measurement of sd-LDL-C will be of more use than LDL-C as a surrogate maker to determine the severity of CHD.

516 FENOFIBRATE REDUCES C-REACTIVE PROTEIN IN NON-OBESE HYPERTRIGLYCERIDEMIC PATIENTS WITH HIGH RISKS

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Objective: We investigated the effect of fenofibrate on C-reactive protein (CRP) and variables determining changes.
Methods: This case-control study enrolled 280 hypertriglyceridemic patients who were managed either with 200 mg of fenofibrate (Fenofibrate group, n = 140) or with general measures (Control group, n = 140). CRP levels were measured before and after 2 months of therapy.
Results: CRP decreased in both fenofibrate (p = 0.003) and control (p = 0.048) groups. Changes in CRP were not different between the two groups (−0.24±1.56 versus −0.14±1.69 mg/dL, p = 0.27) and were associated with baseline CRP levels (r = −0.47, p = 0.000). In patients with baseline CRP ⩾ 1 mg/dL, CRP also decreased in both groups (p = 0.000 and p = 0.001 respectively), however, more in the fenofibrate group than in the control group (−0.79±1.90 versus −0.66±1.77 mg/L, p = 0.025). The reduction of CRP was associated with higher baseline CRP (r = −0.29, p = 0.001), lower body mass index (r = 0.23, p = 0.007), and fenofibrate therapy (r = 0.19, p = 0.025). CRP decreased more in the fenofibrate group than in the control group in patients with body mass index ⩽26 kg/m^2 with borderline significance (−1.21±1.82 versus −0.89±1.92 mg/dL, p = 0.097). In patients with high density lipoprotein-cholesterol <40 mg/dL, only fenofibrate group reduced CRP (p = 0.006).
Conclusions: Fenofibrate reduced CRP in non-obese hypertriglyceridemic patients with high CRP and/or low high density lipoprotein-cholesterol. This finding suggests that fenofibrate may have anti-inflammatory effect in selected patients with high risks.

517 CORRELATION OF THE LEPTIN:ADIPONECTIN RATIO WITH INSULIN RESISTANCE-RELATED FACTORS IN JAPANESE MEN

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Background and Aims: The major adipocytokines, leptin and adiponectin, play important roles in energy homeostasis and the development of atherosclerosis. Circulating leptin increases and adiponectin decreases in proportion to the degree of adiposity. The leptin:adiponectin ratio (LAR) has been proposed as a biomarker for atherosclerosis in obese type 2 diabetic patients. We examined correlation of the LAR with insulin resistance-related factors in apparently healthy subjects.
Methods: We recruited 300 Japanese men who underwent health checkups. The participants were classified into three groups based on a 75-g OGTT: 194 with normal glucose tolerance, 91 with impaired fasting glucose and/or impaired glucose tolerance and 15 with diabetes mellitus. Serum leptin and adiponectin concentrations were measured using ELISA, and the LAR was calculated.
Results: No significant differences in the LAR were detected among the three groups. In total subjects, there was an inverse correlation between leptin and adiponectin concentrations (r = −0.232, $p < 0.001$). The LAR was highly correlated with BMI (r = 0.551, $p < 0.001$), waist circumference (r = 0.534, $p < 0.001$), fasting serum insulin (r = 0.610, $p < 0.001$), the HOMA of insulin resistance (HOMA-R) (r = 0.589, $p < 0.001$). The LAR was also positively correlated with non-HDL-cholesterol, creatinine, ALT, CRP concentrations, and negatively with age and HDL-cholesterol concentrations. Multiple regression analysis showed that the LAR was independently associated with HOMA-R, adiposity, age, triglycerides and CRP concentrations.
Conclusions: The LAR was closely associated with adiposity, insulin resistance and an atherogenic lipid profile in Japanese men. The data suggest that the LAR is a useful biomarker of obesity-related insulin resistance.

518 PLASMA AMINOTHIOL PROFILE IN APPARENTLY HEALTHY SUBJECTS FROM THE AZORES ARCHIPELAGO, PORTUGAL

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The Azores Islands have the highest standardized mortality rate for cardiovascular diseases (CVD) as compared to mainland Portugal. Plasma aminothiols, such as Hcy, Cys, Cys-Gly and GSH, which are metabolically interrelated, play an important role in determining the redox status of cell environment. The aim of this study was to evaluate the plasma aminothiol profile (PAP), some of its major determinants (plasma folate, vitamin-B_{12} and vitamin-B_6 concentrations and serum γ-GT activity), as well as its relationship with serum lipid profile, in apparently healthy subjects, all born and living in the Azores archipelago.
Participants in this study (191 women and 142 men, aged 20 to 60 years) were split in two groups: one with a normal and another with an altered PAP (at least one aminothiol concentration out of reference range). Plasma aminothiols and vitamin-B_6 were quantified by HPLC. The other parameters were determined by commercial kits.
76% of the participants had an altered PAP, mainly due to low GSH levels (<1.5 μM). That profile was worse in male gender, in older or hyperlipidemic subjects or in those with high γ-GT activity. Older subjects or hyperlipidemics showed decreased GSH and increased Cys levels and serum γ-GT activity, as compared to the respective counterparts. Hyperhomocysteinemia was present in 10% of participants, where only 33% had B-vitamin deficiencies.
An altered PAP reflects a pro-oxidant status, thus favoring atherogenesis and consequent CVD. Since subjects were apparently healthy, an altered PAP, namely originated by low GSH levels, can constitute an early marker of atherosclerosis.

519 DIFFERENTIAL INDICATORS ASSOCIATED WITH SUBCLINICAL CORONARY ATHEROSCLEROSIS IN SUBJECTS WITH OR WITHOUT METABOLIC SYNDROME

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Objective: To determine the risk factors associated with subclinical coronary atherosclerosis (CA) assessed by coronary computed tomographic angiography (CTA).
Methods: From July 2004 to December 2008, 550 consecutive asymptomatic subjects without history of coronary artery disease received contrast-enhanced coronary CTA. Recognition of MetS was based on the ethnicity-modified National Cholesterol Educational Program Adult Treatment Panel III (NCEP ATP-III) criteria. Any presence of coronary artery calcification (CAC) or the presence of noncalcified plaques within the proximal third major coronary artery segment(s) with zero CAC was defined as presence of CA.
Results: 38% (209/550) of all subjects met ethnicity-modified NCEP ATP-III MetS criteria. In addition to the clustering of multiple conventional cardiovascular risk factors in MetSyn subjects, MetSyn was independently associated with subclinical CA in multivariable analysis. (OR = 3.40, 95% CI 2.34 to −4.96, P < 0.001). Multivariable logistic regression analysis for risk factors association with subclinical CA revealed that fasting blood glucose ⩾6.11 mmol/L/ diagnosis of diabetes mellitus was an independent indicator of subclincial CA in non-MetSyn subjects (OR = 1.40, 95% CI 1.08 to −1.82, P < 0.05) while TC/HDL-C >4.2% was an independent indicator of subclinical CA in MetSyn subjects (OR = 4.44, 95% CI 1.93 to −10.20, P < 0.001).
Conclusions: Risk factors of subclinical CA in coronary CTA are different between subjects with and without MetSy defined by ethnicity-modified NCEP ATP-III. Fasting blood glucose/diagnosis of diabetes mellitus in non-MetSyn and TC/HDL-C in MetSyn are independent indicator associated with subclinical CA by coronary CTA study.

520 EFFECT OF CYCLOOXYGENASE-1 POLYMORPHISMS ON URINARY 11-DEHYDROTHROMBOXANE B2 LEVELS IN PATIENTS UNDERGOING STENT IMPLANTATION PRETREATED WITH ASPIRIN

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Objectives: Increased urinary levels of 11-dehydrothromboxane B2 (TxB2) is one of the suggested markers for aspirin resistance and are linked with increased risk of cardiovascular events. We assessed hypothesis that polymorphisms of cyclooxygenase-1 (COX-1) may affect periprocedural efficacy of aspirin in patients undergoing percutaneous coronary intervention (PCI).
Methods: We studied 313 patients who underwent PCI with drug-eluting stent and recieved 100 mg of aspirin for at least 10 previous days. Levels of TxB2 and creatinine of first morning urine of the following day after PCI were measured. A promoter polymorphism (−707A>G; rs10306114) and a non-synonymous coding variation (10742C>A; rs5789) were analysed.
Results: The frequency of genotypes was following: 89.8% AA (n = 281) and 10.2% AG (n = 32) for −707A>G, and 98.4% CC (n = 308) and 1.6% CA (n = 5) for 10742C>A polymorphism. Median TxB/Cr values were insignificantly higher in carriers of −707G allele, compared to AA genotype: 142 (496–1727 496–1727) pg/mg vs. 816 (440–2815 440–2815) pg/mg (p = 0.298). No difference was found for CA and CC genotypes: 698 (493–1772 493–1772) pg/mg vs. 869 (535–1749 535–1749) pg/mg (p = 0.881). In subgroup analysis, acute patients (n = 46, 14.7%) had higher TxB/Cr (p = 0.031) than patients with scheduled PCI (n = 267, 85.3%): 792 (469–1768 469–1768) and 1280 (663–2050). Diabetics had higher TxB/Cr (p = 0.023): 790 (461–790) vs 1148 (597–1148 597–1148).