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Biochemical Changes in Blood in Rabbit Pasteurella's

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Abstract: In the microbiology laboratory of the Veterinary Scientific Research Institute, 8 rabbits were divided into two groups. The first group (4 rabbits) was an experimental group, which was infected with experimental Pasteurella's, and the second group, 4 rabbits in the control group, were not infected. From the 3rd day of the experiment, blood was collected from the auricle of all Pasteurella-infected and non-infected healthy rabbits, and blood biochemical indicators were studied. It was observed that the amount of keratin and urea increased, ALT μmol/l, AST μmol/l enzymes increased from the norm, and the decrease of Fe substance caused the decrease of the amount of hemoglobin in erythrocytes in the disease.

Key words: Pasteurella's, rabbit, koon, cluster, microbiology, biochemistry, soil parameters, group, P. multisided, experiment, control.

Introduction: As a result of observations during the research, mass deaths are observed due to the spread of pasteurellosis as an epizootic in multi-branch farms every year in the spring and autumn seasons. Based on this, the production and implementation of local vaccines, diagnostics, treatment and prevention measures for the development of rabbit breeding in the country are considered urgent tasks. As a result of research observations, 80-85% of rabbits in Uzbekistan die from pasteurellosis, and this greatly hinders the development of rabbit breeding clusters. Especially farms suffer a lot from this disease. Therefore, preventive treatment and rapid diagnosis of the disease are important for the development of this field. Availability of high-quality vaccines, diagnostics and other resources plays an important role in timely prevention of the disease . In the case of a rabbit with pasteurellosis, all changes are initially manifested in the blood. Because the pathogenesis of the disease occurs through blood, several scientists have studied this in their research. In the case of rabbit pasteurellosis, a very significant change was observed in the blood, as the number of red blood cells increased, the hemoglobin concentration decreased.

Compared with control rabbits, the number of white blood cells increased, the number of monocytes and neutrophils increased in lymphocytes. However, the significant changes in other blood parameters were clearly reflected in the tests [Ulykhina L.I. 2004, Yatusevich A.I. et al 2008, El-Hendy HM A et al 2020]. It is assumed that when P. multocida enters the body of rabbits, the number of red blood cells increases, the hemoglobin concentration decreases, hematocrit and average corpuscular hemoglobin concentration increase. They reported that neutrophils increase in lymphocytes. [Petrova Y and others 2017].

Materials and methods: In order to study the biochemical changes in the blood of rabbits with pasteurellosis, a total of 8 rabbits were divided into two groups. Rabbits (4 rabbits) infected with experimental Pasteurella were divided into the Experimental group, and healthy rabbits (4 rabbits) not infected with Pasteurella were divided into the control group.

From the 3rd day of the experiment, blood was taken from the ear canal and hematological indicators were checked. They were determined using the photometry method.

Results of the research: The experiment was conducted on 8 rabbits from the existing rabbits in the vivarium of the Microbiology Laboratory of the Veterinary Scientific Research Institute. In this case, 4 rabbits in the first experimental group were infected with experimental Pasteurella, and the rabbits in the second control group (4 heads) were healthy rabbits that were not infected with Pasteurella. Blood was taken from the auricle

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of the rabbits in both groups, and the biochemical changes in the blood were analyzed in this sheep, which is detailed in Table No. 1.

Picture #1 is the flow of blood collection

, the process of studying the biochemical properties of blood

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Biochemical changes in the blood of rabbits in rabbit patcerellosis

Table No. 7

Group II control - healthy rabbits														
No	The sign of rabbits in the experiment and the type of experiment	Amount of sugar. mmol/l	Cholesterol total mmol/l	Keratinin.mmol/l	Urea. mmol/l	Nitrous oxide. µmol/l	General protein. G/L	Common belrubin. µmol/l	ATmol/l	ISmcol/l	Timolcinema. ED/L	Mg mmol/l	Fe µmol/l	Ca mmol/l
1	White rabbit (painted tail).	1.7	4.8	118.6	10.3	30.9	46.6	28.5	0.18	0, 20	1.7	0.5	6.7	2.4
2	Gray rabbit	1.6	5.6	120.6	10.9	25.9	48.6	30.5	0.28	0, 25	1.9	0.8	7.4	3.2
3	White rabbit (painted head)	2.1	4.8	121.5	11.3	28.9	50.2	32.5	0.20	0, 28	2,3	0.9	5.9	2.8
4	Bullet rabbit (painted back)	1.8	5.2	117.6	10.5	35.5	45.5	25.3	0.22	0, 18	1.9	0.8	6,7	2.9
On average		**1.8**	**5.1**	**119.5**	**10.7**	**30.3**	**47.7**	**29.2**	**0.22**	**0.23**	**1.9**	**0.7**	**6.6**	**2.8**
Experimental group I rabbits infected with experimental pasteurellosis														
5	Black rabbit	1.5	4.2	416.5	20.4	30.6	48.7	36.4	0.98	0.50	1.9	0.4	0.9	1.9
6	The white rabbit is small	0.9	3.9	325.5	18.9	25.5	50.3	32.5	1.37	0.68	1,2	0.3	1,2	0.9
7	Kulrang is cute	1.3	4.1	218.9	25.2	29.6	45.7	34.8	1.56	0.55	1.7	0.4	1.0	1.5
8	Shoot big boy	1.7	4.1	345.2	21.3	21.4	46.8	29.4	0.99	0.45	2.1	0.2	0.8	0.7
A fugitive		**1.4**	**4.0**	**326.5**	**21.4**	**27.7**	**47.8**	**33.2**	**1,2**	**1.8**	**1.7**	**0.3**	**0.9**	**1,2**

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From this table, the increase in the amount of keratin and urea in the blood indicates the development of pathological processes in the kidneys of rabbits with pasteurellosis. ALT μmol/l, AST μmol/l increased from the norm in the heart, liver, muscles, nervous tissue, kidney, spleen, lung organs, when neurotic processes took place, it was observed that these indicators increased due to the destruction of the structure of their cytoplasm, the decrease in Fe substance caused a decrease in the amount of hemoglobin in erythrocytes in the disease. observed, it was found that the reduction of Ca caused a decrease in useful elements due to the disease.

Conclusion:

1. In the microbiology laboratory of the Veterinary Scientific Research Institute (8 animals), it was observed that the amount of creatinine in the blood of experimental rabbits infected with pasteurellosis (4 animals) increased by 207 μmol/l and urea by 10.7 mmol/l compared to the norm.
2. In rabbits infected with experimental pasteurellosis, relative organicity of ALT and AST enzymes was observed. In this pasteurellosis, the development of parenchymatous organs (heart, liver, spleen, lungs, kidney) was revealed as a result of disruption of the structure of the cytoplasm.
3. The average decrease of Fe macro element by 5.7 μmol/l was determined by the decrease of the amount of hemoglobin in the erythrocytes in the disease and anemia was observed in the animal.

References:

1 Aripov A.I. Fesenko L.M., Aripov O.A. Ismoilova N.I., Muhamediyarova R.G. Clinic Laboratory Diagnostics bўyich κўllanma Tashkent -2007 yil B- 12-56
2 Agzamkhodzhaev T.S., Khaydarov M.B., Ismailova M.U., Tolipov M.G., Babaniyazov K.K., “Clinical laboratory tashhislash va tekshiruv usullari” Toshkent – 2016. B-73-75
3 Ulykhina L.I. "Sparing colic " / Rostov-on-Don Feinks 2004 C - 216-218
4 Yatusevich A.I. Prudnikov VS, Karasev NF, Nikolaenko MF. "Infectious diseases of fur animals" / Monograph VITEBSK-2008. C- 10-12
5 El-Hendy H.M A, Mohamed F. M, Hassan K.A // Clinicopathological and Hematological Changes in Consequence to Experimental Infection of Rabbits with Pasteurella Multocida Type A // SVU- International Journal of Veterinaey Sciences 3 (2): Egypt 2020, P-1-13.