USE OF N-3 POLYUNSATURATED FATTY ACIDS TO MAINTAIN SINUS RHYTHM AFTER CONVERSION FROM PERSISTENT ATRIAL FIBRILLATION. A PROSPECTIVE RANDOMIZED STUDY

ACC Poster Contributions
Georgia World Congress Center, Hall B5
Sunday, March 14, 2010, 9:30 a.m.-10:30 a.m.

Session Title: Clinical Electrophysiology–Supraventricular Arrhythmias
Abstract Category: Clinical Electrophysiology–Supraventricular Arrhythmias
Presentation Number: 1023-124

Authors: Savina Nodari, Marco Triggiani, Anna Foresti, Giuseppe Milesi, Nicola Berlinghieri, Mihai Gheorghiade, Livio Dei Cas, Department of Experimental and Applied Medicine-University of Brescia, Brescia, Italy

Background: The risk of atrial fibrillation recurrences (AFR) after cardioversion (CV) is one of the most important problems in the treatment of this arrhythmia. Literature data showed that amiodarone is the most effective antiarrhythmic drug in sinus rhythm maintenance. Several studies have recently demonstrated that also non-antiarrhythmic drugs as RAS inhibitors (RASI) and n-3 PUFAs can prevent atrial remodeling and reduce AF occurrence or recurrences. At present only few evidences suggested the beneficial effect of n-3PUFAS in AF. This study has evaluated the role of n-3 PUFAs in addition to amiodarone and RASI on maintaining sinus rhythm (SR) after conversion from persistent AF.

Methods: To be included in this study, patients (pts) must have persistent AF > one month, at least one AF relapse after previous electrical or pharmacological CV and to be already in therapy with amiodarone and RASI. The pts were randomized to placebo or n-3PUFAs 1gr/day and scheduled for electrical CV after achievement of INR>2 for 4 consecutive weekly controls. After procedure pts were monitored by telemetry for at least 6 hours. The primary end point was the length of time to a first recurrence of AF and the number of early (up to 1 month) and late AFR (3, 6, 12 months) detected by electrocardiogram and 24-hour Holter recording.

Results: From a total of 254 consecutive pts with persistent AF, 199 fulfilling inclusion/exclusion criteria were analyzed using an intention-to-treat analysis, 100 (69.7 + 6.5 y) randomized to n-3 PUFAs and 99 (69 + 9.2 y) to placebo. No significant differences were found between study groups for clinical, demographic, echocardiographic characteristics and for duration and etiology of AF. After 1 month of follow-up the relapses rate in the n-3 PUFAs group was significantly lower (6/100, 6%) than in the placebo group (12/99, 12.1%) \( p<0.01 \). The Kaplan-Meier analysis of time to first recurrence during the follow-up (median time 287 days; range 78 to 712) showed that pts treated with n-3 PUFAs had a greater probability of maintaining SR than control group (at one year 60% vs. 37%, respectively; \( p=0.007 \)).

Conclusions: n-3 PUFAs may be considered a useful therapy to reduce AFR after conversion from persistent AF.