

REACTIVITY OF THE GONADAL SYSTEM IN THE EARLY POST-INTENSIVE CARE PERIOD**Karabaev Aminjon Gadaevich**MD, Associate Professor, Head of the Department of Physiology,
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Annotation. Currently, the mechanisms of development of post-resuscitation disease and the development of compensatory processes remain an urgent problem of experimental and clinical resuscitation. The aim of the study was to study the content of sex hormones in plasma and the rate of recovery of neurological status in the early post-intensive care period, after a 5-minute clinical death. 20 male animals were examined who underwent a 5-minute cardiac arrest under ether anesthesia using the method of intrathoracic compression of the vascular bundle of the heart and resuscitation measures were carried out. The content of sex hormones was determined using ELISA in 5 intact animals and 15 in which post-resuscitation disease was simulated. After resuscitation, the condition of the animals is severe; when studying the hormone content after 6 hours, 12 hours and 24 hours, an increase in the blood content of FSH, LH, and testosterone and the activity and irritability of the animals was revealed.

Keywords. Clinical death, post-intensive care disease, sex glands, hormones, follicle stimulating hormone, luteinizing hormone, testosterone.

A number of scientific studies are being conducted worldwide to improve the assessment of endocrine system disorders between anabolic, catabolic and kinetic systems, when exposed to various extreme factors. [5; 8; 12; 13; 14]. Currently, the dynamics of changes in the content of reproductive steroid hormones in the body in post-intensive care conditions is not clear. At the same time, experimental studies have shown the dynamics of morphofunctional changes in the hypothalamic-pituitary system, as well as the post-resuscitation protective effect of estrogenic hormones, progesterone, and testosterone administered parenterally [1;2;18;9;10;15;16;17]. An analysis of the literature shows that studies of endocrine system dysfunctions during post-intensive care disease, only some glands have been studied; that is, the hypothalamic-pituitary neurosecretory system, adrenal glands, thyroid gland, pancreas in the process of clinical death and post-intensive care disease have been partially studied [3; 5; 8].

Certain measures are being taken in the world to create a healthcare system that provides a radical increase in the quality and effectiveness of medical care for the population, including early diagnosis, effective treatment, prevention and reduction of complications of various somatic diseases. Based on these tasks, it is advisable to conduct scientific research aimed at assessing disorders of the reproductive system in the post-intensive care period. However, the dynamics of changes in the morphofunctional nature of the synthesis and secretion of the male hormone testosterone has not been fully studied and remains an urgent problem.

The purpose of the study. To identify the reactivity of the male reproductive system in the early post-resuscitation period.

The object of the study. In connection with this task, a study was conducted on 20 mongrel male rats weighing 160-170 g. Of these: 5 intact, 15 experimental rats, in which a study of the reactivity of the reproductive system was conducted, after modeling post-resuscitation disease [7].

Research methods. Experimental, morphological, and enzyme immunoassay methods were used to achieve the goal and solve the problem.

The results obtained and their discussion. In the study of the reactivity of the reproductive system in intact rats (Table №. 1) the content of follicle-stimulating hormone (FSH), Luteinizing hormone (LH), testosterone content against the background of moderate morphofunctional activity of β and d- basophil cells of the adenohypophysis are at the stage of moderate functioning.

Table № 1

Показатели	Intact animals	5 minute clinical death	After resuscitation through		
			6 hours	12 hours	24 hours
FSH mIU/ml.	0,1 3±0,02	0,133± 0,02	0,17 ± 0,01	0,17 ± 0,01*	0,21± 0,01**
(LH mIU/ml,	0,4 3 ± 0,01	0,44 ± 0,01	0,47 ± 0,01*	0,51± 0,01**	0,61± 0,02***
Testosterone nmol/l	5,0 4±0,25	5,251± 0,25	7,49 ± 0,54*	8,24± 0,6***	9,89± 0,7***

Primacy : $P<0.05$ -*; $P<0.01$ -**; $P<0.001$ -***

After the onset of clinical death in 5 minutes, it was determined: an increase in the content of FSH LH, as well as the amount of testosterone ($P>0.05$), but the indicators are insignificant. This condition indicates the activation of the hypothalamic-pituitary system, aimed at the secretion of testosterone into the blood, for the adaptation of the body, when exposed to such a factor as clinical death.

In the early post-resuscitation period, 6 hours after recovery, a further increase in FSH content was determined ($P>0.05$), but the indicator was insignificant compared with intact rats, and the content of LH and testosterone increased significantly ($P<0.05$) the type of animals is untidy, pronounced shortness of breath is noted.

After 12 hours, a further increase in the content of FSH ($P<0.05$) LH ($P<0.01$), as well as the amount of testosterone ($P<0.001$), was determined in the dynamics of hormonal status, compared with intact and pre-running groups. At the same time, the animals became relatively active.

At the 24th hour of post-intensive care disease, an increase in the content of FSH ($P<0.01$), LH, and the amount of testosterone ($P<0.001$) was detected, compared with intact animals, the animals became active irritable. If we interpret the data obtained with the data of Horizontov P.D., then the hormones responsible for the reproductive state are involved in the stage of adaptation, during the period of post-intensive care disease [4].

Based on the data obtained, the following conclusions can be drawn:

1. The reproductive system in intact rats is in a state of moderate functioning to ensure the synthesis and secretion of testosterone.
2. In the early post-intensive care period, an increase in the synthesis and secretion of FSH, LH, testosterone and animal activity is most likely aimed at compensating for the synthesis of reproductive structures of body cells.

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