

**BIOCHEMICAL INDICATORS OF BLOOD SERUM DURING THE TREATMENT OF ASEPTIC PODODERMATITIS IN BREEDED COWS BY DIFFERENT METHODS**

Eshkuvatov Kh. H.,

Assistant, Samarkand State University of Veterinary Medicine,  
Animal Husbandry and Biotechnology

Yunusov Kh. B.

Professor, Samarkand State University of Veterinary Medicine,  
Animal Husbandry and Biotechnology

Niyazov H. B.

Professor, Samarkand State University of Veterinary Medicine,  
Animal Husbandry and Biotechnology

**Abstract**

In this article, the hooves of purebred cows in specialized dairy farms in our Republic were cleaned, then bathed with 5% formalin, hydrocortisone 4ml + 0.5% novocaine 5ml intramuscularly, cal-bor-mag (250 ml intravenously every 24 once an hour for a total of three times), phenylbutazone-20 (5 ml intravenously for 100 kg body weight three times a total of once every 48 hours) reduces inflammatory processes, increases regeneration processes, and the total protein content in blood serum is 8.9% , the amount of albumins increased by 18.5%, the amount of alpha-globulins decreased by 23.3%, the amount of beta-globulins increased by 47.2%, and the amount of gamma-globulins decreased by 13.8%.

**Keywords.** Purebred cow, formalin, hydrocortisone, novocaine, cal-bor-mag, phenylbutazone-20, biochemical indicators, total protein, albumins, alpha-globulins, beta-globulins, gamma-globulins.

**Relevance of the topic.** For the treatment of purulent-necrotic lesions of the fingers in cows, they used a new generation of probiotics - vetosporin and a complex preparation containing amino acids, multivitamins, trace elements and glucose - vitamelam. When these drugs are compared with traditional treatment methods, it has been found that they reduce the healing time by 5-7 days. [1].

FGBNU "TsTPB-VNIVI" drug "Fuzobaxan" was developed [5], its effectiveness was confirmed by positive results of comparative tests with similar drugs in the treatment of cattle

with mild and moderate hoof diseases for 25 years. The authors say that the clinical recovery period of animals with mild hoof diseases is 5-7 days on average and the average level is 11 days on average, no recurrence of the disease and adverse reactions during injection were observed, the small amount of the therapeutic dose and the convenience of using the drug in the form of an emulsion allow to increase the maximum therapeutic effect.

As a result of A.V. Izdepsky's research, it was determined that aseptic serum synovitis is caused by a decrease in antioxidant activity, an increase in peroxide oxidation of lipids both in blood serum and synovial fluid, and a decrease in the antiradical protection of these substrates [2].

Authors [6;7;8;9;10;11;12] recommend in the treatment of purulent-necrotic processes in the finger area in cows, 25 ml of 10% cathosol, 10 ml of 0.5% novocaine and 4 ml 30% lincomycin solution injected intramuscularly to accelerate the absorption of oxytetracycline+ streptocide+ iodoform (4:4:2 ratio) using 5-7 ml of dimexide drugs, the number of erythrocytes in the blood was 8.3%, and the amount of hemoglobin was 19.4%, segment nucleated neutrophils increased by 45.2%, total serum protein by 14.5%, albumin by 27.8% and beta-globulin by 24.2%, and leukocytes by 17% and lymphocytes by 21.2% determined.

The researcher [3] in productive cows infected with purulent pododermatitis showed an average number of leukocytes in blood up to  $16.48 \pm 1.17$  thousand/ $\mu$ l, total protein content up to  $75.3 \pm 0.99$  g/l, g-globulin content  $50.8 \pm 0$  It was observed to increase to 74%.

Laboratory examinations of cows infected with pododermatitis revealed a decrease in the amount of hemoglobin in their blood to 96 g/l, the number of erythrocytes to 4.7 g/l, obvious leukocytosis, and an increase in the sedimentation rate of erythrocytes. According to the author's data, hematological indicators in large horned animals with hoof dermatitis after treatment-prophylactic measures with the use of the new drug increased the proportion of neutrophils with rod nuclei to  $7.4 \pm 0.6$ , eosinophils to  $5.2 \pm 0.7$ , and monocytes in blood parameters. It was found to decrease to  $6.4 \pm 0.6$ . [4].

**The purpose of the study.** The purpose of this study is to develop improved methods of treating cows with aseptic pododermatitis in the hooves by various methods in dairy farms of our republic, based on the use of a certain amount and order, and to study the changes in biochemical indicators in the blood.

Research object and methods. Scientific tests and experiments at the Samarkand State University of Veterinary Medicine, Animal Husbandry and Biotechnology, 15 cows with aseptic pododermatitis processes in the hoof area were selected as a result of clinical tests at the "Naslli sut servis" cattle farm, Samarkand region, Samarkand district. Diseased animals were divided into three groups of 5 heads each based on the principle of similar pairs. The animals of the first experimental group were cleaned and clipped, then bathed with 5%

formalin, hydrocortisone 4ml and 0.5% novocaine 5ml intramuscularly, cal-bor-mag (250 ml intravenously once every 24 hours for a total of three times ) sent. The animals of the second experimental group were cleaned and clipped, then bathed with 5% formalin, hydrocortisone 4ml and 0.5% novocaine 5ml intramuscularly, cal-bor-mag (250 ml intravenously once every 24 hours for a total of three times) , phenylbutazone-20 (5 ml intravenously once per 100 kg body weight) was administered. The animals of the third control group were cleaned and clipped by traditional methods, then bathed in 5% formalin, 4ml of hydrocortisone and 5ml of 0.5% novocaine were injected intramuscularly.

Animals were clinically examined before and during the experiment, and morphological and biochemical parameters in their blood were checked before the experiment and after the start of the treatment on the 5th, 10th, 15th and 20th days of the experiment.

**Analysis of the obtained results.** During the treatment of pathological processes in the hooves of experimental animals with aseptic pododermatitis, along with their clinical physiological indicators, morphological and biochemical indicators of blood were checked.

The analysis of the obtained data showed that the hooves were cleaned and trimmed, then bathed in 5% formalin, hydrocortisone 4ml, 0.5% novocaine 5ml intramuscularly, cal-bor-mag (250 ml intravenously once every 24 hours for a total of three times) when the biochemical indicators of blood serum of animals of the first group were used, it was observed that the total protein content increased by 2.4% on the 5th day of the experiment, by 5.2% on the 10th day, and by 8.1% on the 15th day, and then it increased again and at the end of the experiment it was found that it increased by 11.6% ( $P<0.05$ ) compared to the initial values. When the protein fractions were examined, it was observed that albumin increased from the beginning of the treatment to the end of the experiment, while the amount of albumin increased by 5.1% on the 5th day of the experiment, by 10.5% on the 10th day, and by 8.1% on the 15th day. the maximum rate of increase was observed on the 20th day and made 33.5%. In the tests, it was observed that the percentage of alpha globulins in the blood serum decreased during the treatment, and the percentage of alpha globulins decreased by 8.4% on the 5th day of the experiment, by 19.2% on the 10th day, and by 23.4% on the 15th day ( $P<0.05$ ). decreased, but by the end of the experiment, its maximum decrease was 31.7% ( $P<0.05$ ). In the amount of beta globulins, the opposite picture is shown, their percentage increased during the experiment, reaching 26.1% on the 10th day of the experiment ( $P<0.05$ ), and by the end of the experiment, it was 47.6% compared to the initial values ( $P<0, 05$ ) was noted to have increased. The amount of gamma globulins in the blood serum decreased during the experiment, when the percentage of gamma globulins decreased by 1.6% on the 5th day of the experiment, by 5.2% on the 10th

day, and by 11.5% on the 15th day. it was found that it decreased by 23% ( $P < 0.05$ ) compared to the initial indicators.

The hooves were cleaned and trimmed, then bathed in 5% formalin, hydrocortisone 4ml, 0.5% novocaine 5ml intramuscularly, cal-bor-mag (250 ml intravenously once every 24 hours for a total of three times), phenylbutazone-20 ( 5 ml per 100 kg body weight once every 48 hours for a total of three times per vein) in the second experimental group, when the biochemical parameters of the serum of the animals were checked, on the 5th day of the treatment, the total protein content was 3.8%, on the 10th day it was 5, 4%, on the 15th day it increased by 6.6%, then it increased again and at the end of the experiment it was found that it increased by 8.9% ( $P < 0.05$ ) compared to the initial values. In the tests, it was observed that the amount of protein fractions, i.e. albumin, increased from the beginning of the treatment to the end of the experiment, and on the 5th day of the experiment, the amount of albumin increased by 2.4%, on the 10th day by 8.9%, and on the 15th day by 12%. the maximum rate of increase observed at the end of the experiment was 18.5%. The amount of alpha-globulins decreased during the experiments, and on the 5th day of the experiment, the amount of albumin decreased by 3.1%, on the 10th day by 7.1%, on the 15th day by 16.7%, and at the end of the experiment by 23.3% ( $P < 0.05$ ) decreased. It was observed that the amount of beta-globulins increased from the beginning of the treatment to the end of the experiment compared to the initial indicators, and the amount of beta-globulins increased by 13.8% on the 5th day of the experiment, by 27.7% on the 10th day, and by 47% on the 15th day ( $P < 0.05$ ). increased by .2% ( $P < 0.05$ ), its maximum rate of increase during the treatment was observed at the end of the experiment, and it was found that its amount increased by 58.3%. The amount of gamma globulins in the blood serum decreased during the experiment, while the amount of beta globulins decreased by 3% on the 5th day of the experiment, by 8.7% on the 10th day, and by 9.9% on the 15th day. level was observed at the end of the experiment, and its amount was 13.8% ( $P < 0.05$ ).

When the blood serum of the animals in the third control group, whose hooves were cleaned and trimmed, then bathed in 5% formalin, hydrocortisone 4 ml, and novocaine 0.5% 5 ml were administered intramuscularly, the total protein content increased by 2.9% on the 5th day of treatment. it was observed that it increased by 4.6% on the 10th day of the experiment, by 5.8% on the 15th day, and by 7.6% at the end of the experiment. It was noted that the amount of albumin in the protein fraction increased by 4.3% on the 5th day of the experiment, by 9.6% on the 10th day of the experiment, and by 20% 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 15.4% and 12.7%, respectively, compared to the initial values. The amount of beta-globulins increased during the experiment, it was shown that

it increased by 6.8% on the 5th day of the experiment, by 18.1% on the 10th day of the experiment, and by 22.7% at the end of the treatment ( $P < 0.05$ ).

In the treatment of sick animals, cal-boron-mag and phenylbutazone-20 intravenous injection in a known rate and quantity increased the amount of total protein in the blood serum by 8.9%, the amount of albumin increased by 18.5%, and the amount of alpha-globulin decreased by 23.3%. , it was observed that the amount of beta-globulins increased by 47.2% and the amount of gamma-globulins decreased by 13.8%. After treatment procedures were applied to sick animals, it was noted that 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 aseptic pododermatitis in the finger area, the amount of albumin and beta globulin in the blood serum was 18.5% and 47.2% lower, respectively, which is known to be due to the amount of protein that is used in large amounts for the active immune defense process in the body. an increase in their number was observed after the application of treatment procedures.

Thus, in the treatment of aseptic pododermatitis animals, their hooves are cleaned and trimmed, then bathed with 5% formalin, hydrocortisone 4 ml, 0.5% novocaine 5 ml intramuscularly, cal-bor-mag (250 ml intravenously every 24 hours three times in total), we recommend injecting phenylbutazone-20 (intravenous 5 ml per 100 kg body weight intravenously 5 ml intravenously per 100 kg body weight once every 48 hours three times in total).

### **Summary**

1. In the treatment of aseptic pododermatitis in cows, it was noted that cal-bor-mag and phenylbutazone-20 injection in a certain rate and amount into a vein reduces inflammatory processes, increases regeneration processes and shortens the duration of treatment.
2. In the treatment of aseptic pododermatitis in cows, administration of cal-boron-mag and phenylbutazone-20 in a known rate and amount into a vein increases the amount of total protein in the blood serum by 8.9%, the amount of albumins by 18.5%, the amount of alpha-globulins by 23.3 % decrease, beta-globulin content increased by 47.2%, and gamma-globulin content decreased by 13.8%.

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