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Original Article

Differences in Quality of Life, Anxiety and Depression in Patients with Paroxysmal Atrial Fibrillation and Common Forms of Atrioventricular Reentry Supraventricular Tachycardias

Louiza Lioni[1], MD, Konstantinos Vlachos[1], MD, Konstantinos P. Letsas[1], MD, FESC, Michael Efremidis[1], MD, Dimitrios Karlis[1], MD, Dimitrios Asvestas[1], MD, Vasilios Kareliotis[1], MD, Sotirios Xydonas[1], MD, Nikolaos Dimopoulos[2], MD, Panagiotis Korantzopoulos[3], MD, PhD, Athanasios Trikas[4], MD, Antonios Sideris[1], MD.

[1]Second Department of Cardiology, Laboratory of Cardiac Electrophysiology, "Evangelismos" General Hospital of Athens, Greece.
[2]"Dromokaiteio" Psychiatric Hospital of Attica, Greece.
[3]Department of Cardiology, University Hospital of Ioannina, Greece.
[4]Department of Cardiology, "ELPIS" General Hospital of Athens, Greece.

Address for Correspondence: Konstantinos P. Letsas, MD, FESC, Second Department of Cardiology, Laboratory of Cardiac Electrophysiology, Evangelismos General Hospital of Athens, 10676, Athens, Greece. E-mail: k.letsas@mail.gr

Abstract

Introduction: The aim of this study was to evaluate the differences in quality of life and psychosocial stress parameters among patients with paroxysmal atrial fibrillation (AF) and common forms of atrioventricular reentry supraventricular tachycardias (SVTs).

Methods and Results: The total study population included 106 patients, 54 patients with paroxysmal AF (32 males, age 56.64±12.50 years) and 52 with SVTs (25 males, age 40.46±14.96 years). General health ($p<0.01$), physical function ($p=0.004$), role emotion ($p=0.002$) and role physical ($p<0.01$) scores were lower in patients who suffered AF. SF-36 physical and mental health summary measures were also significantly lower in the AF group compared to those in SVT group ($p<0.01$ and $p=0.001$, respectively). Lower SF-36 total score was observed in patients with AF compared to those with SVTs ($p<0.01$). Comparing the anxiety and depression scores all the values were higher in patients with AF. Higher STAI-state scores ($p<0.01$), STAI-trait scores ($p=0.039$) and BDI scores ($p=0.077$) were seen in patients who suffered AF comparing to those with SVTs.

Conclusions Quality of life is significantly impaired and the level of anxiety is significantly higher in patients with AF comparing to those with common forms of SVTs.

Key Words: Quality of life; anxiety; depression; supraventricular tachycardias; atrial fibrillation.

Introduction

Atrial Fibrillation (AF) is associated with a more severe impairment in quality of life (QoL) compared to general population [1]. AF imposes a significant psychosocial burden including depression and anxiety in approximately one third of patients [2]. Psychosocial stress can be elicited by AF episodes and might also predispose to AF initiation. The Framingham Offspring Study demonstrated that tension was an independent predictor of coronary heart disease, AF and mortality in men [3]. Several studies have demonstrated an improvement in QoL after left atrial catheter ablation of paroxysmal AF [4]. Atrioventricular nodal reentry tachycardia (AVNRT) and atrioventricular reentry tachycardia via an accessory pathway (AVRT) are most common types of regular supraventricular tachycardias (SVTs). Due to the paroxysmal nature of the disease, the QoL is increasingly impaired over time [5,6]. SVTs are associated with anxiety in approximately 20% of patients [7]. Patients with SVTs treated with catheter ablation show significant improvement in physical, emotional and social indexes of their health-related QoL [8] and reduction in anxiety symptoms [9]. The aim of this study was to evaluate the differences in QoL and psychosocial stress parameters among patients with paroxysmal AF and common forms of SVT.

Methods

Patients

The study population consisted of consecutive patients with symptomatic, drug-refractory paroxysmal AF or symptomatic SVTs (AVNRT or AVRT) who referred for catheter ablation. Patients were classified as having paroxysmal AF according to the current guidelines [10]. Exclusion criteria were age <18years, presence of physical and/or mental insufficiency, left atrial diameter >50mm, intracardiac thrombi documented by transesophageal echocardiography, systolic heart failure [left ventricular ejection fraction (LVEF) <45%, NYHA III-IV], previous ablation for AF, persistent AF, inadequate follow-up and/or inability to provide informed consent. Demographic and clinical characteristics were collected from all patients. Transthoracic and transeshophageal echocardiography was performed in all subjects. LVEF were recorded in all patients. The study protocol was approved by the hospital's Ethics Committee and written informed consent was obtained from all patients.

Catheter ablation procedures

Left atrial ablation for paroxysmal AF has been described in details elsewhere [11]. In brief, following the transseptal puncture, the three-dimensional geometry of the left atrium was reconstructed using the CARTO 3 system (Biosense Webster, Inc., Diamond Bar, Calif., USA) for isolation of large atrial areas around both ipsilateral pulmonary veins with a 3.5-mm-tip ablation catheter (Thermo Cool Navi-Star, Biosense Webster, Inc., Diamond Bar, Calif., USA). The power settings of the energy were individualized depending on the ablation sites. The end point of electrical pulmonary antral isolation was the absence or dissociation of potentials in the isolated area as documented with the circular mapping catheter (Lasso, Biosense Webster, Inc., Diamond Bar, Calif., USA). The diagnosis of common type AVNRT and AVRT was established using common criteria and diagnostic manoeuvres [12]. The ablation procedure for both SVTs has been previously described [13,14]. Left-sided accessory pathways were mapped using the transaotric approach via the femoral artery under systemic anticoagulation.

Evaluation of QoL, anxiety and depression

All patients were evaluated for QoL, anxiety and depression using specific questionnaires 24h before ablation. The SF-36 is a multipurpose, short-form health survey with 36 questions that