

Metabolic syndrome in grown-up children of patients with premature coronary heart disease. Relation to own and parental characteristics.MV Konnov¹, LM Dobordzhinidze¹, AD Deev¹, N A Gratsiansky¹¹*Institute of Physico-Chemical Medicine, Moscow, Russian Federation***Topic: Risk factors and risk prediction**

Purpose: To elucidate associations between metabolic syndrome (MS) in grown-up children of patients with premature (onset <55 years) coronary heart disease (CHD) and their own and parental characteristics.

Methods: We examined members of 166 families. There were 143 parents-probands with premature CHD aged 36-63 years, 98 their spouses aged 36-63 years, and 225 their children aged 16-37 years. Characteristics studied in these people included alcohol consumption, tobacco smoking, education, oral contraceptive use, menses, height, body mass index, waist circumference, heart rate, systolic and diastolic blood pressure, total cholesterol (CH), low density lipoprotein (LDL) CH, high density lipoprotein (HDL) CH, triglycerides, blood glucose, arterial hypertension (JNC 7 criteria), diabetes mellitus (WHO criteria), MS (IDF criteria). Predictors of MS in children were selected by sex and age adjusted logistic regression. Factors belonging to MS criteria were excluded from analysis of own predictors of MS.

Results: MS was found in 26/225 (11.6%) of children. According to univariate logistic regression analysis MS was not associated with own alcohol, smoking, heart rate or LDL CH ($p > 0.1$). Factors which according to univariate logistic regression analysis were related to the presence of MS with $\hat{\tau} < 0.1$ (diabetes of proband, MS, HDL CH and LDL CH of non-proband) were included into stepwise regression procedure. Characteristics independently associated with MS were diabetes of proband (odds ratio [OR] 2.79, 95% confidence interval [CI] 1.09 to 7.09; $p = 0.032$) and HDL CH level of non-proband (OR 0.09, 95% CI 0.01 to 0.95; $p = 0.046$).

Conclusion: In this group of young adults with parental premature CHD: (1) MS was not related to any of studied own characteristics; (2) diabetes mellitus of parent with premature CHD was the strongest predictor of MS; (3) a characteristic of parent-nonproband notably HDL CH level was also associated with MS.