

Conclusions. So, today there is no complete information about the effects of all medicines on the fetus in the body of a pregnant woman. On the modern pharmacological market there are tens of thousands of medicines. It is necessary to understand that none of the drugs is completely safe for a pregnant woman. It is difficult to predict the result of the effect of the drug on the fetus, because it depends on many factors: the genetic characteristics of the fetus, the characteristics of the organism and the accompanying pathologies of the mother, the dose of the medication, the treatment period, etc. Therefore, it is desirable to avoid taking medications for pregnant women, except the cases, when there are vital indications.

The use of medicines in pregnant women requires the doctor to assess the benefit / risk relationship with respect to the mother and fetus, which is a difficult task. It is necessary to carefully approach the choice of drugs during pregnancy, considering that the physiological changes occurring in the body of a woman can lead to changes in the pharmacokinetics of medicinal substances and, consequently, to a change in their effectiveness and safety, not only for the fetus, but also for the mother.

Unfortunately, when carrying out pharmacotherapy in pregnant women, drugs with unproven clinical effectiveness and safety are often used. Thus, the rational and effective use of drugs during pregnancy requires further study, with the subsequent updating of standards and the introduction of protocols for the management of pregnant women in accordance with evidence-based medicine.

CYP1A2 AND RISK OF MYOCARDIAL INFARCTION DEVELOPMENT: RESULTS OF PHARMACOGENETIC TESTING

Kobets M. N., Kobets Yu. N.

Scientific supervisor: prof. Filiptsova O. V.

National University of Pharmacy, Kharkiv, Ukraine

phililptsova@yahoo.com

Introduction. Cardiovascular diseases, including myocardial infarction, account for almost half of the deaths in the European Region and 2.0 million deaths in 27 subjects of the European Union (42%). In Europe, from cardiovascular diseases, more than 800,000 people over 65 years old die each year. The significant prevalence of these diseases and the need for large financial allocations for the implementation of treatment programs determine the social significance of this problem.

The **aim** of the work is to determine the potential sample among the population of Ukraine, the therapeutic effect of which will be most effective considering the polymorphism of the *CYP1A2* gene.

Research methods: To study the population distribution of polymorphism 163A/C *CYP1A2*, a sample was made, consisting of 102 Ukrainians (48 men, 54 women) who are not related. Genotyping of the participants in the study for polymorphism *CYP1A2* (rs762551) was carried out using PCR.

Results and discussion. *CYP1A2*, participates in the metabolism of a number of drugs, among which can be identified: caffeine, theophylline, melatonin, methadone, paracetamol, lidocaine, etc. *CYP1A2* is called the "coffee gene", because under its influence caffeine undergoes significant (more than 30%) metabolic effects. The rate of caffeine metabolism and its concentration in the blood may be different depending on the carriage of the alleles of the *CYP1A2* gene. The results of genotyping individuals for polymorphism 163A/C of the *CYP1A2* gene were as follows: in the population sample, slow metabolizers were the least (CC, 15 out of 102), and most of all intermediate (AC, 50 out of 102). In general, the distribution of genotypes in the study sample was as follows: AA – in 36%, in AC– in 49% and CC – in 15% of individuals. In carriers of C gene allele *CYP1A2*, caffeine is metabolized more slowly than in carriers of allele A. A significant amount of coffee consumed increases the risk of myocardial infarction for these individuals. At the same time, the amount of coffee consumed in carriers of allele A with myocardial infarction is not associated, but causes a favorable effect on the cardiovascular system.

Conclusions. Caffeine and chlorogenic acids contained in coffee, have antioxidant properties, protecting the human body from the development of heart disease. In people with a disorder of caffeine metabolism, coffee consumption may be associated with an increased risk of myocardial infarction.