According to the results of the studies, women were divided into two groups: 40 (40 %) women were found to have human papilloma viruses, 60 (60 %) women were not infected.

HPV WRC infection is a necessary but not the only condition for carcinogenesis. When interpreting the results of HPV testing within cervical screening is taken into account the woman's age, the genotype of the virus, the number of detected genotypes, viral load and dynamics, persistence of the virus more than 12 months. All these characteristics are compared with the results of other methods of examination and allow to determine the tactics of management and treatment of women.

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TOXICOLOGICAL EVALUATION OF EPICUTANEOUS EFFECT, INHALATION OF HEXYL ESTER OF 5-AMINOLEVULINIC ACID AND ITS REGULATION

M. Atroshko[1], E. Vlasenko[2]

[1]Belarusian State University, ISEI BSU,
Minsk, Republic of Belarus
atroshkomikhail@gmail.com
[2]Scientific Practical Centre of Hygiene,
Minsk, Republic of Belarus
evgenii_vlasenko@mail.ru

The hexyl ester of 5-aminolevulinic acid is a very perspective growth-control tool for plants. In that case it is very important to investigate it for some unpleasant effects and to regulate the usage, provided with suggestions of its critical toxicological doses.

Keywords: hexyl ester of 5-aminolevulinic acid, toxicity, transdermal, inhalation.

Materials and methods

The investigation of transdermal toxic effect was done on 7 male randombreed white rats. The monitoring of their status lasts for 14 days with registration of toxic effects.

Toxicity of 50 % water solution of chemical was studied by inhalation experiment in 250 cm^3 chamber by dispersed pulverization on 20 white randombreed rats of both sexes. As a way of control, we used an aspirator to gather the air probe to measure the concentration of hexyl ester of 5-aminolevulinic acid. Inhalation time was set to 2 hours of application. Monitoring of health status was set for 14 days.

The research results were processed by conventional methods of variation statistics. A critical level of signifi-cance when testing statistical hypotheses was accepted $p \leq 0,05$.

Results and discussion

During the study of the toxic properties of hexyl ester of 5-aminolevulinic acid under conditions of epicutane exposure during the observation period after single applications, no manifestations of intoxication and death of animals were recorded. In terms of body weight of experimental animals, the exposure dose of hexyl ester of 5-aminolevulinic acid was 800 mg / kg, which is the maximum possible value for the conditions of this experiment. Consequently, the average lethal dose when applied once to the skin of animals exceeds the values accepted as classification when classifying substances as class 3 - substances that are moderately hazardous. White rats subjected to a single epicutane exposure to hexyl ester of 5-aminolevulinic acid showed a weight gain of 129% of the values of control animals, however, the differences are not statistically significant. Macroscopically, during autopsy, there were no significant signs of the toxic effect of the drug: the state of the internal organs in experimental and control rats, as well as the weight of a number of their organs, did not have significant differences.

Under conditions of inhalation inoculation (the maximum achievable concentration of fine aerosol disintegration of the drug was 72,2 mg / m^3) and in the next 14 days of observation after exposure to hexyl ester of 5-aminolevulinic acid, animal death and signs of intoxication were absent. The mice were mobile, they maintained a normal level of spontaneous motor activity. Animals willingly consumed food and water, they did not register changes in the speed and depth of breathing, as well as skin color and visible mucous membranes. By the end of the experiment, the increase in body weight of animals subjected to a single inhalation exposure to hexyl ester of 5-aminolevulinic acid did not have significant differences compared with the control. Consequently, under the

aggra-vated conditions for simulating acute inhalation poisoning, the maximum possible concentration of the hexyl ester of 5-aminolevulinic acid disintegration water aerosol was reached, equal to 72,2 mg / m3. Based on its physical properties, hexyl ester of 5-aminolevulinic acid is able to pollute the air environment only in the form of a disinte-gration aerosol. In accordance with the guidelines [1], the achieved level of exposure to the drug cannot be used as a qualifying hygienic criterion for establishing the hazard class of hexyl ester of 5-aminolevulinic acid in case of inhalation.

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TOXICOLOGICAL EVALUATION OF LOCAL IRRITATING EFFECT AND APPLICATION TO MUCOUS MEMBRANES OF THE EYES OF HEXYL ESTER OF 5-AMINOLEVULINIC ACID AND ITS REGULATION

M. Atroshko[1], E. Vlasenko[2]

[1]Belarusian State University, ISEI BSU,
Minsk, Republic of Belarus
atroshkomikhail@gmail.com
[2]Scientific Practical Centre of Hygiene,
Minsk, Republic of Belarus
evgenii_vlasenko@mail.ru

The hexyl ester of 5-aminolevulinic acid is a very perspective growth-control tool for plants. In that case it is very important to investigate it for some unpleasant effects and to regulate its usage, due to the risk of accidental contact during exploitation with delicate and dangerous parts of the body.

Keywords: hexyl ester of 5-aminolevulinic acid, irritation, rats, rabbits.

Materials and methods

The study of local irritating properties was carried out on 7 white outbred male rats, the severity of erythema, the value of skin edema and its intensity were evaluated according to [1].

A study of the characteristics of the irritating effect of hexyl ester of 5-aminolevulinic acid on the mucous membranes of the eyes was performed on male rabbits. hexyl ester of 5-aminolevulinic acid in the amount of 50 μl of a 50 % aqueous solution was introduced into the lower conjunctival arch of the rabbit's right eye, the left eye (50 μl of distilled water) served as a control. Visual monitoring of the condition of the mucous membranes of the eyes of rabbits was carried out for 14 days. The manifestation of signs of irritation of the mucous membranes of the eyes was recorded - conjunctival and corneal hyperemia, eyelid edema, discharge from the eye [1].

The research results were processed by conventional methods of variation statistics. A critical level of signifi-cance when testing statistical hypotheses was accepted $p \leq 0,05$.

Results and discussion

In the process of studying the local irritating effect of hexyl ester of 5-aminolevulinic acid, no signs of hyper-emia and visually significant changes in the status of the skin of experimental animals were detected. Under the epicutaneous action of hexyl ester of 5-aminolevulinic acid, erythematous manifestations were not visually ob-served on the skin of experimental and control animals (0 points when assessing the severity of erythema), and there was no increase in the instrumentally measured thickness of the skin fold of animals compared to the back-ground (intensity gradation - lack of reaction, assessment of edema in points - 0 points). The surface of the skin at the sites of applications was similar to that of the control, the skin was not densified, peeling or with foreign for-mations. Thus, the total quantitative assessment of the degree of induction of erythema and edema for control and experience under the influence of hexyl ester of 5-aminolevulinic acid is 0 points. Therefore, under the conditions adopted for evaluating the skin-irritant effect when tested in laboratory animals [1], hexyl ester of 5-aminolevulinic acid is not capable of inducing pronounced local irritant properties.

The instillation of hexyl ester of 5-aminolevulinic acid into the lower conjunctival arch of the right eye for 1 hour in rabbits leads to profuse lacrimation, moderate redness of the conjunctival vessels and swelling of the eyelids (4 points). As a result, manifestations of blepharospasm were observed (the eye is completely closed). Symptoms of damage to the mucous membranes of the eye persisted for the next 9 days of observation (1 point). The