

Arrhythmogenic right ventricular cardiomyopathy without arrhythmias?

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KEYWORDS: arrhythmogenic right ventricular cardiomyopathy, arrhythmias, sudden cardiac death.

CITATION: *Cardiol Croat.* 2019;14(9-10):257-8. | <https://doi.org/10.15836/ccar2019.257>

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Introduction: Arrhythmogenic right ventricular cardiomyopathy (ARVC) is a rare cardiovascular disease that predisposes to ventricular arrhythmias potentially leading to sudden cardiac death (SCD). In 1994 and 2010, an International Task Force document proposed guidelines for the standardized diagnosis of ARVC based on electrocardiographic (ECG), arrhythmic, morphological, histopathologic, and clinical-genetic factors.¹⁻³ Our case report shows how important is to diagnose this disease, because the patients with ARVC should undergo lifelong clinical follow-up to periodically evaluate new onset or worsening of symptoms, progression of morphological and/or functional ventricular abnormalities, and ventricular arrhythmias in order to reassess the risk of SCD.

Case report: 53-year-old man with history of arterial hypertension and hyperlipidemia was treated at cardiac dispensary because of bad control of blood pressure. He was asymptomatic and his family history for SCD was negative. ECG demonstrated normal sinus rhythm with complete right bundle branch block and transthoracic echocardiography (TTE) was recommended. The left ventricle had normal dimension with normal ejection fraction (EF), right ventricle was enlarged (PLAX 34mm) with bulging of apical segment RV and thickness of trabecular muscles (**Figure 1**). Cardiac MRI presented imaging criteria for ARVC with reduced EF RV 35%. More detailed analysis of ECG showed epsilon wave in lead V2 (**Figure 2**). The 72-hours Holter electrocardiogram monitoring did not show any cardiac arrhythmias, same as during the exercise test. The patient was referred to University Clinic to make additional cardiological examinations. The ventricular late potential test was positive. Programmed stimulation of the left ventricle was made - without causing arrhythmia. The diagnosis of ARVC was confirmed – one major criteria on TTE and on cardiac MRI with present epsilon wave on ECG. The risk stratification

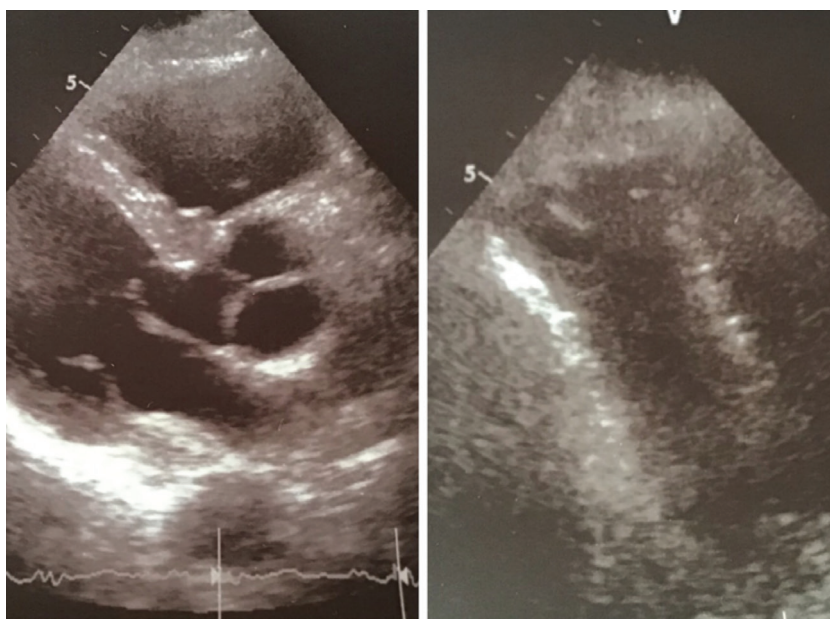


FIGURE 1. Enlargement of the right ventricle with bulging of the apical segment.

RECEIVED:
August 27, 2019

ACCEPTED:
September 16, 2019



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was made, the patient had low risk and the therapy with beta blocker was prescribed with limitation of physical activity and regular follow-up. Genetic testing is planned.

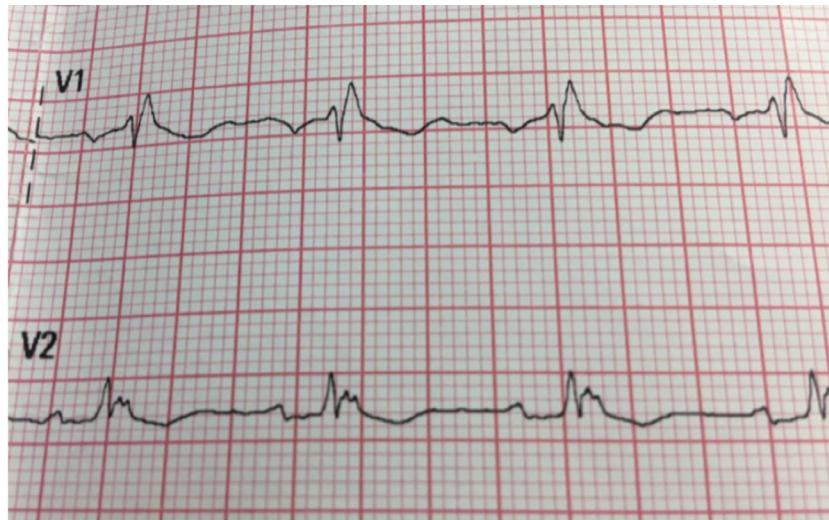


FIGURE 2. Epsilon wave visible in lead V2.

Conclusion: ARVC without arrhythmias is rare and easily misdiagnosed. The presentation can be non-specific, as was in our case, making the diagnosis of this condition challenging.

LITERATURE

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