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BIOCHEMICAL INDICATORS OF BLOOD SERUM IN THE TREATMENT OF PURULOUS-NECROTIC PROCESSES IN THE TOES OF COWS WITH DIFFERENT METHODS

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Abstract
In the article, in the treatment of various purulent-necrotic processes in the finger area of cows, 25 ml of catazal immunostimulant is administered intravenously once every 48 hours for a total of three times, 10 ml of 0.5% novocaine and 4 ml of lincomycin are mixed intramuscularly and oxytetracycline + streptocide + iodoform (4:4:2 ratio) when demyxidine stimulators are used in a certain rate and quantity to accelerate absorption, improve blood and lymph circulation in the pathological focus, reduce inflammatory processes, strengthen regeneration processes, and shorten the duration of treatment, 14.5% of total protein in blood serum It was stated that the amount of albumin increased by 27.8% and beta-globulin by 24.2%, and alpha-globulin decreased by 14.8% and gamma-globulin by 22.8%.

Keywords: Purebred cow, catazal, lincomycin, oxytetracycline, streptocide, iodoform, demyxidine, biochemical indicators, blood serum, total protein, albumins, beta-globulin, alpha-globulin, gamma-globulin.

Relevance of the Topic

In order to prevent the occurrence of hoof diseases in animals, periodic disinfection of livestock buildings and timely provision of replacement pastures, coordination of the ration, especially in the winter period, strengthening of storage conditions, optimal placement of cattle, increasing the resistance of the organism, and when necessary, organizing foot baths in aseptic solutions, in special cases it is recommended that the use of vaccine, serum, immunostimulators and antihistamine drugs is important [1; p. 15-16].

The degree of purulent-necrotic process and pathological changes in Holstein-Friesian cows in the toe area was studied. According to the researcher, orthopedic pathologies were found in 13.26% of cows with a one-year adaptation period, of which 75% had various diseases in the toe area, 25% had hoof deformation. organized. 55.56% of surgical procedures are wounds, 33.33% are pododermatitis, and 11.11% are tumors [6; p. 18]. The author said that when cows with three years of adaptation to local conditions were examined in autumn, orthopedic pathologies were 28.33%, of which pododermatitis was 14.81%, and primary complications in the form of arthritis and abscesses in the finger area were 22.22%. When the blood serum of cows undergoing spontaneous purulent-necrotic processes in the finger area was analyzed biochemically, compared to healthy animals, the number of leukocytes increased by

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0.88 thousand, the total protein content increased by 2.96%, the amount of protein fractions, respectively , beta-globulins by 8.36% and increase of gamma-globulins by 5.09% and decrease of alpha-globulins by 12.93% were noted. Also, in the blood serum of sick cows, the amount of potassium increased by 23.61 mg%, while the amount of sodium decreased by 57.7 mg%.

According to some authors, the speed of production causes excessive burden on the immune system of animals, and with the increase in productivity, first of all, it increases the demand for a full-value diet enriched with all nutrients and biologically active substances [9 ; p. 44-46. 7; pp. 11-12]. According to the authors, disturbances in the metabolism of biologically active substances often remain unnoticed and, most importantly, appear only when irreversible pathological changes occur, and thus the number of animals with impaired immune status increases among the farm herd, and this is mainly a decrease in cellular immunity, a violation of the ratio of T- and V-lymphocytes, decreased phagocytic activity and absorption of neutrophils, manifested in lymphocytopenia.

Researchers say that the study of biochemical indicators of blood is of great diagnostic value, and even an incomplete hematological and biochemical analysis of blood is enough for a specialist to reliably determine the state of an animal's organism, and periodically checking the composition of blood can predict not only the general state of the organism, but also the consequences of the disease. It allows to coordinate treatment, to study the effects of one or another drug [5; pp. 105-108, 2; p. 227, 3; pp. 57-59, 4; pp. 239-241, 8; 478-481-b].

The purpose of the study. It consists in the development of improved treatment-based methods based on the use of a certain amount and order of treatment of cows with various purulent-necrotic processes in the area of the finger in cattle farms, and the study of changes in biochemical indicators in the blood.

Research object and methods. Scientific examinations and experiments were conducted at the "Veterinary Surgery and Obstetrics" department of the Samarkand State Veterinary Medicine, Animal Husbandry and Biotechnology University, at the "Farovon Grand Invest" livestock farm of the Okdarya district of the Samarkand region, and at the laboratories of the Samarkand regional hospital.

As a result of clinical examination, 15 cows with various purulent-necrotic processes in the finger area were isolated from the "Farovon Grand Invest" livestock farm of Okdarya district.

In the first experiment, the animals of the first group had their fingers and hooves cleaned and clipped, and pus and dead tissue were surgically removed, then they were bathed with 5% formalin, 10 ml of 0.5% novocaine and 4 ml of lincomycin were mixed and injected intramuscularly, and oxytetracycline + To accelerate the absorption of streptocide + iodoform (4:4:2 ratio), Demyxidine stimulator was applied, then the powders were sprayed on the pathological focus and tightly bandaged.

The animals of the second experimental group were cleaned and clipped toes and hooves, and pus and dead tissue were surgically removed, then bathed with 5%

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formalin, after the pus discharge stopped, Catazal was administered intravenously from the immunostimulator, 25 ml, once every 48 hours for a total of three times. , 10 ml of 0.5% novocaine and 4 ml of Lincomycin were mixed and injected into the muscle, and to accelerate the absorption of oxytetracycline + streptocide + iodoform (4:4:2 ratio), Demiksidin stimulating agent was applied, then the powders were sprayed on the pathological focus and tightly bandaged.

The animals of the third control group were treated by traditional methods, i.e., toes and hooves were cleaned and clipped, and pus and dead tissue were surgically removed, then bathed with 5% formalin, mixed with 0.9% saline solution and injected intramuscularly with bicillin-5 and oxytetracycline + streptocide + iodoform powder (4:4:2 ratio) was sprayed on the pathological focus and bandaged.

Before and during the experiment, the animals were clinically examined, and their blood biochemical parameters were checked twice before the experiment, and on the 5th, 10th, 15th and 25th days of the experiment.

Analysis of the obtained results During the treatment of the pathological processes in the fingers and hooves of the experiment, along with the clinical physiological indicators, the biochemical indicators of the blood serum were also checked in all cows. The analysis of the obtained data showed that the generally accepted methods were mixed with 10 ml of 0.5% novocaine and 4 ml of lincomycin intramuscularly, and oxytetracycline + streptocide + iodoform (4:4:2 ratio) was used as a stimulant to accelerate the absorption of the first group of animals. when the biochemical composition of blood serum was checked, it was observed that the total protein content increased by 5.4% ($r<0.05$) on the first 10 days, then it increased again and at the end of the experiment it was 9.2% compared to the initial values ($r<0.05$) was noted to have increased. When the protein spectrum was determined, albumin increased, and its maximum rate of increase was observed on the 25th day and was 19.7%. The amount of alpha globulins decreased during the experiment and reached 21.6% by the end of the experiment, the amount of beta globulins increased by 15.6% ($r<0.05$) on the 10th day of the experiment, and by the end of the experiment it was 24.6% compared to the initial values. ($r<0.05$) increased, and gammaglobulins showed the opposite picture and decreased, and at the end of the observations, it decreased by 18.2% compared to the initial values

Biochemical indicators of blood serum of cows of the second experimental group.

Table 1 Biochemical indicators of blood serum of cows of the second experimental group .

t.r	Indicators	Unit of measure	Until treatment begins (n = 5)	After treatment (n= 5)	P
1	Total protein	g/l	66.2 ± 1.24	75.8 ± 1.04	< 0.05
2	Albumins	g/l	28.8 ± 0.80	36.8 ± 0.71	< 0.05
3	Alpha globulin	%	25.6 ± 0.56	21.8 ± 0.53	< 0.05
4	beta globulin	%	13.2 ± 0.43	16.4 ± 0.82	< 0.05
5	Gamma globulin	%	32.4 ± 1.61	25±1,49	< 0,05

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Animals of the 2nd group of the experiment, in addition to the generally accepted methods, to accelerate the absorption of lincomycin with 0.5% novocaine and oxytetracycline + streptocide + iodoform (in a ratio of 4:4:2) from catalase immunostimulator to the venous blood after the cessation of pus discharge when the blood serum was examined, it was noted that they showed the following changes

Certain characteristic changes were also shown in the biochemical parameters of blood serum of animals of this group. It was found that total protein in blood serum increased by 3.3% on the 10th day of testing, then increased during the experiment, and at the end of the experiment, it increased by 14.5% ($r<0.05$) compared to the initial values. The amount of albumins increased by 4.5% on the 5th day of testing, then by 20.1% ($r<0.05$) on the 15th day of the experiment, and by 27.8% ($r<0.05$) at the end of the experiment. it was noted that it increased

The amount of alpha-globulins decreased during the experiments, and at the end of the tests, it was noted that it decreased by 14.8% ($r<0.05$). It was observed that the amount of beta-globulins increased by 14.4% ($r<0.05$) on the 15th day of the experiment and by 24.2% ($r<0.05$) at the end of the experiment. The amount of gamma-globulins decreased and reached 77.2% at the end of the experiment (Table 1).

The characteristic sharp changes were not observed in the blood serum of the animals of the third control group. On the 15th day of treatment, total protein content in blood serum increased by 3.1%, and at the end of the experiment, it was observed that it increased by 4.9% compared to the initial values. The percentage of albumins in the protein spectrum increased slightly during the experiment and it was noted that it increased by 2.2% on the 5th day of the experiment, by 5.5% on the 10th day of the experiment, and by 8.3% at the end of the experiment ($p<0.05$). The amount of alpha- and gamma-globulins decreased during the experiment, and at the end of the experiment, it was noted that it decreased by 8.5% and 5.6%, respectively, compared to the initial values. The amount of beta-globulins, on the contrary, increased during the experiment and showed a wavy character. It was shown that it increased by 5.2% on the 15th day of the experiment and by 9.5% at the end of the experiment.

In addition to the generally accepted methods for the treatment of various purulent-necrotic processes in the area of the finger based on the inspections, acceleration of the absorption of lincomycin and oxytetracycline + streptocide + iodoform (4:4:2 ratio) with 0.5% novocaine from the catalase immunostimulator into the vein after the pus discharge stops. In the cows of the second experimental group, where demyxidine was used as a stimulant, the amount of total protein in the serum of cows undergoing purulent-necrotic processes of the fingers was 14.5% lower before the start of treatment, which is related to the moderation of metabolism in the body, which causes dehydration of the body and thickening of the blood in the animals. . (Table 1) It was noted that after treatment procedures were applied to sick animals, the amount of protein increased as the physiological processes in their bodies began to improve. It should be noted that before the treatment of cows with various purulent-necrotic processes in the finger area, the amount of albumin and beta globulin in the blood

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serum was 27.8% and 24.2% lower, respectively, which is known to be due to the large amount of protein used in the active immune defense process in the body. was, and an increase in their amount was observed after the application of treatment procedures.

Summary

1. From the results obtained in the experiment, it was known that in the treatment of various purulent-necrotic processes in the finger area of cows, the use of 0.5% novocaine, lincomycin oxytetracycline, streptocide, iodoform, and demyxidine in a certain amount and rate improves blood and lymph circulation in the pathological focus, inflammation reduces the processes, strengthens the regeneration processes and shortens the treatment period.
2. In the treatment of various purulent-necrotic processes in the finger area, the use of catazal immunostimulator, 0.5% novocaine, lincomycin oxytetracycline, streptocide, iodoform and demyxidine in a certain standard and amount reduces the amount of total protein in the blood serum to 14.5%, and the amount of albumin to 27.8 % and beta-globulin increased by 24.2%, and alpha-globulin decreased by 14.8% and gamma-globulin by 22.8%.

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