Acute Coronary Syndromes

EFFECT OF HIGH DOSE OF ATORVASTATIN VERSUS MODERATE DOSE ON ENDOTHELIAL FUNCTION AND INFLAMMATORY BIOMARKERS IN PATIENTS WITH STEMI

Poster Contributions
Poster Sessions, Expo North
Monday, March 11, 2013, 9:45 a.m.-10:30 a.m.

Session Title: ACS Therapy: Basic and Translational
Abstract Category: 3. Acute Coronary Syndromes: Therapy
Presentation Number: 1301-184

Authors: *Riccardo Raddino, Paolo Della Pina, Mara Gavazzoni, Elio Gorga, Alberto Madureri, Marco Metra, Cardiology, Department of Experimental and Applied Medicine, University and Civil Hospital of Bresci, Brescia, Italy*

Background: the use of statins allowed a striking progress in the treatment of coronary artery disease both in chronic and acute phase. Despite these evidences, at this date few data are available about the efficacy of statin therapy in the subgroup of patients with acute coronary syndromes and persistent ST-elevation myocardial infarction. The aim of this study is to evaluate efficacy of early administration of Atorvastatin at high dose compared to a moderate dose in patients with STEMI undergoing PCI primary in protecting endothelial function and reducing vascular inflammation .

Methods: We randomized (1:1) 26 patients with STEMI to a therapy with Atorvastatin 80 mg (Group 1) or Atorvastatin 20 mg (Group 2). Endothelial function was assessed by a non-invasive finger plethysmography (Endopath ® Itamar Medical Ltd., Cesarea, Israel) at 1st day and 30 days after ACS. At same times were measured levels of hs-PCR, IL 6, TNF α, ox-LDL

Results: There was a major improvement of endothelial function (expressed as % variation of RH-PAT index) with Atorvastatin 80 mg than Atorvastatin 20 mg (increasing of RH-PAT index from 1.56 ± 0.30 to 1.96 ± 0.16, P <0.0001 vs increasing from 1.54 ± 0.33 to 1.72 ± 0.19, P = 0.03). We found a major decreasing of hs -PCR in Group 1 than in Group 2 at 30th day after randomization (0.04 ± 0.04 mg / dL vs 0.36 ± 0.3 mg / dL, p= 0.001). Significant difference was obtained for levels of IL 6 (1.12 ± 0.93 pg / mL for Group 1 vs. a 3.13 ± 2.84 pg / mL for Group 2 at 30th day after randomization, p = 0.03). About TNFα and ox-LDL the reduction reached the statistical significance only for Group 1 (TNF α: from 10.9 ± 6.01 to 7.54 ± 3.56 pg / mL in the Group 1, p = 0.03 ; ox-LDL: from 87.25 ± 34.44 ng / mL to 49.08 ± 14.01 ng / mL in the Group 1, p <0.0001). We observed a moderate correlation , between levels of oxidized LDL and levels of LDL-C at thirty day (r = 0.59, p = 0.002).

Conclusions: during STE-ACS, an early intensive Atorvastatin therapy could protect the endothelial function and reduce inflammation more than moderate dose. So these effects (as the main reduction of LDL-cholesterol) could be dose dependent.