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SOME BIOCHEMICAL INDICATORS OF BLOOD IN PROSPEROUS COWS IN PURE PODODERMATITIS

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ABSTRACT:

Changes in some biochemical parameters in the blood of productive cows with purulent pododermatitis were studied, and the dynamics of their specific changes when using conventional and non-conventional therapies were determined. The levels of α- and--globulins in the blood of sick cows were low in both experimental groups on the first day of treatment and increased as a result of treatment, which was more rapid in non-conventionally treated cows than in conventionally treated cows.

KEYWORDS: Purulent pododermatitis, productive cows, biochemical index, blood, total protein, albumin, alpha-globulin, beta-globulin, gamma-globulin, conventional method, non-conventional method, absolute index, relative index.

INTRODUCTION:

Purulent pod dermatitis, a common disease among high-yielding cattle, causes great economic damage to farms, especially leading to a sharp decline in milk production from animals. In recent years, due to the conditions of storage of high-yielding cows imported to the country at the expense of large sums from abroad, as well as shortcomings in feeding and other factors, leading to the early exclusion of cows with hoof and joint diseases. The development and implementation of science-based measures aimed at the early detection of diseases and reducing the duration of their treatment are of great practical importance.

Hypocalcemia, hypophosphatemia, copper, zinc, reserve alkalinity, calcitonin deficiency, [2]. Germivit, Vitadaptin, and Guvitin-S have been used as dietary supplements in cows during pregnancy, the effects of these biologically active substances on the metabolism have been studied, and the authors have shown that the combined use of biologically active drugs has a positive effect on cow's blood biochemical parameters and regulates metabolic processes. When the blood of cows with hoof ulcers was analyzed, it was found that the number of erythrocytes, hemoglobin, total protein, gamma globulin decreased, and the number of leukocytes increased compared to healthy animals. As a result of complex treatment of purulent-necrotic ulcers of cows' hooves, a decrease in the number of leukocytes in the blood, an increase in erythrocyte count and hemoglobin, as well as an increase in total serum protein and gamma globulin concentrations compared with local treatment [4]. The author called for experimental skin-muscle injury in laboratory animals when 50 and 100% chistotel juice was applied to them, Staph. Aures, Proteus Vulgaris, Escherichia coli, Str. It was noted to be effective against epidermidis microorganisms, and a 10% ointment of chistotel ensured that the skin-muscle injury healed 3 days earlier than in the control group. Based on the results of

experimental experiments, the researcher found that the use of chistotel in addition to novocaine treatment hexoses associated with protein and glycoproteins in the serum, a decrease in the concentration of free oxyprolins, 0.5% novocaine solution in the dorsal artery of the palm and the local application of chistotel significantly purulent necrotic ulcer.

Biochemical parameters of the blood of cattle affected by hoof tissue were studied. According to the results of the study, cases of hypocalcemia and hypophosphatemia and disorders of calcium and phosphorus in the body of sick animals, ie calcium and phosphorus, respectively, 1.70 mmol / l and 1.28 mmol / l, 1.5 and 1.3 times less than in a healthy animal, a violation of the calcium-phosphorus ratio in the serum, the acid reserve is 1.52 times lower in healthy animals than in a sick cow, as well as the amount of zinc in the serum of a sick cow Found to be 2.4 times less [1].

The main task of the scientific experiment is to develop and introduce effective methods of treatment of purulent pododermatitis in cattle by detecting biochemical changes in blood composition.

OBJECT AND METHODS OF RESEARCH:

Scientific experiments were conducted at the farm "Siyob-Shavkat-Orzu" in the village of Kara Teri, Akdarya district of Samarkand region. For the experiment, 10 heads of animals with purulent pododermatitis with a live weight of 400-450 kg were selected. The animals in the experiment were divided into two groups, and all animals in both groups were fed on the same ration. Each group of animals was divided into 5 heads and each group was washed traditionally, ie in warm water in a 1: 1000 solution of potassium permanganate, purulent and purulent exudates in the hooves and joints were cleaned and tied with a sterilized bandage using streptomycin powder, syntomycin ointments. Also, non-traditional therapies were used using highly effective drugs. Blood samples were taken from both groups of animals before the experiment and their hematological parameters were checked.

The first group of animals was traditionally treated with oxytetracycline ointment, and the antibiotic oxytetracycline-100 was injected intramuscularly from 20 ml of 450-500 kg body weight once in 7 days. Besides, 20 ml of butazole-100 was administered intravenously 3 times a day.

In the second experimental group of animals, streptomycin powder was mixed with syntomycin ointment. In addition, as an unconventional method, a linkospect -150 antibiotic imported from Belarus was injected intramuscularly 10 ml once a day for 7 days, and a biostimulant drug - butazol-100 to 20 ml was injected intravenously 3 times a day.

Cattle were examined using clinical examination methods in the study of purulent pododermatitis, and pathological materials were examined using pathomorphological, macroscopic methods.

Results obtained and their analysis. Scientific studies have shown that purulent pododermatitis, which occurs in the distal part of the legs of cattle, exhibits specific hematological changes.

The total protein content in the blood of cows in the first experimental group with purulent pododermatitis was 63.6 ± 0.75 g / l ($p < 0.01$) on the first day of the experiment or 74.1% compared with the control group, and by the tenth day of treatment was observed to reach a high level. That is, the absolute and relative values of total protein content were 66.6 ± 0.97 g / l ($p < 0.02$) on the third day of the experiment, respectively; 75.3%, on the seventh day 71.8 ± 1.19 g / l ($p<0.02$); 81.1%, on the tenth day 86.4 ± 1.71 g / l ($p < 0.02$);

97.9%, and on the thirteenth day 86.0 ± 2.57 g / l (p <0.03); 98.2%, on the fifteenth day 85.8 ± 2.01 g / l (p <0.03); 97.6%.

In the second experimental group treated with unconventional treatment, the total protein content of the blood of sick cows and the relative values of cows of the healthy control group were slightly lower than that of cows of the control group on the first day of treatment, 63.8 ± 0.82 g / l (p <0.01) or the relative index is 74.3%. A gradual increase in these blood values in the following days of treatment, on the third day, respectively 67.0 ± 0.79 g / l (p <0.01); 75.7%, on the seventh day - 72.6 ± 1.35 g / l (p <0.02); 82.0%, on the tenth day 89.4 ± 1.48 g / l (p <0.02); 101.3%, on the thirteenth day 85.6 ± 2.84 g / l (p <0.04); 97.8%, on the fifteenth day 85.8 ± 2.53 g / l (p <0.03); 97.6%.

The amount of albumin in the blood of the first group of patients treated with conventional methods and their relative values compared to the control group, respectively, on the first day of the experiment 25.2 ± 0.65% (p <0.03); 51.9%, with a gradual increase in treatment over the next study days. That is, these values, respectively, on the third day of the experiment 26.0 ± 0.79% (p <0.03); Up to 53.7%, on the seventh day 30.0 ± 0.79% (p <0.03); Up to 62.1%, on the tenth day 43.2 ± 1.55% (p <0.04); Up to 90.0%, on the thirteenth day 46.6 ± 1.71% (p <0.04); Up to 95.6%, on the fifteenth day 47.3 ± 1.38% (p <0.03); It was noted to increase to 98.7%.

The second experimental group had 25.0 ± 079% (p<0.03) of albumin content in the blood of sick cows and relative values of healthy cows on the first day of treatment, respectively; 51.5%, and a gradual increase in these rates was observed during treatment. Absolute and relative values of albumins on the third day of treatment 27.0 ± 0.79 (p <0.03); 55.7%, on the seventh day 31.0 ± 0.79% (p <0.03); 64.1%, and on the tenth day 44.4 ± 1.82% (p <0.04); 92.5%, 46.4 ± 1.48 on the thirteenth day (p <0.03); 95.2%, 47.8 ± 0.89% on the fifteenth day (p<0.03); It was noted that 99.7%.

The amount of α-globulins in the blood and its relative values, respectively, on the first day of the experiment 7.82 ± 0.07% (p <0.01); 56.2%, on the third day of treatment these indicators were 8.42 ± 0.13% (p<0.02); 62.3%, on the seventh day 9.56 ± 0.17% (p<0.02); To 69.7%, on the tenth day - 12.5 ± 0.39% (p <0.04); To 91.2%, on the thirteenth day 13.3 ± 0.28% (p<0.02); Up to 96.3%, on the fifteenth day 13.5 ± 0.41% (p <0.04); An increase of up to 100% was observed.

Absolute and relative values of alpha-globulins in the blood of cows of the second experimental group, respectively, on the first day of treatment 7.9 ± 0.07% (p<0.02); At 56.8%, these values were 8.6 ± 0.13% (p <0.02) on the third day of treatment; Up to 63.7%, on the seventh day 9.68 ± 0.13% (p <0.02); Up to 70.6%, on the tenth day 13.0 ± 0.39% (p <0.03); Up to 94.8%, on the thirteenth day 13.4 ± 0.32% (p <0.03); Up to 97.1%, on the fifteenth day 13.78 ± 0.28% (p <0.02); It was noted to increase to 102.2%.

b-globulin content and its relative values in proportion to the dynamics of changes in α-globulin content in sick cows in the first experimental group treated by conventional methods, respectively, on the first day of treatment, 15.8 ± 0.41% (p <0.03); From 86.3% on the third day 17.4 ± 0.32% (p <0.02); Up to 97.2%, on the seventh day 17.9 ± 0.20% (p <0.01); Up to 100%, on the tenth day 18.4 ± 0.20% (p <0.01); Up to 100%, on the thirteenth day 18.3 ± 0.37% (p <0.02); Up to 102.2%, on the fifteenth day 18.0 ± 0.39% (p<0.03); It was found to increase to 100%.

Absolute and relative values of beta-globulins in the blood of cows of this group, respectively, on the first day of treatment 16.0 ± 0.39% (p <0.03); 87.4%, and was observed to

rise steadily until the tenth day of the next study. That is, the absolute and relative values of beta-globulins, respectively, on the third day of treatment 17.5 ± 0.39% (p <0.02); To 97.7%, on the seventh day 18.3 ± 0.28% (p <0.02); To 102.8%, on the tenth day 18.6 ± 0.20% (p <0.02); 101%, on the thirteenth and fifteenth days they were almost unchanged 18.4 ± 0.32% (p <0.02, respectively), 102.7%; 18.0 ± 0.39% (respectively. p <0.03), 100%) were found to remain.

The amount and relative values of g-globulins in the blood of sick cows in the first experimental group were 51.0 ± 0.79% (p<0.02), respectively, on the first day of treatment; From 151.7% on the third day 49.4 ± 0.83% (p <0.02); Up to 147.9%, on the seventh day 49.0 ± 0.61% (p<0.01); Up to 143.6%, on the tenth day 32.2 ± 0.96% (p <0.03); Decrease to 95.5%, on the thirteenth day 35.4 ± 0.57% (p <0.02); To 106.3%, on the fifteenth day 35.2 ± 0.51% (p <0.02); 106.9%, which is close to that of the cows in the control group.

In the second experimental group using non-traditional treatment, the absolute amount of gamma globulins in the blood of sick cows and the relative values obtained in healthy cows were slightly higher on the first day of treatment, corresponding to 50.8 ± 0.74% (p <0.02), 151.1%. Decreased absolute and relative levels of gamma globulins by the tenth day of treatment, i.e., respectively, at 3 days 49.8 ± 0.65% (p<0.02); Up to 149.1%, on the seventh day 49.8 ± 0.96% (p<0.02); Up to 146.0%, on the tenth day 33.8 ± 1.29% (p <0.04); Decrease to 100% and without significant change on the thirteenth and fifteenth days (36.4 ± 0.57% (respectively p <0.02), 109.3%; 36.3 ± 0.69% (p <0, 02), 110.3%) were observed.

CONCLUSION:

- The total protein content of the blood of cows with purulent pod dermatitis was slightly lower on the first day of treatment, approaching the norm in healthy cows on the 13th day of conventional treatment, on the 10th day of non-conventional treatment;
- Although the levels of α- and--globulins in the blood of cows with purulent pod dermatitis were low in both experimental groups on the first day of treatment and increased as a result of treatment, this process was more rapid in non-conventionally treated cows than in conventionally treated cows. was;
- The amount and relative levels of γ-globulin in the blood were high on the first day of treatment, and its convergence with healthy cows occurred on the 10th day of treatment in non-traditional cows, on the 13th day in traditionally treated cows.

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