

"Omega-3 Index" In Israeli Post-MI ICD Recipients – Baseline Results From PUFA-ICD RCT.

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Background: Total % content of EPA and DHA acids in red blood cell, the "Omega-3 Index", was recently introduced as a CHD risk predictor. Its relationship with arrhythmias is still controversial.

Objective: To examine the association between baseline Omega-3 Index and ventricular arrhythmias in post MI ICD patients.

Methods: 82 post-MI patients (mean age 67±9 range 41-89, 93% male) with ICD (53% dual-chamber, 18% bi-ventricular) were included in a randomized controlled trial of the effect of PUFA supplement on arrhythmias. While the study is still ongoing, we report here the analysis of ventricular arrhythmias stored by the ICDs over the last six months prior to enrollment as related to the baseline Omega- 3 Index in 48 of the study patients.

Results: Mean baseline Omega-3 index (N=48) was 4.3% ± 2.6 (range: 0.1-11.82%). Over the 6 month period 10 patients (21%) experienced sustained VT/VF (terminated with ATP or shock) and 13 patients (27%) experienced nonsustained VT.

Mean Omega-3 Index was similar (4.46 ± 3.2 vs. 4.15 ±2.5 (p=0.748)) in patients with vs. patients without sustained VT/VF respectively. There was lower mean Omega-3 Index in patients with any ventricular arrhythmia (sustained or nonsustained) than in patients without any ventricular arrhythmia (3.63±3.0 vs. 4.53± 2.4, P = 0.26).

Conclusion: In this study Omega-3 Index was not found to be significantly different in post MI ICD patients with and without ventricular arrhythmias. These observations will need to be tested in larger cohorts of post MI patients.