

Poster presentation

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Fibrofatty replacement of myocardium and diskinetic areas in the right ventricle as nonspecific imaging findings - comparison with arrhythmogenic right ventricular dysplasia/cardiomyopathy patients

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Introduction

Nowadays, Cardiovascular MR imaging (CMR) is frequently indicated to evaluate patients with arrhythmias in order to diagnose Arrhythmogenic Right Ventricular Dysplasia/Cardiomyopathy (ARVD/C). Detection of intramyocardial fat and/or fibrosis in the right ventricle (RV) - major criteria in tissue characterization to diagnosis ARVD/C - and right ventricular akinetic or dyskinetic areas with diastolic bulging - major criteria in regional function - is possible because of the MR ability of excellent tissue characterization, besides being gold standard in ventricular functional analysis.

However, with an increase in the number of CMR examinations, fatty replacement of the RV myocardium and diskinetic areas of the RV apical region are imaging findings that we might find in patients without symptoms or arrhythmias as a normal variant.

Purpose

The purpose of this pictorial essay is to demonstrate CMR examinations from patients with clinically and symptomatic ARVD/C, and others with positive imaging findings for ARVD/C without arrhythmia or suspected ARVD/C, collected from two different imaging centers.

Methods

Two doctors in each institution analyzed routine cardiovascular MR examinations performed between July 2007 and September 2009. Two reviewers then correlate MRI findings with clinical history and other cardiovascular exams to indicate the presence of ARVD or not.

Results

Fibrofatty replacement is unusual with wide spectrum of findings in both categories.

RV apical dyskinesia is frequently reported, but it's a common finding in non-ARVD patients. Correlation with clinical history and ECG data may help referring cardiologist. Sometimes, repeat CMR may provide additional information.

Conclusion

Nonspecific CMR findings such as fibrofatty replacement of myocardium and RV dyskinesia can be found in ARVD/C patients, completing diagnostic investigation. In other patients, the importance of these findings must be discussed and investigated.