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REPRODUCTIVE FUNCTION OF MALES AFTER HIRUDOLOGICAL INFLUENCE

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The relevance. In Ukraine, there are about one million barren marriages. Male infertility accounts for up to 60% of the total number of infertile marriages. In male infertility of the main pathological conditions of reproductive function is a violation of fertility and the number of spermatozoa in the ejaculate. The norms of spermograms, which are periodically reviewed by the World Health Organization, show a significant decrease over the last decades. The study of infertility is one of the main problems of the world level, therefore it is very important now to look for various methods of its research and treatment. Knowing that biologically active substances of medicinal leeches possess a wide range of therapeutic actions, regulation of hemostasis and vascular tone, anti-inflammatory, regenerative, neurotropic, bacteriostatic, and immunomodulating effects. It became very important to investigate the hirudological effects on the reproductive function of male rats.

The purpose: to investigate the hirudological influence on the change in the mass of the testes, fertility and the number of sperm in the ejaculate, the number of offspring obtained from males.

Materials and methods. The work was performed on 40 non-linear, white, sexually-grown male rats weighing 250-300 g. For the study, animals that had undergone a quarantine regimen and had no external manifestations of the disease were used. Manipulation with animals was carried out in compliance with the regulated norms and rules of handling of laboratory animals. Animals were equally divided into two groups - control and experimental. After fixation of the animals in the fixator developed by us, males made medical leeches. After decapitation, the male specimens were weighed. After that, the epiphysis of the testicles was cut and washed out of them with ejaculate in 5 ml of 5% glucose solution preheated to the body temperature of the animal. In the resulting suspension of ejaculate, the total and activity of spermatozoa was considered. Statistical processing of the obtained data was carried out using parametric statistical methods (Student's t-test).

Results and discussion. As a result of the study in the experimental group of animals after fence, the weight of the testicles was significantly increased by 678 ± 31.7 versus the control of 511 ± 23 mg, $p < 0.05$. The increase in the weight of the testicles was due to an increase in the total number of sperm in the ejaculate. In a study in ejaculate, the total number of sperm in experimental animals was significantly increased in experimental animals at 9950 ± 497 in 1 μ l of 5 ml of ejaculation suspension compared to the control group of 5750 ± 287 . Analyzing fertility of sperm in experimental animals, the activity of 1200 ± 59 significantly increased at a control of 300 ± 14 , $p < 0.05$. Morphologically, the spermatozoa did not differ from the control group. Our experimental data suggest that the hirudological effect contributes to a positive stimulating shift in the reproductive function of males, in particular, the weight of the testicles increases as a result of an increase in the total number of sperm in the ejaculate and an increase in their activity. In the study of fertility of the offspring from males of the experimental and control group, a significant increase in the number and total weight of the infant was registered $p < 0.05$.

Conclusion. The hirudological effect contributes to the stimulation of the reproductive function of male rats, affects the increased mass of the testes by increasing the total number of spermatozoa in the ejaculate and increasing the activity of spermatozoa, also increases the number of offspring.