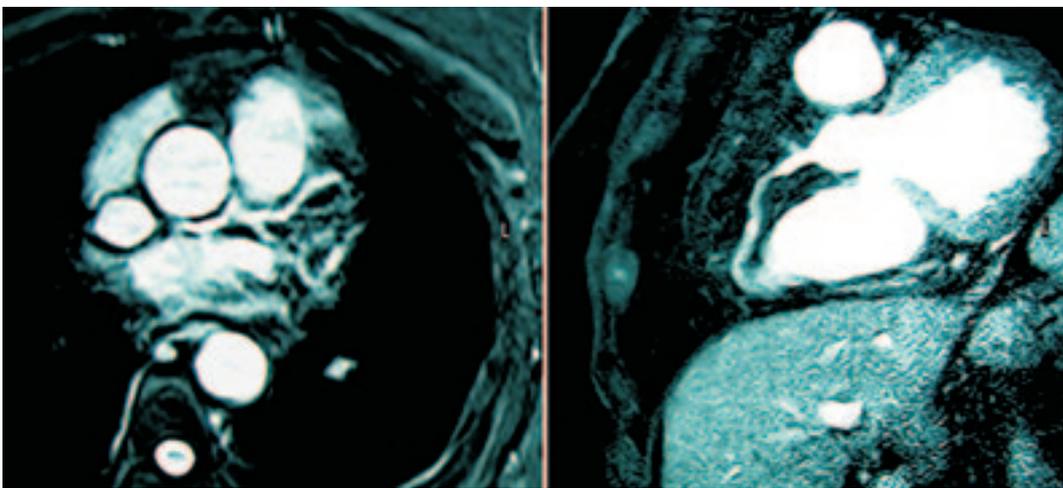


Figure 2. 3D-free breathing CMR angiography revealed huge ectatic coronaries. (LAD left and RCA right).