

POLYMORPHISM OF CYP2C19 GENE IN PATIENTS WITH CHD

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Introduction: The consequence of insufficient suppression of increased activity of platelets can be a repeated cardiovascular event. The most important determinants of the difference in the effectiveness of clopidogrel use between patients are two variants of the genotype with loss of function in the CYP2C19 gene (*2 and *3), which encodes the cytochrome P450 2C19 enzyme.

Methods: The study included 34 patients with ischemic heart disease, after a recent myocardial revascularization with stenting. Pharmacogenetic testing for the determination of allelic variants (polymorphisms) of the CYP2C19 gene was carried out by polymerase chain reaction (PCR) in RealTime mode using "DNA-EXPRESS-BLOOD" reagents sets "Liteh", Moscow. Statistical processing was performed using the SPSS program: descriptive statistics, Student's t-test for independent samples, Chi-square, ROC analysis.

Results: A total of 34 patients were examined, with an average age of 61.7(cf. 11.4) years. Male 23(67.6%) at the age of 55.5(compare off 8.9) years, women 11(32.4%) at the age of 61.2(compare off 6.9) years. Kazakh nationality 23(67.6%), the European race - 11(32.4%). In the history: PCI with stenting, reception of DAT (aspirin with clopidogrel). Stents with drug coating 28(82.4%), without drug coating 6(17.6%). According to the diameter of the stents to 2.75 mm 14(41.2%), 3 mm and more than 20(58.8%). For recurrent coronary events: there is no event 18(52.9%), stent thrombosis 6(17.6%), recurrent angina 10(29.4%). A weak positive correlation was found between the development of stent thrombosis from genetic manifestations ($r=0.35$, $p=0.43$). Genetic testing was performed: 1 - wild type 21 homozygote (61.8%), 2 - heterozygous 11(32.4%), 3 - homozygous mutation 2(5.9%). All patients are divided into groups by nationality and genetic changes. The differences found in the groups are not significant ($p = 0.140$). The statistical significance of genetic testing for the prediction of stent thrombosis has been revealed (OR 6.708 CI 95% (1.355-33.209), $p=0.02$).

Conclusion: Polymorphism CYP2C19*2(G681A) has a prognostic value in the development of stent thrombosis in patients after myocardial revascularization against the background of DAT ASA and clopidogrel (OR 6.708 CI 95% (1.355-33.209), $p=0.02$).