

 **CARDIAC ARRHYTHMIAS**

N-3 POLY-UNSATURATED FATTY ACIDS FOR THE PREVENTION OF ATRIAL FIBRILLATION RECURRENCE AFTER ELECTRICAL CARDIOVERSION OF CHRONIC PERSISTENT ATRIAL FIBRILLATION. A RANDOMIZED, DOUBLE-BLIND, MULTICENTRE STUDY.

ACC Poster Contributions

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Background: Persistent atrial fibrillation (AF) can be successfully terminated by Direct Current electrical cardioversion (ECV). However the arrhythmia recurs in the majority of the cases despite treatment with antiarrhythmic drugs. Several experimental and clinical studies showed that n-3 poly-unsaturated fatty acids (PUFAs) could have antiarrhythmic properties even at atrial level. The aim of this multicentre study was to assess if oral PUFAs supplementation in patients undergoing ECV for persistent AF could reduce the recurrence rate of the arrhythmia.

Methods: A total of 204 patients (mean age 69.3 years, 33% females) with persistent AF were double blindly randomized to receive 2 grams a day of PUFAs (104 patients) or placebo (100 patients), beginning at least one week before ECV until the end of the study. The use of other antiarrhythmic drugs was left to the local medical decision. All the patients were followed up for 6 months and their rhythm was assessed both by trans-telephonic monitoring and clinical visits. Primary end point was the recurrence rate of AF.

Results: After ECV (in case of a first unsuccessful ECV a second one could be attempted after modification of antiarrhythmic treatment) 187 patients (91.7%) were in sinus rhythm: 95 (91.4%) patients on PUFAs and 92 (92.0%) patients on placebo ($p=NS$). Atrial fibrillation relapsed in 56 (58.9%) of the PUFAs patients and in 47 (51.1%) of the placebo patients ($p=0.28$). The mean time to AF recurrence was 83+8 days in the PUFAs group and 106+9 days in the placebo group ($p=0.29$). The absence of difference between the two groups of patients in the arrhythmia recurrence was present both in patients off and on antiarrhythmic drugs, independently of the type of drug.

Conclusions: PUFAs supplementation at a dose of 2 grams a day, on top of standard antiarrhythmic treatment, in patients undergoing ECV of chronic persistent AF was not able to reduce the recurrence of the arrhythmia.