Results: Basal blood pressure, heart rate, basal forearm blood flow, NTG1 & body weight were similar between groups. FMD was greater in group A (7.2±5.6%) than in groups B (4.3±4.7%, p<0.05) or C (5.4±5.7%, p<0.05). No significant difference of FMD was observed between groups B (4.3±5.1%) and C (5.4±4.7%, p=NS). Ejection fraction was greater in group A (61.3±1%) than in groups B (58.6±4.9%, p<0.01) and C (54.1±1.0%, p<0.001) but no difference was observed in ejection fraction between groups B and C (p=NS).

Conclusions: There is no significant difference in endothelial function between patients with ischemic and dialated cardiomyopathy. These findings indicate that underlying atherosclerosis plays a minor role in endothelial dysfunction in patients with heart failure.

1152-94 Hyperhomocysteinemia and Cardiovascular Disease in Diabetes Mellitus Patients

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Background: It is well established that patients with diabetes mellitus (DM) are at increased risk for cardiovascular disease (CVD). There is also increasing interest in the role of hyperhomocysteinemia as a potential determinant of CVD. The impact of hyperhomocysteinemia in this high-risk population remains however to be clarified. The purpose of this study is to assess prospectively the relationship between elevated plasma homocysteine (homocysteine) levels and risk of CVD (stroke, myocardial infarction and CVD death) in DM patients.

Methods: This is a sub analysis from the Veterans After High-Density Lipoprotein Cholesterol Intervention Trial (VA-HIT), performed on 834 men with documented CVD and enrolled 306 men with DM and 531 men without DM. Homocysteine levels were assessed in plasma in 398 patients who presented with a new CVD event over a 6.1-year follow-up and 476 age-matched controls.

Results: The mean age of study participants was 65 year old, and the prevalence of diabetes was 23%. Mean plasma homocysteine levels were 10.4±13 µmol/L in the non-DM group and 10.0±14 µmol/L in the DM group. For DM patients with elevated plasma homocysteine levels, the 6.1-year cumulative risk of a new CVD event was 64%, whereas it was 50 % in DM patients with normal homocysteine levels. For DM patients with normal homocysteine levels, the 6.1-year cumulative risk of a new CVD event was 64%, whereas it was 50 % in DM patients with normal homocysteine levels (reference group) (p=0.004). Adjusted Hazard Ratios (HR) for elevated plasma homocysteine, insulin, HbA1C, vitamin B6 and folate) for a new CVD event were 1.78 (p=0.01) in the DM group with elevated homocysteine levels and 1.29 (p=0.06) in DM patients with normal plasma homocysteine. Multivariate analysis demonstrated an inverse association between elevated plasma homocysteine levels and risk of a new event in DM patients with known CVD. Hyperhomocysteinemia, like hypertension and dyslipidemia, should probably be screened in this high-risk population of patients since treatment might improve their cardiovascular outcomes.

1152-95 Effects of Vitamin C on Nitric Oxide/L-Arginine Pathway in Patients With Atherosclerosis

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Background: Increased oxidative stress has been implicated as a potential mechanism for abnormal endothelial vasomotor function. Vitamin C is the main water soluble antioxidant in human plasma and L-arginine is the substrate for nitric oxide synthesis. We assessed the effects of vitamin C on the vasomotor responses of L-arginine administered in coronary arteries.

Methods: In 6 patients (3 males; 3 females, mean aged 50±6 years) with coronary artery disease (CAD) and stable angina we infused normal saline (NS) and 150 µmol/min L-arginine intracoronary before and after intravenous infusion of vitamin C 25 mg/min for 60 minutes. The intracoronary infusion of L-arginine elicited a significant increase in coronary blood flow (25±15% vs. control: 0±10%, p=0.04). Also positive associations were found between at alcohol intake and total cholesterol levels (r=0.32, P=0.04), uric acid (4.26±0.75 vs. 4.09±0.53 vs. 4.76±1.01 vs. 5±1.2 mg/dl, P=0.009). The previous associations were confirmed from multivariate analysis after taking into account age, sex, smoking habits, lipidemic medication, dietary parameters and physical activity levels.

Conclusions: The detrimental association between alcohol intake and cardiovascular disease can be partially explained through the J-shaped relation between several biochemical parameters related to atherosclerosis and the amount of alcohol consumption.

1152-83 Increased Oxidative Stress Is the Mechanism of Endothelial Dysfunction After a High-Fat Meal


Background: Ingestion of a high-fat meal increases oxidative stress and decreases nitric oxide (NO) bioavailability. Thus, we measured serum glutathione peroxidase (GP), an antioxidative enzyme, and urine excretion of 8-PGF2 alpha (8-epi-PGF2alpha) as a marker of oxidative modification of arachidonic acid in this study.

Methods: We measured serum glutathione peroxidase (GP), an antioxidative enzyme, and urine excretion of 8-epi-PGF2alpha as a marker of oxidative modification of arachidonic acid in 14 men after a high-fat meal. The previous associations were confirmed from multivariate analysis after taking into account age, sex, smoking habits, lipidemic medication, dietary parameters and physical activity levels.

Conclusions: The detrimental association between alcohol intake and cardiovascular disease can be partially explained through the J-shaped relation between several biochemical parameters related to atherosclerosis and the amount of alcohol consumption.

1152-84 The J-Shape Association Between Alcohol Intake and Clinical Biochemical Markers Related to Cardiovascular Risk: The ATTICA Study

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Background: Alcohol intake is considered to have an ambiguous effect on the cardiovascular risk, especially compared to other well-established risk factors. The aim of this study was to investigate the association between alcohol consumption and other clinical and biochemical parameters in cardiovascular disease free men and women.

Methods: The ATTICA study is a prospective population-based cohort designed to enroll 3073 men and women from the greater area of Athens. A random algorithm was developed and stratified, by sex, age, sampling was performed, during 2001. In this work we analyzed data from 602 men (18-86 years old) and 680 women (18-80 years old).

Using multiple regression analysis we investigated the association between alcohol intake and cardiovascular risk factors. Significant positive associations were found between alcohol intake and total cholesterol levels (p<0.05). Also positive associations were found between alcohol intake and total cholesterol levels (p<0.05). The previous associations were confirmed from multivariate analysis after taking into account age, sex, smoking habits, lipidemic medication, dietary parameters and physical activity levels.

Conclusions: The detrimental association between alcohol intake and cardiovascular disease can be partially explained through the J-shaped relation between several biochemical parameters related to atherosclerosis and the amount of alcohol consumption.