PP155—PREVALENCE OF GENE POLYMORPHISM SLCO1B1 IN PATIENTS WITH DYSLIPIDEMIA AND SYSTEMIC ATHEROSCLEROSIS IN RUSSIAN POPULATION

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Introduction: The statin lipid-lowering efficacy and safety varies widely among patients. This is mainly interindividual differences that can be explained by genetic factors. The purpose of this study was to investigate the prevalence of allelic variants (polymorphism) of the gene SLCO1B1 *5 (c.521T>C, rs4149056), which encodes a polypeptide involved in the removal of statins by the liver into the bile, as well as prediction of myopathy in patients who are to use of statins. The frequency of genotypes in SLCO1B1 in the Russian population is not known in other European ethnic groups is 8% to 20%.

Patients (or Materials) and Methods: The study is based AGL Hospital Road station Yaroslavl OJSC “Russian Railways” GBOU VPO Yaroslavl State Medical Academy, Russian Ministry of Health in 2012–2013. The study included 377 patients with dyslipidemia and systemic atherosclerosis. Of these, 226 men (59.95%) and 151 women (40.05%); the mean age was 52.58 ± 12.21. All patients underwent determination of single nucleotide polymorphisms SLCO1B1 *5 using reagent “SNP-Express” by real-time PCR thermocycler with IQ 5 (firm Bio-Rad).

Results: Identified gene polymorphisms SLCO1B1 *5: heterozygous genotype s.521 vehicle in 106 patients (28.12%) and homozygous genotype CC s.521 - in 14 patients (3.71%), which is associated with an increased risk of myopathy with statins and the need for correction of the maximum dose to be lower compared with the TT genotype s.521 (“wild” type).

Conclusion: The frequency of the heterozygous genotype (s.521TS) is 28%, and homozygous genotype (s.521SS) - 4% of patients with dyslipidemia and systemic atherosclerosis, which requires a reduction of the therapeutic dose of statins to one half and one quarter, respectively. Thus, the holding of pharmacogenetic testing can be useful for your personal selection of the dose of statin to maximize the effectiveness and safety of treatment.

Disclosure of Interest: None declared.

PP157—CYP2C9 ALLELE FREQUENCIES AMONG THREE COSTA RICAN ETHNIC GROUPS COMPARED WITH HISPANIC POPULATIONS

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Introduction: CYP2C9 is involved in the metabolism of drugs such as warfarin, losartan, fluoxetine, and NSAIDs. The frequency of CYP2C9*2, allele causing decreased enzyme activity, has been reported to be lower in Amerindian and Admixed populations (from Cuba, Nicaragua, Ecuador, and Mexico), than in Spanish-Caucasian populations. The aim of this study was to determine CYP2C9 allele frequencies in 3 Costa Rican ethnic groups and to compare the results with frequencies previously reported for Hispanic populations.

Patients (or Materials) and Methods: The CYP2C9 alleles (*2, *3 and *6) were analyzed by real-time-PCR among 373 healthy individuals belonging to 3 ethnic groups living in Costa Rica: Amerindians (AM; n = 193), Afro-Caribbean (AC: n = 45) and Costa Rican Mestizo population (CRM; n = 137). These frequencies were compared with a population of Spaniards (SP n = 327) 2 previously published.

Results: The frequency of CYP2C9*2 was significantly lower in the AM (2.8%) and CRM (7.7%) than in the SP group (16%; P < 0.05).