

P220**New methods in non-invasive sudden death risk stratification strategy?**

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Introduction: Several noninvasive methods for sudden cardiac death (SCD) prediction are used in the population of post MI patients. However the positive predictive accuracy of these tests, even in combination does not reach 50%. The subject of our prospective study is a recently described measurement of heart rate turbulence (HRT), assessing RR interval oscillation on ECG following a premature ventricular beat. In previous reports this method has been studied on post MI populations treated by thrombolysis, but not on patients with MI treated by direct PCI.

Aim: To increase a positive predictive accuracy of combination of noninvasive methods by adding a new parameter.

Methods: In patients surviving acute MI treated by direct PCI following assessments were performed: echocardiography, ECG Holter, baroreflex sensitivity measurement (BRS), heart rate variability (HRV), and HRT measurements. Parameters BRS, HRV, turbulence slope and turbulence onset created an Index of autonomic influence on heart rate, that was divided into 5 categories according to the positivity, or negativity of each parameter. All the patients are regularly followed with a special emphasis on mortality and malignant arrhythmias.

Group of patients: 111 acute MI survivors with average age 63 years, average left ventricular ejection fraction 44.5%. 30% of patients suffered from single vessel disease (VD), 63.3% suffered from multiVD.

Complete revascularization was done in 36% and partial in 44%. The index of autonomic influence was calculated in 34 from the total of 70 patients with minimum follow up 12 months.

Results: There were 14 patients (42.0%) with all parameters negative, 9 patients (26.5%) with only 1 parameter positive, 7 patients (20.5%) with 2 positive parameters and 4 patients (11%) with 3 positive parameters. No patient had all parameters positive. Four patients died during follow-up. One death was classified as a sudden in a patient with the index of autonomic influence 3.

Conclusion: A continuing prospective study analyzing the HRT assessment in combination with the other noninvasive methods as an Index of autonomic influence. The study should reveal the role of HRT measurement in prediction of sudden cardiac death among MI survivors treated with direct PCI.

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