P-508
ADMINISTRATION TIME-DEPENDENT EFFICACY OF STATINS IN HYPERLIPIDEMIC PATIENTS WITH ESSENTIAL HYPERTENSION
Carlos Calvo, Jose E Lopez, Ramon C Hermida, Diana E Ayala, Manuel Covelo, Marta Rodriguez, Maria L Romero, Maria J Fontao, Rita Soler. Hypertension and Vascular Risk Unit, Hospital Clinico Universitario, Santiago, Spain; Bioengineering and Chronobiology Labs, University of Vigo, Vigo, Spain.
A significant circadian variation has been shown to characterize cholesterol and triglycerides, with predictably highest values at the end of the diurnal active hours, and lowest values after awakening [Am J Heart J. 2000;139:164-173]. It has thus been suggested that statins should be administered at night. However, most studies on the efficacy of statins have not evaluated a potential change in effects as a function of the circadian time of dosing. Accordingly, we evaluated the potential administration time-dependent changes in the lipid profile of hyperlipidemic-hypertensive patients treated with statins. We studied 2486 patients (1167 men), 59.7±13.8 years of age, with grade 1-2 essential hypertension and dyslipemia, all under treatment with statins. We evaluated the circadian time of statin administration (awakening-breakfast, lunch, bedtime-dinner, other) and its potential correlation with lipid control, according to NCEP-III criteria (LDL-cholesterol<160, <130, or <100 mg/dl, according to cardiovascular risk stratification). Therapeutic compliance was evaluated using the Morisky-Green test. Atorvastatin was the statin most frequently used (41.3%), followed by simvastatin (28.0%) and pravastatin (17.4%). Most of the patients were taken their statin at night (87.7%) as compared to midday (53.4%). There were no other significant differences in the rest lipid profile between subjects with ISH and those with essential hypertension.

Key Words: Chemotaxis and ROS, Polymorphonuclear Leukocytes, Statin

P-509
EFFECTS OF SIMVASTATIN ON POLYMORPHONUCLEAR LEUKOCYTE FUNCTION IN HIGH-RISK PATIENTS
Franca Marino, Marco Cosentino, Luigiina Gauzzi, Ramona Consuelo Maio, Mariagrazia Cimpanelli, Cinzia Simon, Giovanni Gaudio, Lorenzo Maroni, Daniela Restelli, Ivano Franzetti, Patrizio Marnini, Achille Venco, Gianmario Frigo, Sergio Lecchini. Department of Clinical Medicine, University of Insubria, Varese, Italy; Department of Internal Medicine and Therapeutics, University of Pavia, Pavia, Italy.
To investigate whether the treatment with simvastatin 20 mg/die may change polymorphonuclear leukocyte (PMN) function in high-risk patients, the chemotactic index (CI, i.e. stimulated chemotaxis/spontaneous migration) and reactive oxygen species (ROS) production were studied in isolated PMNs obtained from patients before institution of statin treatment (1D-e) and thereafter, at 3 days (3D-e) and at 30 days of treatment (30D-e). Functional responses were obtained by stimulation of the cells with fMLP, a chemotactic peptide acting on membrane receptors, and PMA, a direct activator of protein kinase C.

Eight high-risk subjects (mean age 61±8 years; 5 patients with type-2 diabetes in diet treatment, 3 dyslipidemic patients; non-smokers, no heavy sporting activities) were studied. In patients at 1D-e the mean total cholesterol (T-c) was 238±23 mg/dl, LDL-c was 165±17 mg/dl, HDL-c was 47.5±5.3 mg/dl, and triglycerides were 125±50 mg/dl. T-c, LDL-c and ApoB significantly decreased at both 3D-e (202±27 mg/dl, 134±25 mg/dl, and 108±15 mg/dl, respectively) and 30D-e (164±28 mg/dl, 96±21 mg/dl, and 70±32 mg/dl, respectively). Differences were always statistically significant versus 1D-e (P<0.05 by ANOVA followed by Student Newman Keuls post test). The dietary habits (as evaluated by a diary) and the fasting glycaemia did not change during the 30-days follow-up. The CI in PMNs from patients was 1.29±0.06 at 1D-e and did not change at 3D-e and at 30D-e, while PMA-induced ROS production was significantly reduced at the 30D-e, both with respect to 1D-e and 3D-e (P<0.05 vs both 1D-e and 3D-e). By contrast, fMLP-induced ROS generation remained unchanged throughout the treatment.

The present results show that the treatment with simvastatin in high-risk patients is associated with a reduction of stimulated ROS production by PMNs. The effect is stimulus specific, and this finding may support an action of simvastatin on intracellular (rather than membrane receptor) targets in the modulation of the inflammatory response.

Key Words: Chemotaxis and ROS, Polymorphonuclear Leukocytes, Statin

P-510
LIPID PROFILE OF PATIENTS WITH ISOLATED SYSTOLIC HYPERTENSION
John A Papadakis, George Vrentzos, Irene Kazakou, Sylvia Lazaridou, Argiro Repa, Emmanouel S Gouvatidis. Dept. of Internal Medicine, University Hospital of Heraklion, Heraklion, Greece.
Isolated Systolic Hypertension (ISH) has been shown to increase cardiovascular disease morbidity and mortality. In this study, we searched for differences in the lipid profile between subjects with ISH and those with essential hypertension.
We studied 442 [212 (48%) were men] hypertensives, who had never been treated. Their median age was 56 (range: 18–83) years. Among them, 135 (30.5%) patients had ISH [Systolic Blood Pressure (SBP) > 140mmHg and Diastolic Blood Pressure (DBP) < 90mmHg]. All patients had a full lipid profile.

Persons with ISH were older than other hypertensives (62.0±8.4 years vs 54.3±11.9 years, P<0.001). There was no difference in the sex distribution between the two groups (66 out of 135 (48.9%) vs 146 out of 307 (47.6%) were men, respectively). Those with ISH had significantly greater pulse pressure (PP) (71.6±16.1 mmHg vs 60.6±16.8 mmHg, P<0.001) and significantly smaller body mass index (BMI) (23.3±3.9 vs 30.9±5.2, P<0.001), when compared with the rest hypertensives.

Subjects with ISH had significantly higher high density lipoprotein (HDL) than the rest hypertensives (51.8±17.6 vs 46.9±11.6mg/dl, P<0.01). There were no other significant differences in the rest lipid profile between the two groups.

In conclusion, our study suggests that among untreated patients with essential hypertension those with ISH had a more favourable lipid profile.

Key Words: HDL-Cholesterol, Isolated Systolic Hypertension, Lipid pProfile

0895-7061/05/$30.00 © 2005 by the American Journal of Hypertension, Ltd. Published by Elsevier Inc.