

# **POSITIVE T-WAVE ALTERNANS AFTER ACUTE MI: FACTORS INFLUENCING ITS PRESENCE.**

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T-wave alternans (TWA) has been proposed as a marker of susceptibility to ventricular tachycardia/fibrillation after acute MI.

The presence of TWA, as well as other established and proposed risk factors in the prospectively enrolled 96 patients with first only anterior wall MI undergoing PCI < 12 hours from symptoms onset with TIMI 2/3 flow in LAD after procedure, treated according to current guidelines was assessed. Demographics, Tn I, CKMB, ECG, arrhythmias, HRV, SAECG, ECHO and treatment data were collected. At 30-day follow-up ECHO for ejection fraction recovery > 5% (EF+) and TWA test were performed.

Results: Alternans was present in 22 pts (TWA+), absent in 62 (TWA-) and in 12 pts it was undetermined or not performed (AF, disability). There were no differences in gender, age, comorbidities, treatment, time from symptoms onset to PCI and extent of coronary lesions in both groups. TWA+ pts had higher maximum 6-24 hours levels of Tn I ( $44 \pm 8$  vs.  $30 \pm 19$  ng/ml,  $p < 0,05$ ) and CKMB ( $398 \pm 147$  vs.  $264 \pm 182$  UI,  $p < 0,05$ ), worse wall motion score index ( $1,57 \pm 0,17$  vs.  $1,37 \pm 0,15$ ;  $p < 0,05$ ) and perfusion index ( $1,40 \pm 0,23$  vs.  $1,79 \pm 0,22$ ;  $p < 0,001$ ) assessed by real-time myocardial contrast ECHO than TWA- pts, but not standard EF measures at baseline ECHO. All 30-day ECHO indices were significantly worse in TWA+ pts. EF+ was more frequently present in TWA- pts.

Conclusions: Presence of TWA could be predicted by perfusion and contractility indices and extend of myocardial necrosis but neither with ECG nor standard ECHO indices.