EFFICACY OF ANTIARRHYTHMIC DRUGS FOR ATRIAL FIBRILLATION IS DIFFERENTLY DEPENDENT ON LEFT ATRIAL REMODELING

ACC Moderated Poster Contributions
McCormick Place South, Hall A
Monday, March 26, 2012, 11:00 a.m.-Noon

Session Title: Arrhythmias: AF/SVT: Continuing Role of Pharmacologic Therapy for Atrial Arrhythmias
Abstract Category: 16. Arrhythmias: AF/SVT
Presentation Number: 1238-257

Authors: Hoyoun Woo, Hye Jin Hwang, Jaemin Shim, Jae-Sun Uhm, Boyoung Joung, Hui-Nam Pak, Moon-Hyung Lee, Yonsei University Health System, Seoul, South Korea

Background: The association between the efficacy of antiarrhythmic drugs (AADs) and left atrial (LA) size remains unclear. However, the association between the efficacy of AADs and LA size remains unclear, whereas most of AADs have been well known to be ineffective to prevent ventricular arrhythmias in patients with reduced LV function. We assessed the hypothesis that the efficacy of AADs is dependent on LA size.

Methods: Among 964 patients in AF registry of Severane hospital, 383 patients with symptomatic paroxysmal or persistent AF (282 male, 59 ± 12 years), who were treated with class Ic drug (n=343; flecainide, n=336 or propafenone, n=54) or amiodarone (n=155), were finally enrolled. AADs failure was defined as AF recurrence documented by 24 hr Holter monitoring or ECG every 4 months during follow-up period of 4 years.

Results: 165 of 341 (48%) did not respond to class Ic drug, and 92 of 155 (59%) did not to amiodarone. Class Ic drug failure group had more persistent AF (39 % vs 14%, p<0.01), larger LA size (42 ± 7 vs 40 ± 6, p<0.01) and more LA AP diameter (LAd) ≥41 mm (61 % vs 44 %, p<0.01). There was no statistical difference in age, sex, diabetes, hypertension, stroke, hs CRP, TSH, and echocardiographic parameters including LV chamber size, EF, E, A, and E/E' (all p >0.05). Amiodarone failure group had more persistent AF (49 % vs 29%, p<0.01) but was not related to LA size (p>0.05). By multivariate analysis, persistent AF (OR 4.5, 95% CI: 2.588~7.823, p<0.01) and LAd ≥41mm (OR 1.7, 95% CI: 1.057~2.703, p=0.028) were independent predictors of class Ic drug failure, whereas only persistent AF was an independent predictor of amiodarone failure. In subanalysis, the patients treated with class Ic drug were divided into 4 groups (group 1: paroxysmal AF with LAd <41mm, group 2: paroxysmal AF with LAd ≥41mm, group 3: persistent AF with LAd <41mm and persistent AF with LAd ≥41mm). Class Ic drug failure rates were 33%, 45%, 70% and 77%, respectively (p<0.001).

Conclusions: The efficacy of class Ic AADs was dependent on LA size and AF type synergistically, whereas the efficacy of amiodarone was not associated with LA size.