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Images in Cardiology: Identical Twins with Arrhythmogenic Right Ventricular Dysplasia/Cardiomyopathy

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A 37-year-old man was hospitalized because of a syncopal episode. The echocardiogram (ECG) showed T wave inversions in V1–V6 and epsilon wave in V1 (Fig. 1a). An ECG disclosed severe right ventricular enlargement and dysfunction. A cardiac magnetic resonance imaging (MRI) confirmed the presence of severe right ventricular dysplasia with mild left ventricular involvement (Fig. 1b). A cardioverter defibrillator was implanted. This patient had an asymptomatic twin brother. Interestingly, the ECG showed low negative T-waves in V1 to V4 (Fig. 2a). An ECG disclosed slight right ventricular enlargement. A cardiac MRI confirmed the presence of right ventricular dysplasia (Fig. 2b).¹

Reference

1. Solenthaler M, Ritter M, Candinas R, Jenni R, Amann W: Arrhythmogenic right ventricular dysplasia in identical twins. *Am J Cardiol* 1994;74:303–304

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FIG. 1 (A) Echocardiogram of the patient showing T wave inversions in V1 through V6 and epsilon waves in V1 (arrow). (B) Short-axis gradient-echo MRI of the patient demonstrating a markedly dilated right ventricle with fatty infiltration with mild left ventricular involvement (arrows).

FIG. 2 (A) Electrocardiogram of the identical twin brother showing low negative T waves in V1 to V4. (B) Short-axis gradient-echo MRI of the identical twin brother demonstrating mild right ventricle enlargement with free wall thinning and fatty infiltration (arrows).