

**MS234 SMOKING AND CARDIOVASCULAR RISK IN NORTHERN GREECE. ATHOS CARDIO GREECE STUDY**

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**Objective:** To study the relation between smoking habit and cardiovascular risk in a Northern Greek population sample.

**Method:** 3000 subjects (54% males and 46% females) with mean age  $62 \pm 13$  years from Northern Greece were examined during an epidemiological project the last three years. All subjects gave informed consent form and completed a questionnaire on personal and family medical history. Demographic/anthropometric characteristics and blood pressure were recorded. Biochemical parameters (total cholesterol, HDL, LDL, triglycerides) were measured by the Cholestech Kit (dry chemistry method). All subjects were divided into three groups according to smoking habit: current smokers, ex smokers and non smokers. SPSS 15.0 was used for the epidemiological analysis. Data are presented as mean  $\pm$  standard deviation.

**Results:** Most of the subjects studied were non smokers (74.1%). Smoking habit was more frequent in men than in women (65/35% respectively) and in younger ages ( $47 \pm 14$  years) with a mean smoking duration of  $16 \pm 6$  years. Dyslipidemia and hypertension were the strongest risk factors in all three groups. Atheromatic index and cardiovascular risk score were higher in the current smokers group ( $4.7 \pm 1.6$  and 21% respectively).

**Conclusions:** Smoking habit found to be strongly related to the overall cardiovascular risk whereas smoking cessation reduced it greatly. Most of the ex smokers had quit smoking due to health problems such as diabetes, dyslipidemia, coronary artery disease and hypertension. Today every smoker should be considered as a patient examined thoroughly for the existence of other risk factors and be advised to follow a smoking cessation program.

**MS235 EFFECTS OF FOOD ON POSTPRANDIAL BLOOD PRESSURE AND ARTERIAL STIFFNESS MEASUREMENT**

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**Background:** Recent research suggests central pulse pressure may be a better indicator of cardiovascular disease outcomes than brachial pressure. Little information is available about the effect of food on postprandial central pressure and arterial stiffness measures made using non-invasive pulse wave analysis (PWA).

**Objective:** To investigate the effects of water and food plus water intake on brachial and central blood pressure (BP) and measures of arterial stiffness, including augmentation pressure (AP) and index (AI) using PWA.

**Design:** 35 subjects had BP and PWA measured fasting and for two hours after the intake of either water or breakfast (1300 kJ) in random order.

**Results:** Baseline fasting measures of BP and arterial stiffness were not significantly different before the two interventions. Consumption of food plus water, compared to water alone, led to a significantly lower (all  $p < 0.01$ ) brachial diastolic pressure ( $\Delta -3.8$  mmHg), central BP ( $\Delta$  systolic  $-6.1$  mmHg;  $\Delta$  diastolic  $-3.8$  mmHg), central pulse pressure ( $\Delta -2.4$  mmHg), mean arterial pressure ( $\Delta -4.6$  mmHg), AP ( $\Delta -2.9$  mmHg) and AI ( $\Delta -5.3\%$ ).

**Conclusion:** Markers of central hemodynamics are sensitive to feeding state and should therefore be measured fasting to avoid variability due to recent (1–2 hours) food intake. This is particularly important where measurements are repeated over time to assess the effect of medication and lifestyle changes on CHD risk factors.

**MS236 PREVALENCE OF THE CAROTID-INTIMA-MEDIA THICKNESS AND CAROTID PLAQUES IN HYPERTENSIVE PATIENTS**

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**Objective:** Investigate the prevalence of subclinical atherosclerosis measured by carotid intima-media thickness (CIMT) and carotid plaques (CPs) in patients with hypertension (HTA).

**Methods:** A prospective, transversal study was carried out from June to August 2008. 141 patients, 40–65 years aged, with HTA and low and intermediate cardiovascular risk (CVR) according to Framingham cardiovascular risk score (FCRS) were included. Mode B carotid ultrasonography (USG) was performed.

**Results:** A hundred women and 41 men were included. 82.3% subjects were calculated on low risk while 17.7% were on intermediate risk. Subclinical atherosclerosis by USG was present in 30% of patients, 92.8% of them had CP and 7.2% exhibited CIMT greater than 0.9 mm. Intermediate CVR subjects had three times more probability to have CP than low CVR patients. Twice

more probability to have CP in non-controlled than in controlled patients was observed. A positive correlation between CIMT and CVR was found with  $r = 0.343$  ( $p < 0.0001$ ) for the right carotid and  $r = 0.1902$  ( $p = 0.024$ ) for the left carotid. The correlation between the CIMT and the systolic blood pressure (SBP) was positive:  $r = 0.172$  ( $p = 0.0412$ ) and  $r = 0.351$  ( $p < 0.0001$ ) for right and left carotid respectively.

**Conclusions:** A high prevalence of subclinical atherosclerosis was found by the CIMT and CPs measured by USG in hypertensive patients. The use of CIMT and CPs could be recommended to improve Framingham stratification criteria in these subjects.

**MS237 SERUM ATHEROGENIC LIPID MARKERS IN SUBJECTS FROM THREE ISLANDS OF THE AZORES' ARCHIPELAGO (PORTUGAL) – A COMPARISON STUDY**

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São Miguel (SM), Graciosa (GR) and São Jorge (SJ) are three islands of the Azores' Archipelago, where the death rate from coronary artery disease is about twice than in mainland Portugal. The aim of this study was to evaluate and compare serum atherogenic lipid markers as reflected by lipid profile, as well as by apoB/apoA-1 ratio in apparently healthy subjects from those islands. The study group was formed by 321 subjects with no chronic diseases, aged 20 to 60 years, born living in the respective island (156 from SM, 92 from GR and 73 from SJ). In all cases, about 64% of subjects were hyperlipidemic, mainly hypercholesterolemic. LDL-C and HDL-C concentrations were respectively, lower and higher in SM than in SJ or GR. ApoB concentration was 40% and 17% higher in SJ than in SM and GR, respectively, while apoA-1 reached the maximum in SM ( $178 \pm 38$  mg/dL). Regarding apoB/apoA-1 ratio, taken as a better atherogenic marker than conventional lipid profile, subjects from GR exhibited the highest mean value ( $0.85 \pm 0.4$ ), followed by those from SJ ( $0.75 \pm 0.3$ ) and SM ( $0.58 \pm 0.2$ ). Particularly in men from GR and SJ, ratios were 1.0 and 0.9, respectively, which corresponds to a high risk of developing a cardiovascular incident.

**MS238 RISK FACTORS PREVALENCE AND CONTROL IN SECONDARY PREVENTION AFTER MYOCARDIAL INFARCTION AND ISCHEMIC STROKE IN UKRAINIAN URBAN AREA**

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**Objectives:** In Ukraine cardiovascular morbidity and mortality is one of the highest in Europe. Lack of risk factors (RF) control in primary and secondary prevention may play major role in this situation.

**Methods:** RF prevalence and control was assessed in representative sample of 235 patients (pts) after ischemic stroke (PostIS) and 312 pts after myocardial infarction (PostMI) randomly selected from 2229 pts discharged from hospital between 2000 and 2005 in Ukrainian city Lutsk.

**Results:** As shown in table the most prevalent RF in both groups was arterial hypertension (AH). Only 11.9% of PostIS and 21.3% PostMI pts had their BP below 140/90 mmHg ( $p < 0.001$ ). Higher AH prevalence in PostIS pts corresponded with higher levels of BP. No difference between groups was found in other RF as well as lipids, glucose and high-sensitivity CRP levels. Insufficient number of pts took antithrombotic drugs, especially in PostIS group: 39.1% vs 52.6% in PostMI ( $p = 0.008$ ) and very few took statins: 1.7% PostIS vs 11.2% PostMI ( $p < 0.001$ ).

**Conclusions:** High prevalence of RF with poor control was found in pts after ischemic events in Ukrainian city Lutsk. PostIS patients had higher prevalence of AH and worse BP control. Inappropriately low number of patients receive preventive treatment especially in PostIS group.

Table: Prevalence of RF in PostMI and PostIS pts (%)

	AH	Diabetes	Obesity	Abdominal obesity	Hypercholesterolemia	Smoking
PostMI	84.3	13.5	44.8	57.6	76.1	18.0
PostIS	89.8	15.3	44.2	60.6	73.2	18.3

**MS239 ADIPOSE TISSUE INFLAMMATORY ACTIVITY IS ASSOCIATED WITH CARDIOVASCULAR DISEASE**

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**Background:** Obese patients are at higher risk of developing cardiovascular disease (CVD). Several studies suggest obesity as an independent risk factor.