Atrial fibrillation in arrhythmogenic right ventricular cardiomyopathy and its association with ventricular arrhythmias.

Authors:
M A Baturova¹, A Svensson², J H Svendsen³, H Bundgaard³, J Carlson⁴, P G Platonov⁴, ¹Department of Cardiology, Clinical Sciences, Lund University, Lund, Sweden, Research Park, St.Petersburg State University - St.Petersburg - Russian Federation, ²Linkoping University, Department of Cardiology and Department of Medical and Health Sciences - Linkoping - Sweden, ³Rigshospitalet - Copenhagen University Hospital, Department of Cardiology, The Heart Centre - Copenhagen - Denmark, ⁴Lund University, Department of Cardiology, Clinical Sciences - Lund - Sweden,

Topic(s):
Atrial Fibrillation - Epidemiology, Prognosis, Outcome

Citation:
Background: Recent studies in arrhythmogenic right ventricular cardiomyopathy (ARVC) have drawn attention to atrial arrhythmias.

Purpose: We aimed to assess the prevalence of atrial fibrillation (AF) and its association with future ventricular tachyarrhythmias in ARVC patients.

Methods: Study sample comprised 78 patients with a definite ARVC diagnosis according to the 2010 Task Force criteria (TFC2010) from three tertiary care centers participating in the Nordic ARVC Registry (33% females, median age at ARVC diagnosis 41 years [interquartile range 25%-75% (IQR) 32-55 years]). The information about AF and VT/VF episodes was obtained from the ARVC Registry and from the electronic ECG databases which contains all ECG recordings in the hospital catchment areas from 1988.

Results: AF was diagnosed in 26 patients (33%): In 14 patients before ARVC diagnosis (18%) and in 12 patients during follow-up (15%). The median age at AF onset was 54 years (IQR 33-63 years). The only independent factor associated with AF at the time of ARVC diagnosis was previous ventricular tachycardias/fibrillation (VT/VF) (odds ratio 7.71, 95% confidence interval (CI) 1.56-28.38, p=0.012). AF diagnosed before the ARVC diagnosis was established predicted VT/VF during follow-up (univariate hazard ratio (HR) 2.41; 95% CI 1.06-5.46, p=0.035; see Figure).

Conclusion: AF is a common arrhythmia in ARVC patients. AF significantly increases the risk of VT/VF in ARVC patients.
Abstract: Atrial fibrillation in arrhythmogenic right ventricular cardiomyopathy and its association with ventricular arrhythmias.

Authors: M A Baturova, A Svensson, J H Svendsen, H Bundgaard, J Carlson, P G Platonov

Department of Cardiology, Clinical Sciences, Lund University, Lund, Sweden, Research Park, St. Petersburg State University – St. Petersburg – Russian Federation, Linkoping University, Department of Cardiology and Department of Medical and Health Sciences – Linkoping – Sweden, Rigshospitalet – Copenhagen University Hospital, Department of Cardiology, The Heart Centre – Copenhagen – Denmark, Lund University, Department of Cardiology, Clinical Sciences – Lund – Sweden.

Topic(s): Atrial Fibrillation – Epidemiology, Prognosis, Outcome

Background: Recent studies in arrhythmogenic right ventricular cardiomyopathy (ARVC) have drawn attention to atrial arrhythmias.

Purpose: We aimed to assess the prevalence of atrial fibrillation (AF) and its association with future ventricular tachyarrhythmias in ARVC patients.

Methods: Study sample comprised 78 patients with a definite ARVC diagnosis according to the 2010 Task Force criteria (TFC2010) from three tertiary care centers participating in the Nordic ARVC Registry (33% females, median age at ARVC diagnosis 41 years [interquartile range 25%–75% (IQR) 32–55 years]). The information about AF and VT/VF episodes was obtained from the ARVC Registry and from the electronic ECG databases which contains all ECG recordings in the hospital catchment areas from 1988.

Results: AF was diagnosed in 26 patients (33%): In 14 patients before ARVC diagnosis (18%) and in 12 patients during follow-up (15%). The median age at AF onset was 54 years (IQR 33–63 years). The only independent factor associated with AF at the time of ARVC diagnosis was previous ventricular tachycardias/fibrillation (VT/VF) (odds ratio 7.71, 95% confidence interval (CI) 1.56–28.38, p=0.012). AF diagnosed before the ARVC diagnosis was established predicted VT/VF during follow-up (univariate hazard ratio (HR) 2.41; 95% CI 1.06–5.46, p=0.035; see Figure).

Conclusion: AF is a common arrhythmia in ARVC patients. AF significantly increases the risk of VT/VF in ARVC patients.