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CORRELATION BETWEEN ENDOTHELIAL DYSFUNCTION TESTED BY PERIPHERAL ARTERIAL TONOMETRY AND PROGNOSIS OF ACUTE MYOCARDIAL INFARCTION AND PLASMA ADIPONECTIN

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Objectives To explore whether the use of Peripheral Arterial Tonometry (PAT) in the evaluation of admission vascular endothelial function of acute myocardial infarction (AMI) patients can predict recurrence of major adverse cardiovascular events (MACE) before and after discharge, to explore whether PAT-determined endothelial dysfunction of acute ST-segment elevation myocardial infarction (STEMI) patients is linearly correlated with plasma adiponectin (APN).

Methods 126 consecutive patients clinically diagnosed with AMI received evaluation of vascular endothelial function using PAT technique within 72 h of admission, reactive hyperemia index (RHI) was calculated. 124 patients were divided into two groups by the tertile of RHI, follow-up of MACE was conducted in both groups during hospitalisation (median value 7.0 days) and after discharge from hospital (246.4±68.2 days). MACE included cardiac death, recurrent acute myocardialinfarction, recurrent unstable angina during hospitalisation, ischemic stroke, elective PCI or CABG, and hospitalisation due to cardiovascular causes. A subgroup of 45 STEMI patients was tested for plasma adiponectin 48 h after admission.

Results There was no significant statistical difference between the two groups on cumulative proportion of patients without recurrent cardiovascular events during hospitalisation (p=0.807), as well as that of total cumulative proportion before and after discharge from hospital (p=0.579). Multivariate Cox regression analysis shows that it is lesioned coronary artery number an independent predict factor of MACE during hospitalisation (p=0.033, RR=2.064) and the whole follow-up period (p=0.022, RR=1.722), but not RHI (p=0.385 and 0.909, respectively). Mean level of plasma adiponectin in 45 STEMI patients was 11.539±2.879 μg/ml, their RHI was not linearly correlated with plasma adiopnectin (p=0.724).

Conclusions PAT cannot predict recurrence of major adverse cardiovascular events in AMI patients before and after discharge, PAT-determined endothelial dysfunction is not linearly correlated with plasma adiponectin in STEMI patients.