Changes in Blood Leukoformula in the Treatment of Acute Postpartum Purulent-Catarrhal Endometritis in Cows by Various Methods

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ABSTRACT

In the treatment of acute postpartum purulent-catarrhal endometritis in breeding cows, oxytetrocycline 10 g + ASD-2 4 ml + tannin 1,5 ml + fish oil 50 ml + 35 ml of the prepared emulsion in distilled water intrauterine and penstrip -400-20 ml intramuscularly one of the most convenient and effective methods of treating acute postpartum purulent-catarrhal endometritis in animals, in which the number of eosinophils in the blood is 44.4%, the relative number of lymphocytes is 44,2%, the number of monocytes is 18, 1% increase in stab neutrophils by 52,4% and segmented neutrophils by 39,2%.

KEYWORDS: *Pedigree cow, ASD-2, oxytetracycline, leukoformula indices, eosinophils, stab neutrophils, segmented neutrophils, lymphocytes and monocytes*

Relevance of the topic. Clinical signs of acute postpartum purulent-catarrhal endometritis appear 8-10, sometimes 6-7 days after birth and develop as a complication of placental abruption or acute subinvolution of the uterus.When massaging the uterus from the side of the genital tract, in the position of the animal lying down, during amplification or through the rectum, a maroon-brown or yellowish-brown discharge, a large amount of odorous mucopurulent exudate are observed from the genital tract.The labia and base of the tail are contaminated with exudate deposits [1; 3; 8].

According to the authors, the effectiveness of the new biological product "Nika-EM" is high, it has an impact on the prevention of postpartum complications in cows, increases the immunological potential of calves, the authors note a good therapeutic effect of this drug in the treatment of endometritis in cows, as well as a positive effect of drugs administered in utero , on hematological parameters in the blood of animals [4; 10].

Many scientists recommend the use of tissue preparations in combination with sinestrol, antibiotics, vitamins, sulfonamides for the treatment and prevention of postpartum pathology in cows.Examples of them are trivitamin, aystvit, tetravit, prostaglandin F2α, antibiotics.This complex treatment is more effective than other methods, increases the body's resistance and quickly restores tissue regeneration.In addition, in the prevention of these pathologies, adequate nutrition of cows during

pregnancy, massaging, vitaminization prevent postpartum placental abruption, endometritis, subinvolution of the uterus [5; 6; 9; 12; 11].

According to the authors, in cows with clinical manifestations of acute purulent catarrhal endometritis, the tissue index in the mucous fluid obtained from the genital tract is maximally reduced, and a characteristically high rate of toxic factors is observed.With latent endometritis, the tissue index is 1.2 ± 0.24, the toxic index is 0.63 ± 0.26.The author notes that in smears obtained from the mucous fluid obtained from the genital tract at the time of embryo death, neutrophils of epithelial cells of the uterine wall were also detected, the tissue index was 2.9 ± 2.08, and the toxic factor was 1.25 ± 0.63 [7].

Scientists in their studies found that in case of postpartum endometritis in cows, hematological checks were characterized by leukocytosis, lymphocytopemia, hypoeosinophelia, neutrophilia, and an increase in stab cells.According to the author, in the acute course of endometritis, a decrease in total serum protein, albumin and globulins is detected [2].

Purpose of the study. An improved treatment method has been developed in the dairy farms of the republic, based on the use of various methods of treating cows with acute postpartum purulent catarrhal endometritis based on a certain amount and method, as well as changes in the blood leukocyte formula (eosinophils, stab neutrophils, segmented neutrophils, lymphocytes and monocytes).

Objects and methods of research. Scientific research and experiments were carried out at the Samarkand Institute of Veterinary Medicine, at the "Farovon Grand Invest" livestock farm in the Akdarya district of the Samarkand region, in the laboratories of the Samarkand regional hospital.

As a result of medical examination, 15 cows weighing 380-400 kg with acute purulent-catarrhal endometritis were isolated from the livestock farm "Farovon Grand Invest" in Akdarya district 5-9 days after birth, according to the principle of the same type of pairs, they were divided into three groups of 5 heads each group.In order to determine the susceptibility of microbes in samples taken from the uterus and cervix of infected cows to antibiotics and other drugs, an emulsion and penstrep were specially prepared - 400 impregnated discs amounted to 29 mm staphylococcus, 23 mm streptococcus, 25 mm escherichiosis, Pseudomonas aeruginosa 23 mm, fungi 27 mm, and in discs impregnated with oxytetrocycline staphylococci 28 mm, streptococci 21 mm, Escherichia bacillus 26 mm, Pseudomonas aeruginosa 23 mm and fungi 25 mm.

For the treatment of postpartum purulent-catarrhal endometritis, the animals of the third control group received 10 ml of Limixin-200 intramuscularly, the uterus was washed with aK_2MnO_4 solution 1:5000, and 2 units of furazolidone were injected into the uterus.

In the first experimental group, a prepared emulsion containing 10 g oxytetracycline + ASD-2 4 ml + 1.5 ml tannin + 50 ml fish oil + 35 ml distilled water was injected into the uterus and penstrip-400 was injected intramuscularly by 20 ml.In the second experimental group of animals, 1 tablet of trichopolum and iodapene, penstrip - from 400 to 20 ml and aisidvit - 10 ml intramuscularly were injected intrauterine.

Animals were subjected to clinical examination before and during the experiment; the amount of leukoformula was checked twice before the start of the experiment, as well as on days 3, 5, 7, and 14 after the start of treatment.

Analysis of the results

In addition to clinical and physiological parameters, morphological parameters of the blood of experimental cows were studied.When analyzing the data during the experiment by groups, the

number of eosinophils in animals of the first experimental group, to which the emulsion prepared for treatment was injected into the uterus, and the penstrip - from 400 to 20 ml intramuscularly, increased by 5.5% on the 3rd day of the experiment, 22, 2% on day 5, 22.2% on day 7 and 44.4% on day 14 $p<0.05$.However, in neutrophils with rod-shaped nuclei, everything was the opposite: if on the 3rd day of the experiment the decrease was 4.8%, then, as it was found, on the 5th day it decreased by 19.9%, on the 7th day by 43.4 %, and at the end of the experiment by 52.4%, $p <0.05$%.Segmented neutrophils in this group decreased during the experiment by 8% on the 3rd day of the experiment, by 17.5% on the 5th day, by 29.6% on the 7th day and by 39.2% on the 14th day of the experiment.The relative number of lymphocytes in the leukoformula was also slightly increased in the first experimental group of animals at the beginning of the experiment and increased by 19.5% on the 5th day of the experiment, by 34.2% on the 7th day of the experiment, and by the end of the experiment it increased by 44 .2% compared to the previous one. Monocytes decreased by 9.1% on day 3 of the experiment, increased by 9% on days 5 and 7, and increased by 18.1% at $p<0.05$ at the end of the experiment.

In the second experimental group of animals for treatment, 1 tablet of trichopolum and iodopen was injected into the uterus, penstrip - 400-20 ml and amsidvit intramuscularly 10 ml, and if the number of eosinophils decreased by 16.7% on the 3rd and 5th days of the experiment, then on the 7th day it increased by 11.1%, and at the end of the experiment by 16.6% compared with the baseline.However, in this group, the opposite pattern was observed in neutrophils with rod-shaped nuclei, which on the 3rd day of the experiment decreased by 28.9%, on the 5th and 7th days - by 46.2%, and at the end of the experiment decreased by 51.9%, $p < 0.05$Segmented neutrophils decreased during the experiment by 8.4% on the 3rd day of the experiment, by 18% on the 5th day, by 22.7% on the 7th day and by 30.7% on the 14th day of the experiment.The relative index of lymphocytes in the leukoformula was also somewhat higher in animals of the 2nd experimental group at the beginning of the experiment and increased by 14.1% on the 3rd day of the experiment, by 26.8% on the 5th day, by 30% 7th day of experience and at the end of the experience increased by 39% compared with baseline. The number of monocytes in this group of animals increased by 12.5% at the beginning of the experiment, by 18.7% on the 5th day of the experiment, by 12.5% on the 7th day of the experiment, and at the end of the experiment $p<0.05$ increased by 31.2% compared to the baseline.

For treatment, limoxin-200 was administered intramuscularly at a dose of 10 ml, the uterine cavity was washed with a solution ofK_2MnO_4 ning 1:5000 and 2 units of furazolidone were injected into the uterus, eosinophils in the blood of animals of the third control group had a wave-like character, on the 3rd day of the experiment they decreased by 20%, by 5 the 1st day of the experiment increased by 15%, on the 7th day they were equal to the initial values of the experiment, and at the end of the experiment it was noted that it decreased by 5% compared to the previous indicator.In rod-shaped neutrophils, that is, on the 3rd day of the experiment, the baseline equivalence gradually decreased during the experiment to 22.3% on the 5th day, 11.1% on the 7th day and 22.3% at the end of the experiment $p < 0.05$. Segmented neutrophils in this group decreased during the experiment and showed a decrease of 23.2% on the 14th day of the experiment.The relative number of lymphocytes increased on the 5th day of the experiment in the third control group by 13.3%, on the 7th day of the experiment by 20.7% and at the end of the experiment by 29% compared with the initial level.Monocytes slightly increased at the beginning of the experiment, i.e. by 6.2% on the 3rd day of the experiment, but gradually decreased during the experiment and decreased by 31.3% at the end of the experiment.

In cows with acute purulent catarrhal endometritis, a decrease in the number of monocytes in the blood can be observed, which is explained by their active phagocytic activity during

immunostimulation and their death.After treatment of sick animals, an increase in the number of monocytes was noted as the physiological processes in the body improved.A decrease in the number of lymphocytes in cows with acute purulent catarrhal endometritis, it is known that lymphocytes are involved in the process of active immune defense in the body, and in acute purulent inflammation in the body, a decrease in the process of active immune defense is associated with a decrease in their number. an increase in their percentage was observed after the application of treatment procedures and an increase in their percentage was observed after treatment.

Conclusion

1.In the treatment of acute postpartum purulent catarrhal endometritis in cows with oxytetracycline 10 g + ASD-2 4 ml + tannin 1.5 ml + fish oil 50 ml + 35 ml of distilled water of the prepared emulsion intrauterine and penstrip -400 to 20 ml intramuscularly once. This is one of the simplest and most effective methods.

2.Intramuscular administration of an emulsion prepared in the treatment of acute postpartum purulent-catarrhal endometritis in cows, in an amount of 100 ml and penstrip -400 per 20 ml, intramuscularly increased the number of eosinophils in the blood by 44.4%, lymphocytes by 44.2%, an increase in the number of monocytes by 18.1% was accompanied by a decrease in stab neutrophils by 52.4% and segmented neutrophils by 39.2%.

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