PROCEDURAL MYOCARDIAL PROTECTION BY SHORT-TERM ATORVASTATIN LOAD IS RELATED TO LOWER LEVELS OF ADHESION MOLECULES AFTER PERCUTANEOUS CORONARY INTERVENTION IN PATIENTS WITH ACUTE CORONARY SYNDROMES. RESULTS FROM THE ARMYDA-ACS CAMS (ATORVASTATIN FOR REDUCTION OF MYOCARDIAL DAMAGE DURING ANGIOPLASTY-CELL ADHESION MOLECULES) SUBSTUDY

i2 Poster Contributions
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Background: In the ARMYDA trial, prevention of peri-procedural myocardial infarction by atorvastatin pre-treatment in patients with stable angina receiving percutaneous coronary intervention (PCI) was associated with reduction of endothelial inflammatory response. Aim was to investigate whether attenuation of endothelial inflammatory response was present even in patients with acute coronary syndromes (ACS) loaded with atorvastatin pre-PCI.

Methods: In a planned subanalysis of ARMYDA-ACS, a subgroup of 44 patients were blind-tested for measurement of ICAM-1, VCAM-1, E-selectin plasma levels: 21 patients belonged to atorvastatin (80 mg 12 hours before PCI, with a further 40 mg pre-procedure dose) and 23 to placebo arm. Adhesion molecules were evaluated at randomization (12 hours before intervention), immediately before PCI and after 8 and 24 hours.

Results: Reduction of procedural myocardial injury after statin pre-treatment was confirmed also in this subgroup. ICAM-1, VCAM-1 and E-selectin levels were similar at randomization and before intervention in both arms. At 8 hours, ICAM-1 increase was similar in the 2 arms, whereas 24-hour levels were lower in the atorvastatin vs. placebo group (241±25 vs 261±30 ng/mL; P=0.019). Attenuation of VCAM-1 elevation occurred at 8 hours in the atorvastatin group (509±56 vs 545±59 ng/mL; P=0.044) and was also significant at 24 hours (561±58 vs 600±53 ng/mL; P=0.025). E-selectin levels were not different at any time-point in the 2 arms.

Conclusions: Short-term atorvastatin load is associated with attenuation of endothelial inflammatory response in patients with ACS undergoing PCI. This may be one of the underlying mechanisms of peri-procedural myocardial protection afforded by atorvastatin during PCI, even in unstable patients.