

COSMETICS AND THEIR PLACE IN THE LIFE OF WOMEN

Ivanova E. A., Filiptsova O. V., Luchko E. N.
Scientific supervisor: assist. Dyomina Ye. V.
National University of Pharmacy, Kharkiv, Ukraine
phililptsova@yahoo.com

Introduction. Cosmetics contain a large number of chemicals that are potentially dangerous to human health: parabens, phthalates, polycyclic aromatic hydrocarbons, etc. The influence of cosmetics on the skin and on the human body is multifaceted and as a whole is an important component of the integral indicator of the quality of life. It was shown that women who correctly used cosmetics looked 4 years younger than their peers who do not use decorative cosmetics. The use of waste funds is not the same in different countries of the world. For example, in France, cosmetics are used by 50% of young women, while in the countries of the Middle East it is much smaller.

Aim. To study the attitude of women to the choice of cosmetic products, its quality and influence on the body.

Material and methods. We have been touring 300 girls aged 18 to 22 years. The main questions concerned the category of used cosmetics, the frequency and duration of their use, the presence or absence of allergic reactions to components. Questions were also included on respondents' awareness of the composition of products, its naturalness.

Results and discussion. According to the results of the survey, the largest number of respondents (85%) prefers cosmetics of the mass market class, second place was cosmetics middle market (10%), lux (3%), professional cosmetics (2%). 64% of respondents use cosmetics daily once or twice a day. At the same time, 26% noted the presence of certain allergic reactions (reddening of the skin, itching, flaking, rashes). 86% of respondents have a desire to be able to choose the right cosmetics. The next question that was asked of the girls is how important it is for their makeup to be natural. The majority of respondents (64%) prefer the predominance of natural ingredients in cosmetics. According to the questionnaire, it is revealed that the majority of the respondents (66%) do not visit the cosmetologist in general; 2% - 2 times a month, 10%, - once a month, and 22% - once a few months.

Conclusion. Thus, as a result of the work carried out, it was revealed that the prevailing number of girls in everyday life uses cosmetics, both an outgoing and decorative. In 26% of the respondents, various allergic reactions to the components of cosmetics were noted. Only 12% use cosmetic services. All this can have a negative impact on the condition and health of the skin and the body as a whole.

DRUGS AND PREGNANCY

Karpenko K. I., Zerniy A. R., Shchokina C. G., Ivantsyk L. B.
National University of Pharmacy, Kharkiv, Ukraine
pharmacology@nuph.edu.ua

Introduction. Pregnancy is a condition of the woman's organism, in which the developing fetus is in the uterus. For many years it was believed that during pregnancy, you should avoid taking any medications. However, during this period, women can get sick, and some have chronic diseases that require adequate pharmacotherapy. According to WHO statistics, 86% of pregnant women in the world use medicines. In our country this figure looks even more impressive - according to some studies up to 96% of pregnant women use the achievements of modern pharmacology. Today it is clear that the statement that during pregnancy is strictly forbidden the use of any medications, is somewhat exaggerated. However, the effect of drugs on the course and outcome of pregnancy remains one of the least studied areas of medicine and pharmacology.

Aim. Identification of the using drugs possibility during pregnancy without the risk of their negative impact on fetal development.

Materials and methods. Analysis of the scientific literature and the results of advanced research in the field of medicine and pharmacology.

Results and discussion. It is believed that drugs are responsible for about 4% of serious congenital anomalies, which include structural defects that form during organogenesis and lead to serious impairment of organ function or death. In addition to congenital anomalies, drugs can contribute to the development of structural abnormalities, for example, violations of facial morphology or hypoplasia of distal phalanges and nails. Estimating the exact contribution of drugs in the development of congenital pathology is difficult because of insufficient knowledge of their effect on the fetus. The cause of approximately 60% of cases of congenital disorders remains unknown, and it is possible that some of them may be associated with the use of drugs during pregnancy. In addition, congenital anomalies are mainly taken into account in the born children, while cases of serious pathology of development, including incompatible with life, are not taken into account in statistics.

The toxic effect of the drug on fetal development can be manifested in the form of embryolethal (death of the embryo, spontaneous abortion), teratogenic (congenital malformations) and fetotoxic (morphofunctional disorders). Estimating the degree of risk to the fetus when using drugs during pregnancy is difficult. Theoretically, any drug effect on the body of a pregnant woman can lead to a pathology of fetal development. However, the degree of drug negative effects on the fetus is diverse and depends on many factors.

All drugs can be divided into drugs that do not penetrate the placenta and do not affect the fetus; drugs that penetrate the placenta, but do not have a damaging effect on the fetus; and drugs penetrating the placenta and accumulating in the tissues of the fetus with a high probability of their damage.

In 1979, the United States Food and Drug Administration (FDA) adopted a classification of medicines for the safety of their use during pregnancy. This classification determines the degree of the drug adverse effect on the fetus on the basis of statistical data, the results of experimental studies and a few clinical studies involving pregnant women. According to this classification, all medicines, including those sold without prescription, can be divided into five categories: A, B, C, D and X. The most dangerous in pregnancy are the preparations of the last two categories. However, safety is not defined for a huge number of drugs. The effect of most drugs on the embryo and fetus has not been studied and tested in connection with the inhumanity of such studies. Most of the information about the negative effects of drugs on the fetus and the pregnant woman was obtained as a result of the information collection after taking these drugs with and without indications. Today, only about 30 medicines are known, which can lead to abnormalities in fetal development in the mother's body. However, drugs with teratogenic properties may be much more.

It is also known that the physiological changes occurring in the organism of pregnant women contribute to significant changes in the pharmacokinetic parameters of medicinal substances. It happens due to a decrease in motor activity of the gastrointestinal tract, which is accompanied by a delay in the absorption of drugs for oral administration, an increase in the volume of circulating blood and the rate of glomerular filtration; a decrease in the level of plasma proteins, which leads to an increase in the drug clearance; increasing the permeability of the placenta; accelerate the metabolism of drugs in the liver and their further excretion. The drug can penetrate the placenta if not in its pure form, then in the form of metabolites. Moreover, the metabolism of medicinal substances can vary depending on the timing of pregnancy and changes in the level of steroid hormones. Different cells and fetal tissues can be sensitive to one kind of medicinal substance and are not sensitive to others. Often the medicine affects some organs and systems of the mother, while in the fetus, the effect can be directed to other organs. With various complications of pregnancy (gestosis, kidney disease, etc.), medicinal substances can accumulate in the mother's body and create higher concentrations in her blood and in the fetus that enhances their fetotoxic effect. The degree of toxic effect depends also on the dose of the substance circulating in the bloodstream of the mother, on the period of exposure, on the mechanism of action of the drug, and also on the period of pregnancy. The gestation period in which the medicine was used is very important in the nature of damage to the embryo and fetus. There are critical periods of embryogenesis, which are characterized by the highest sensitivity of the embryo cells to the effects of drugs. The most dangerous period, when the embryotoxic effects of drugs are most pronounced, are the first weeks of pregnancy. However, since the deadline for the final completion of the all organs laying cannot be precisely established, then, if possible, the prescription of medicines is postponed until the 5th month of pregnancy.

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.