

## THEIR CLINICAL SIGNS AND BLOOD MORPHOLOGICAL INDICATIONS IN THE TREATMENT OF ASEPTIC PODODERMATITIS IN COWS

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### Abstract

In the article, in livestock farms specializing in dairy farming in our Republic, purebred cows have their hooves cleaned and trimmed, then bathed in 5% formalin, hydrocortisone 4ml, 0.5% novocaine 5ml intramuscularly, cal-bor-mag (250 ml intravenously every 24 hours times in total three times), phenylbutazone-20 (5 ml intravenously for 100 kg body weight once every 48 hours for a total of three times) reduced inflammatory processes, increased regeneration processes and increased the number of erythrocytes in the blood by 18.4%, the amount of hemoglobin It is reported to increase by 8.5%, decrease the number of leukocytes by 15.8%, and decrease the erythrocyte sedimentation rate by 27.2%.

**Keywords:** Purebred cow, formalin, hydrocortisone, novocaine, cal-bor-mag, phenylbutazone-20, morphological indicators, erythrocytes, leukocytes, hemoglobin, erythrocyte sedimentation rate.

**Relevance of the topic.** When the researchers analyzed the viability of cows and their culling, it was found that animals do not have high adaptive qualities in the processes of intensive technologies of feeding, storage, milking and feeding, and at the same time, diseases of the reproductive organs, mammary gland and hooves are the main reason for the quick culling of high-yielding cows. to be [1; 3;5 ] and the third place of foot diseases in them after obstetric and gynecological diseases and mastitis [4; 9; 10; 11 ;12 ] have been reported.

According to A.I. Blednov, in surgical diseases of cows, structural inconsistencies of livestock buildings, as well as non-observance of zoohygiene and veterinary-sanitary requirements, deficiencies in feeding have a negative impact on the musculoskeletal organs of animals, and

they have negative consequences such as pododermatitis, arthritis, tendovaginitis and improper growth of hooves. causes [2;].

Disruption of normal blood circulation in the hoof is the main etiological factor associated with the development of laminitis. Histamine plays an active role in this pathology, it is a strong vasodilator and arterial constrictor. There is a direct correlation between large rumen rN (acidosis), intestinal histamine concentration and animal health (laminitis). Histamine synthesis is associated with changes in the microbial population in the large rumen [7;8].

In cows with pododermatitis, laboratory tests showed 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  $6.4 \pm 0.6$ . [6].

By the authors [13; 14; 15] recommended in the treatment of purulent-necrotic processes in the finger area in cows, 25 ml of 10% catozol is injected into a vein, 10 ml of 0.5% novocaine and 4 ml of 30% lincomycin solution are injected into the muscle, oxytetracycline + streptocide + iodoform ( 4:4:2 ratio) the use of 5-7 ml of Dimexide drugs to accelerate the absorption of 8.3% of the number of erythrocytes in the blood, and 19.4% of the amount of hemoglobin, 45.2% of segmented neutrophils, 14.5% of the total protein in the blood serum %, the amount of albumin increased by 27.8% and beta-globulin by 24.2%, and the number of leukocytes decreased by 17% and lymphocytes by 21.2%.

**Research object and methods.** Scientific examinations 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 isolated from the "Naslli sut servis" cattle farm, Samarkand district, Samarkand region for experiments. Diseased animals were divided into three groups of 5 heads each based on the principle of similar pairs. In the first experimental group, the hooves of the animals were cleaned and trimmed, then they were bathed with 5% formalin, 4ml of hydrocortisone and 5ml of 0.5% novocaine were injected intramuscularly, cal-bor-mag (250ml into the vein 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 with 5% formalin, 4 ml of hydrocortisone and 5 ml of 0.5% novocaine were injected into the muscles.

Before the experiment and during the experiment, the animals were clinically examined, and the morphological and biochemical parameters of their blood were checked twice 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 the pathological processes in the hooves of animals infected with aseptic pododermatitis in the experiment, along with their clinical physiological indicators, morphological and biochemical indicators of blood were also checked.

In the experiments, all animals with diffuse aseptic pododermatitis showed the following clinical signs. Diffuse aseptic pododermatitis on the toes of cows is mainly acute and chronic, and animals with disease in several legs lie down more, and when resting, they put their weight on the healthy leg. The animals lie down more, get up with difficulty when they stand up, it was found that appetite and milk production decreased in most of them. Swelling and redness were noted to occur mostly between the toes, and on the soft heel border, on the skin, on the skin of the heel of the hoof circumference. In sick animals, a strong pain reaction was shown when the hooves were pinched using hoof testing clamps. When the damaged hooves were cut and cleaned with a hoof knife, it was found that there were dark red, yellow or dark black spots on the cornea, sometimes there was a double palm cornea.

Limited aseptic pododermatitis processes in cows' hooves are mainly acute and chronic, characterized by increasing lameness depending on the degree of disease in most animals. The animal feeds along with the general herd. Clinical signs were almost not noticed in cases of minor injuries and small hemorrhages (only a change in the color of the capsule of the hoof horn was observed during cleaning). In severe disease, various degrees of lameness were observed, and the lameness worsened when the animal walked on hard ground. The animals lie down more, get up with difficulty, it was found that the appetite has decreased in most of them.

During the experiments, the treatment in the first group of animals with diffuse aseptic pododermatitis lasted an average of 13 days, in the second group 11 days and in the third group 15 days, in the first group of animals with limited aseptic pododermatitis the treatment lasted 11 days, in the second group 9 days and in the third group 13 days. However, it is worth noting that the complete morphological recovery of the functions in the hooves was observed long after the end of the treatment.

The analysis of the obtained data showed that the hooves were cleaned and trimmed, then bathed with 5% formalin, hydrocortisone 4 ml, 0.5% novocaine 5 ml intramuscularly, cal-bor-mag (250 ml intravenously once every 24 hours for a total of three times) the amount of erythrocytes in the blood of the first group of animals used increased by 2% on the fifth day,



by 3.7% on the 10th day of the experiment, and by the end of the experiment, the increase was 6.2% compared to the initial values ( $r < 0.05$ ).

The amount of leukocytes in the blood of animals in this group decreased from the 5th day of the experiment and amounted to 4.3%, on the 10th day of the experiment it decreased to 5.7%, and at the end of the experiment it decreased to 8.5% ( $P < 0.05$ ). The amount of hemoglobin increased by 8.7% ( $r < 0.05$ ) on the 5th day of treatment, by 16.7% on the 10th day of the experiment, then its maximum increase was observed on the 20th day of the tests, that is, its amount was 17.9% ( $P < 0.05$ ) increased. Erythrocyte sedimentation rate decreased by 5.1% on the 5th day of the experiment, by 17% on the 15th day, and by 25.5% on the 25th day of the experiment.

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) when the blood of animals of the 2nd group of the experiment was tested, the number of erythrocytes at the beginning of the tests, that is, on the 5th day, by 2.9%, on the 15th day by 7.7 increased by 18.4% ( $P < 0.05$ ) compared to the initial values by the end of the experiment.

The number of leukocytes in the blood of experimental animals decreased by 6.6% from the 5th day of the experiment and by 10.6% on the 10th day of treatment and by 15.8% at the end of the experiment compared to the initial values. The amount of hemoglobin in this group increased by 1.2% on the 5th day of treatment, and on the 15th and 20th days of the experiment, it increased by 7.5% and 8.5% ( $P < 0.05$ ), respectively, compared to the initial values. The erythrocyte sedimentation rate decreased during the experiment and decreased by 20 and 22% on the 5th and 10th day of the experiment, respectively, and at the end of the experiment, it decreased by 27.2% compared to the initial values.

The hooves of the third control group, whose hooves were cleaned and trimmed, then bathed in 5% formalin, 4 ml of hydrocortisone, and 5 ml of 0.5% novocaine were administered intramuscularly, showed changes in the tone of blood.

It was noted that the amount of erythrocytes decreased by 2.2% only on the 5th day of treatment, then on the 10th day of treatment it equaled its initial values, and then showed a wavelike character and increased by 4.2% at the end of the experiment. The number of leukocytes in the blood decreased throughout the experiment, with a decrease of 5.5% from baseline on the 5th day of treatment, 6.8% on the 15th day, and 19.5% on the 20th day of treatment ( $P < 0.05$ ). The concentration of hemoglobin in the blood of animals in this group increased by 5.2% on the 10th day of the experiment, and by the end of the experiment, its amount increased by 7.1% ( $P < 0.05$ ) compared to the initial values. The erythrocyte sedimentation rate in the blood of animals of the third control group in the experiment decreased during the treatment and compared to the beginning of the experiment, it decreased

by 8.8% on the 5th day of the experiment, by 19.3% on the 10th day of the experiment, and by 22% on the 15th day of the experiment, and at the end of the experiment compared to the initial values. It was shown that it decreased by 26.4% ( $P < 0.05$ ).

After treatment procedures were applied to the sick animals, as the physiological processes in their body began to improve, the amount of hemoglobin, the number of erythrocytes increased, and the rate of erythrocyte sedimentation decreased. The increase in the number of leukocytes in the blood of cows infected with aseptic pododermatitis is related to the fact that leukocytes participate in the active immune protection process in the body and their number increases when the body is inflamed, and their number decreased after the use 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 aseptic pododermatitis, there is local temperature and pain in damaged hooves, dark red, yellow or black spots on the cornea when cut and cleaned with a hoof knife, sometimes there is a double palm cornea, the inner hooves are more damaged on the front legs, and the animal keeps its front legs crossed on the outer. resting on the hooves and more damage to the outer hooves was found in the rear legs
2. In the treatment of aseptic pododermatitis in cows, intravenous administration of cal-bor-mag and phenylbutazone-20 in a certain rate and quantity reduces inflammatory processes, enhances regeneration processes, and shortens the duration of treatment.
3. In the treatment of aseptic pododermatitis in cows, intravenous administration of cal-boronmag and phenylbutazone-20 in a certain rate and quantity increased the number of erythrocytes in the blood by 18.4%, the amount of hemoglobin increased by 8.5%, the number of leukocytes by 15.8% and erythrocyte sedimentation rate decreased to 27.2%.

### List of used literature

1. Батраков А.Я., Зуева З.К., Тетерев Н.Н. Профилактические и лечебные мероприятия при заболеваниях копыт у коров (Применение деревянной пластины, наклеенной на здоровое копыто) // Ветеринария. М., 2010. - № 5. –С. 49-51.
2. Бледнов А.И. Лечение и профилактика хирургической патологии у крупного рогатого скота // Вестник КГСХА. Курган, 2014. -№ 8. –С. 59.
3. Гордиенко Л.Н., Власенко В.С., Свириденко Н.А. Биохимические показатели крупного рогатого скота при заболеваниях конечностей // Вестник Омского ГАУ. -2013. -№ 4 (12). –С. 40-43.

4. Издепский В.И., Кулинич В.И. Роль грибов при гнойно-воспалительных процессах конечностей у коров // Ветеринария. М., -2008. -№ 3. -С.27-30.
5. Кочнев Н.Н., Кочнев, В.Н., Дементьев В.Г., Маренков Н.Н. Повышение продуктивного долголетия коров в условиях молочного комплекса // Достижения науки и техники АПК. М., 2012.-№ 3.-С. 48-50.
6. Писаренко В.Ф. Разработка и апробация лечебно-профилактического средства при развитии инфекционного пальцевого дерматита у крупного рогатого скота. Автореф. // Дисс...канд. вет. наук. Белгород, 2014. – 19 с.
7. Beige A., Bakir B., Nencti R. G., Ormanci S. Subclinical Laminitis in Dairy Cattle: 205 Selected Cases // Turk. J. Vet. Anim. Sci. - 2005. - Vol. 29, N. 1. - P. 9-15.
8. Nocek J.E. The Link Between Nutrition, Acidosis, Laminitis and Environment // [http://www.weds.ams.ualberta.ca/Proceedings/1996/wcd96049 .htm](http://www.weds.ams.ualberta.ca/Proceedings/1996/wcd96049.htm)
9. Ниязов, Х. Б., & Эшкuvatov, Х. Х. (2019). БИОЛОГИЧЕСКОЕ ДЕЙСТВИЕ НА ОРГАНИЗМ КОРОВ АУТОКРОВИ, ОБЛУЧЕННОЙ НЕОН-ГЕЛИЕВЫМИ ЛАЗЕРНЫМИ ЛУЧАМИ. In СОВРЕМЕННОЕ СОСТОЯНИЕ, ТРАДИЦИИ И ИННОВАЦИОННЫЕ ТЕХНОЛОГИИ В РАЗВИТИИ АПК (pp. 100-105).
10. Ниязов, Х. Б. (2016). БИОЛОГИЧЕСКОЕ ДЕЙСТВИЕ НА ОРГАНИЗМ ЛОШАДЕЙ АУТОКРОВИ, ОБЛУЧЕННОЙ НЕОН-ГЕЛИЕВЫМИ ЛАЗЕРНЫМИ ЛУЧАМИ. Путь науки, (10), 44-46.
11. Умаров, Х., & Ниязов, Х. Б. (2021). Распространение и этиология острых асептических миозитов у спортивных лошадей.
12. Hakim, N., Numon, D., & Nasriddin, D. (2021). TREATMENT OF ASEPTIC DISEASES OF LIMB DISTAL PART JOINTS IN UZBEK SPORT HORSES. Journal of Microbiology, Biotechnology and Food Sciences, 2021, 478-481.
13. Kh, D. M. (2021). ETIOLOGY, FREQUENCY AND CLINICAL MANIFESTATIONS OF PURULENT INFLAMMATION OF THE FINGER JOINT IN SPORT HORSES. Academia Globe: Inderscience Research, 2(6), 367-372.
14. Roziboev, A. K., Niyazov, H. B., & Bazarov, H. K. (2022). Microbes And Their Sensitivity To Antibiotics In Samples From The Joints Of Horses With Purulous Inflammation Processes. Journal of Positive School Psychology, 6(9), 2740-2745.
15. Nuriddinov, B. Y., & Niyazov, H. B. (2022). MORPHOLOGICAL INDICATORS OF BLOOD IN THE TREATMENT OF PURULOUS-NECROTIC PROCESSES IN THE TOES OF COWS WITH DIFFERENT METHODS. Conferencea, 150-155.
16. Rayimovich, B. O., & Azamatovic, F. S. (2023). FEATURES OF METABOLIC DISTURBANCE IN ENDEMIC GOITRE IN COWS. Conferencea, 73-76.
17. Бобоев, О. Р., & Файзуллаев, Ш. А. (2022). CAUSES OF IODINE DEFICIENCY IN PRODUCTIVE ANIMALS. World scientific research journal, 4(2), 47-50.