IN THE BLOOD AND LIVER OF RATS POISENED BY SPECTACLED SNAKE VENOM

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It is known that catacin has high fighting properities. Previous experiments have shown that antihypoxants such as gutimine and sodium oxybutyrate give positive results after both prophylaxis and snake venom poisoning.

The direct effects of catacin on tissue when poisoned by snake venom re currently poorly understood. Membrane phospholipids, which can liquefy the body , play an important role in the exchange of membrane properties.

In our following studies, we aimed to monitor the results of various indicators of phospholipids in rat blood and liver catacin use and non-use after intoxitation with Central Asian spectacle snake venom.

Methodology

White rats weighing 200-300 g were used in the experiment. The rodents were fed in bright, moderately ventilated, wooden houses under constant supervision. The animals were divided into three groups and 16 rodents were placed in each house. In the first and second groups, 160 mcg.mg of Central Asian spectacled snake venom was delivered from the buttocks, and two minutes later 50 mg was given to the second group of rodents, catacin was sent. The third group of rodents was provided with a physiological mixture. After 15 minutes, the animals were killed. The Central Asian spectacled snake venom was brought from the Institute of Zoology of the Academy of Sciences of the Republic of Uzbekistan. During the experiment, calcium chloride was dried in a desiccator using 2002 samples.

Blood and liver lipids were retested using several methods.The content of phospholipids in the blood and liver was controlled by a thin, double tube.The proteins were tested using the Louri method.

Results and their discussion

Studies in Central Asian spectacle snake venom have shown that an increase in phosphatidylcholine, phosphatidylserine, lysophosphatidylcholine in the blood leads to a decrease in phosphatidylethanolamine, phosphatidylinositol and cardiolipins. After the injection, the amount of phosphatidylcholine in the blood increased by 1.69 times. At the same time, the amount of lysophosphatidylcholine increased by 12 times.

Decrease in phosphatidylethanolamine, phosphatidylinositol, and cardiolipins in tissues after delivery of Central Asian spectacled snake venom 1.62; 1.48 and 1.80 times decreased, respectively. It is clear that the observed changes occur as a result of the action of Aphospholipases. This is because methyl, a snake venom found in liver tissue, creates an enzymatic state that breaks down as a result of decarboxylic reactions. After venom poisoning by snake venom, A_2 phospholipases primarily reduce phosphatidylethanolamine, phosphatidylinositide, and cardiolipin.

Table 1. Changes the amount of phospholipids in the blood and liver of rats after the poisoning of Central Asian spectacled snakes and the protective power catacin.

Phospholipids	Intact Rodents	Rats poisoned by snakes venom	
blood		control	catacin
FX	3.88+0.90	6.71+0.90	5.07+0.27

LFX	0.96+0.10	12.35+0.36	2.07+0.27
FE	1.92+0.21	0.76+0.12	1.58+0.18
FI	0.89+0.11	0.45+0.11	0.69+0.09
FS	0.92+0.12	1.42+0.18	1.09+0.14
KL	0.75+0.11	0.15+0.09	0.57+0.12
FX	43.9+1.6	73.53+3.74****	57.81+2.90**
LFX	3.52+0.10	13.32+3.33****	4.31+24**
FE	33.7+0.12	15.97+2.98****	24.06+2.00***
FI	7.09+0.08	4.17+0.67****	5.51+0.18**
FS	3.99+0.06	3.90+0.42	4.34+0.62
KL	7.86+0.09	4.38+0.16****	6.25+0.13**

Note: Here the degree of accuracy is indicated by asterisks $p<0.05$; $p<0.02$; $p<0.01$; $p<0.001$.

After the introduction of spectacled snake venom, the production of phosphatidylocholine and phosphatidylserines in the blood of rats decreases and returns to normal. Lysophosphatidylcholine levels are twice as high as normal begins and approaches the norm .However, phosphatidylcholine, phosphatidylserine and lysophosphatidylcholine are only 1.31; 1.18 and rises above the norm by 2.15 times. In contrast, phosphatidylethanolamine, phosphatidylinositide, and cardiolipins, 1.18; 1.22; and 1.24 times less than the norm.

Intake of snake venom into the animal's body, an increase in phosphatidylcholine, lysophosphatidylcholine, and mainly in the liver, this figure is 1.57; 2.45; gives a high result, and it can be seen that the amount of phosphatidylethanolamine, phosphatidylinositol and cardiolipins is 1.59 above the norm; 1.42; and decreases to 1.40 times. In case of poisoning by spectacled snake venom, an increase in the amount of phosphatidylcholine, lysophosphatidylcholine in the blood and liver of rats is observed after delivery of catacin. Decreases in the amount of phosphatidylethanolamine, phosphatidylinositol and cardiolipins in the body are reduced, but not normalized.

Thus, observations confirm that the amount of phospholipids is restored in the case of the use of catatcin in the blood and liver of the animal after poisoning with spectacled snake venom.

Literature

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