

Cardiovascular imaging in patients with suspected arrhythmogenic right ventricular cardiomyopathy

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Arrhythmogenic Right Ventricular Cardiomyopathy (ARVC) is a hereditary cardiomyopathy that is histologically characterized by progressive replacement of the right ventricular myocardial tissue by fibrofatty tissue and usually manifests from the second to fourth decade of life with ventricular arrhythmias origin from the right ventricle, sudden cardiac death and / or abnormal contractility of the right ventricle. Today, it is known that this replacement of normal myocardial of RV with fibrofatty tissues the result of the mutation of five genes encoding heart desmosome proteins responsible for connecting cardiomyocytes.¹⁻⁴ Typical morphological features of ARVC are regional contractility disorders, aneurysm, or dyssynchrony of the right ventricle contractions. These abnormalities are typically observed in predilection areas involving the subtricuspidal area, the free wall of basal segment RV and the posterolateral wall of LV. The 2010 Revised Task Force criteria for ARVD clearly highlighted the importance of cardiovascular imaging in diagnosing this clinical entity, primarily keeping in mind 2D echocardiography and cardiac magnetic resonance. They have become widely available, especially 2D echocardiography, are non-invasive and do not expose patients to ionizing radiation. Although not included in the diagnostic criteria, studies confirm that echocardiographic imaging methods using a TDI or speckle tracking are tool which allow us to notice early changes in RV function. Cardiac magnetic resonance has the ability of 3D visualization and high spatial resolution, and also provides both morphological and functional characterization as well as estimation of fibrofatty replacement, and is the gold standard for final diagnosis, while 2D echocardiography serves in clinical follow-up and has shown significant variability in the rate of progression disease.

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LITERATURE

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