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Some Hematological Indications in Fertile Cows

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Annotasiya: *Pathomorphological changes in the hoof have stood in purulent pododermatitis in productive cows. Acute hyperemia of the blood vessels in the pathological foci of the hoof in purulent pododermatitis, the development of emigration of erythrocytes and leukocytes, the presence of large numbers of leukocytes in the blood plasma and exudate around the vein, a small number of erythrocytes damaged tissue, irregular placement of connective tissue fibers and reticular cells, atrophy.*

Keywords: *Purulent pododermatitis, productive cows, pathomorphological, erythrocyte, leukocyte, pathological lesion.*

Introduction. Injuries to the distal area of the legs in dairy cows in different countries of the world, high relative humidity in barns, disorders of mineral metabolism, along with a decrease in the immunobiological capacity of high-yielding cows, increase the pathogenicity of microorganisms. Therefore, it is important to identify the causes of hoof diseases in dairy cows in a timely manner, to develop and implement scientifically based planned treatment and prevention measures against them. Injuries are a major factor in the development of purulent-necrotic diseases of the hooves of cows. In turn, it is noted that the wound surface provides active cleaning of nectar tissue, purulent exudate [1]. The author's research shows that the pathological process begins with damage to the interdigital tear tissue, rarely the base of the hoof skin, and gradually begins to spread.

According to the authors, the first cause of damage to the hoof horn of cattle is the release of endotoxins, increase in the amount of histamine and, consequently, impaired blood circulation in the hoof due to poor feeding of animals, improper preparation of food, destruction of gram-negative bacteria in poor quality food; the second reason - damage to the hooves and joints as a result of very low quality of the floor surface; the third reason is that cows are kept in boxes that do not meet their needs; The fourth reason is the softening of the hoof horn material due to high humidity in the rooms where cows are kept [2].

The etiological structure of infectious agents in purulent-necrotic lesions of the skin of the distal part of the legs of cattle was studied, and as a result of studies the distal part of the legs of cows was studied in purulent-necrotic disease *Pseudomonas aeruginosa* (100%), *Staphylococcus aureus* (67.8 %), *Escherichia coli* (49.3%), *Staphylococcus epidermitis* (42.7%), *Proteus vulgaris* (38.4%), *Streptococcus pyogenes* (27.8%) microorganisms were detected [3].

According to the authors, seasonal inspections of productive cattle show that purulent pododermatitis in hooves is more common in autumn, winter and spring, and the incidence rate averages 2-35%, including 5-33% in spring, 2-16% in summer and autumn. 5-35% and 6-35% in winter. [5] In some farms, barns

where productive cows are kept do not meet zoohygienic requirements; The main causes of purulent pododermatitis are the presence of concrete and constant moisture in the storage area, the presence of sharp objects in the distribution areas, lack of active movement (hypodynamics), non-compliance with the timing and technique of treatment of hooves, and alimentary metabolic disorders. factors [4]. in productive cows with purulent pododermatitis, edema of the sole of the hoof, chin and its skin, as well as an increase in local temperature, accumulation of purulent exudate along the white line under the stratum corneum, in some cases bending the hoof bone and fingers manifested by necrosis of the superficial and deep muscles.

In the treatment of the experimental group animals, streptomycin powder and syntomycin ointment were applied to the pathological foci based on the hoof skin and bandaged. Intramuscularly, 10 ml of Netox-200 antibiotic was injected once a day for 10 days, as well as 25 ml of butamine intravenously to accelerate tissue regeneration after the 4th day of treatment to reduce the formation of pus in the pathological lesion. sent a total of 4 times.

For the treatment of animals in the control group, streptomycin powder and syntomycin ointment were applied to the pathological foci based on the skin of the hoof, bandaged and intramuscularly injected once daily for 7 days with the antibiotic oxytetracycline-150, for 7 days of treatment. In order to accelerate tissue recovery after the decrease in the formation of pus in the pathological lesion, butamine was injected intravenously in an amount of 30 ml 4 times a day .

The most common clinical sign in cows with purulent pododermatitis was lameness. At the same time, the appearance of mild, moderate pain on days 3-6 and significant pain on days 10-13 was returned. At this time, when the heel of the hoof was examined, that is, pathomorphology of different size and depth was noted.

Object and methods of research. Research work on the study of pathomorphological changes in pododermatitis in productive cows was conducted at the Department Begoyim Fayz Baraka Farm of Altiyarik District of Fergana Region

Results obtained and their analysis. As a result of the development of hoof diseases in productive cows, they showed specific pathomorphological changes. Injury to the hoof wall, hoof heel, soft heel under the influence of external factors weakens its protective layer, the appearance of foci of necrosis, the development of purulent pododermatitis and other diseases. Studies have shown that in productive cows with pododermatitis, the pathological process is exacerbated by necrosis of the skin base of the hoof, the tips of the hooves, the tendons, the soft hoof and the hoof bone.

The clinical status of the animals in the groups examined before starting treatment was typical for purulent pododermatitis and was observed to occur in the form of a purulent inflammatory process.

It was found that the horny layer of the hooves of sick productive cows eroded, pathological ducts leading to the skin base of the hoof were formed, from which a large amount of exudate was secreted. They form purulent inflammatory tumors in the surrounding tissues and spread to the soft palate and circumference.

Dystrophic changes develop in the surrounding tissues of the skin, and in this chronic process the processes of necrosis and necrobiosis spread to the epidermal, hypodermal layers. It was observed that purulent, leukocyte-rich exudate flows from the formed streams, and the inflammatory hoof has an aggressive diffuse penetration into the deep layers of the dermis from the palm side.

The number of erythrocytes in the blood of sick cows in the experimental group averaged 5.5 ± 0.1 million / μl ($p < 0.04$) on the first day of treatment, and on the 5th day - 6.02 ± 0.04 million / μl ($p < 0.02$), on day 10 - 6.5 ± 0.13 million / μl ($p < 0.02$) and on day 15 - 6.52 ± 0.16 million / μl ($p < 0.03$), On day 21, it was 7.05 ± 0.13 million / μl ($p < 0.01$), and on day 25 it was 7.2 ± 0.12 million / μl ($p < 0.05$).

The amount of this indicator in the blood of sick cows in the control group was 5.42 ± 0.11 million / μl ($p < 0.03$) on day 1 of the experiment, and 5.71 ± 0.32 million / μl ($p < 0.05$) on the 10th day - 6.1 ± 0.1 mln / μl ($p < 0.04$), on the 15th day - 6.21 ± 0.22 mln / μl ($p < 0.04$) was 6.75 ± 0.11 million / μl ($p < 0.02$) on day 21 and 6.7 ± 0.19 million / μl ($p < 0.04$) on day 25.

The number of leukocytes in the blood of cows of the experimental group was 16.9 ± 0.2 thousand / μl ($p < 0.05$) on the 1st day of treatment, and on the fifth and seventh days of the next study, a significant decrease in these parameters, respectively: 16.07 ± 0.20 thousand / μl ($p < 0.05$); 13.2 ± 0.17 thousand / μl were observed. 10.8 ± 0.21 thousand / μl ($p < 0.05$) on day 15 of treatment, 10.4 ± 0.17 thousand / μl ($p < 0.05$) on day 21, 9 on day 25, 09 ± 0.17 thousand / μl ($p < 0.02$).

The number of leukocytes in the blood was 17.01 ± 1.17 thousand / μl ($p < 0.03$) on the 1st day of treatment in the control group, on the 5th day - 16.35 ± 0.45 , depending on the pathological process in the body of cows. thousand / μl ($p < 0.03$), on the 10th day - 14.54 ± 0.2 thousand / μl , on the 15th day - 13.56 ± 0.18 thousand / μl ($p < 0.03$), On day 21 - 11.8 ± 0.17 thousand / μl ($p < 0.03$) and on day 25 - 10.2 ± 0.28 thousand / μl .

The amount of alpha-globulins in the blood of sick cows in the experimental group was $7.6 \pm 0.13\%$ ($p < 0.03$) on the first day of treatment, and on the 5th day - $8.56 \pm 0.12\%$ ($p < 0.03$). , On day 10 - $9.32 \pm 0.5\%$, on day 15 - $12.03 \pm 0.32\%$ ($p < 0.04$), on day 21 - $13.62 \pm 0.24\%$ ($p < 0.03$), on the 25th day - $13.72 \pm 0.21\%$.

The amount of alpha-globulins in the blood of cows in the control group on the first day of the experiment was $7.61 \pm 0.11\%$ ($p < 0.02$), on the 5th day - $8.13 \pm 0.11\%$ ($p < 0.02$). On day 10 - $9.02 \pm 0.16\%$ ($p < 0.05$), on day 15 - $9.98 \pm 0.17\%$ ($p < 0.03$), on day 21 - $10.9 \pm 0.9\%$, on the 25th day - $13.01 \pm 0.30\%$ ($p < 0.04$).

Conclusion

when analyzing some hematological parameters of the blood of productive cows with purulent pododermatitis, specific dynamics in relation to the course of pathological processes in the experimental and control group was noted. From the first day to the twenty-first day of treatment, in the control group of sick cows from the first day to the twenty-fifth day of treatment, the level of hemoglobin and erythrocytes in the blood increased to normal, and the number of leukocytes increased slightly in the first days of purulent pathology. was found to be declining from the fifth day.

It was noted that the amount of alpha-globulins in the blood of sick cows was low in the first days of the pathological process and increased as a result of treatment.

Thus, the stabilization of the hematological parameters of the blood of productive cows with purulent pododermatitis in connection with the application of treatment methods is 20-22 days of treatment in sick cows in the experimental group, and 24 days in sick cows in the control group treated with farm method. It was observed to coincide with the 26th day.

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