

MODERN METHODS OF THE CAUSE AND DIAGNOSIS OF LATENT MASTITIS IN PRODUCTIVE COWS.

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Annotation

This article describes modern methods for the causes and diagnosis of latent mastitis, which are currently common in productive dairy cows

Key words

latent mastitis, mastidine, dimastine, somatic cells, serum, catarrhal, catarrhal-purulent, macion, diet.

The relevance of the topic. One of the main obstacles to the further development of animal husbandry in our republic, as well as other sectors of the national economy, through privatization, are various animal diseases, including mastitis among dairy cows. The most common udder diseases in dairy cows are mastitis, which often occur covertly. subclinical mastitis caused by cows decrease in milk productivity by an average of 15-20%, milk fat content by 0.8-1%, Reduction of the terms of economic use of cows for 2-3 years, infertility of sick cows, forced slaughter, increased costs of veterinary measures and production due to an increase in the cost of production, farms suffer great economic damage. Low sanitary quality of milk and dairy products from cows with latent mastitis causes various diseases in humans. Therefore, the hidden mastitis of dairy cows has not only economic, but also social significance. Despite the high prevalence of mastitis among dairy cows in livestock farms of our republic, especially in imported productive cows, effective methods of causation of disease types, early diagnosis, treatment and group prevention have not been fully developed. Therefore, it is important to conduct research aimed at developing and improving methods for detecting, diagnosing, effectively treating and preventing types of mastitis in productive livestock. Some scientists claim that all forms of mastitis are caused by staphylococci, streptococci, E. coli and other microorganisms. The founders of this doctrine rely on the presence of microorganisms in milk obtained from an infected piece of udder [3,4]. Some scientists, however, point out that with mastitis in cows:

infection in the udder parenchyma through the sucking canal caused by the lack of detoxification of milking cups; milk contains substances with antibacterial properties, a decrease in the content of lysozyme; violation of the rules and feeding regime, rapid transition from one type of diet to another feeding of animals with moldy and rotten feed; late training of heifers for milking, feeding on cold and rainy days in stalls that do not meet zoohygenic requirements, lack of litter; mechanical impact on the udder and the appearance of ulcers on the udder skin are the main etiological factors [1,2]. According to the literature, udder inflammation in cows most often develops in the form of subclinical mastitis and occurs in 21.4% of cows during milking, 24.6% during weaning, 28.9% during weaning and 23.4% during newborn. On the other hand, mastitis with clinical manifestations was observed in 4.6-6.2% of cows [4]. Breast diseases cause great harm to the health of cows, leading to a decrease in the quantity and quality of milk received from them, as well as to significant economic damage to the farm. Somatic cells in milk and their role in the diagnosis of mastitis. Somatic cells (CC) are cells of various organs and tissues, mainly leukocytes, erythrocytes, cylindrical cells imported from the flat and cuboid epithelium of the mammary gland. 96% of somatic cells are leukocytes (leukocytes). The detection of somatic cells in milk determines its quality. The number of somatic cells in milk will depend on the individual characteristics of the animal and its physiological state. During childbirth and in healthy cows weaned from milk, the concentration of somatic cells increases, in the peak phase of lactation, on the contrary, it is the lowest level. The result of one of the studies shows that the number of somatic cells in 1 ml of milk obtained from a healthy piece of udder between the 35th and 265th days of lactation is 80 thousand units, from which it is known that the concentration of somatic cells increases with a decrease in milk productivity. The number of somatic cells in milk will also depend on the age of the animal. It is known that with each lactation the number of somatic cells increases. Harry discovered that in animals, a weakened immune system causes the growth of somatic cells. The concentration of somatic cells in milk increases significantly in the summer months (July-August), and the average annual rate reaches 83.0 thousand in 1 ml of milk. With an increase in milk productivity, the number of somatic cells in it also increases. Somatic cells in the milk of cows with a milk productivity of 8,001-8,500 kg are 33.9 thousand. Compared with the milk of cows with a productivity of 6 000 thousand kg. there was a lot per / ml. One of the reasons for the increase in the number of somatic cells in cow's milk is mastitis. During subclinical mastitis, the number of somatic cells in milk increases, although no signs of inflammation are observed. Subclinical mastitis

can last for a long time and have a bad effect on the health of the cow and the economy of the farm (due to reduced productivity and lower milk prices). Therefore, it is necessary to constantly determine the number of somatic cells in milk. The increase in the concentration of somatic cells in milk is caused by the development of microorganisms in the udder tissue, parasitic diseases, diseases of the digestive and excretory systems, metabolic disorders, decreased resistance of the body caused by a lack of vitamins and trace elements, improper use of various hormonal drugs, various injuries of the breast and nipples, various stresses. [5].

By determining the concentration of somatic cells in the milk obtained from each quarter of the udder, it will be possible to determine whether the cow has mastitis and its type. There are 50 thousand somatic cells in milk in 1 ml of milk from 200 thousand. when the cow is healthy (this indicator depends on the age and type of feeding of the cow, 50 thousand per 1 ml of milk from 200 thousand concentration from 201 thousand to 400 thousand / 1 ml indicates the presence of inflammation in the mammary gland. Somatic cells concentration from 401 thousand to 800 thousand / 1 ml subclinical mastitis, 800 thousand / 1 ml more than indicates the development of clinical mastitis.[5]. Experiments have shown that somatic cells in milk reduce cow milk yield by 5% or more at 400 thousand in 1 ml of milk and by 12% or more at 700 thousand. Therefore, in order to reduce the concentration of somatic cells in milk, it will be advisable to constantly monitor the conditions of keeping and feeding cows, remove cows from the main herd that have excess somatic cells over the norms.

Object and methods of research: a dispensary study was conducted to study the prevalence, the main types (serum, catarrhal, catarrhal-Purulent and fibrin), the clinic and features of the development of mastitis in dairy cows of the Samarkand region, intensively developing livestock farms, analyzed the care and feeding of animals, compliance with the technology of milking cows. In order to study the incidence of mastitis in dairy cows, clinical studies were conducted using conventional methods, and the condition of the udder skin was studied, parenchyma of the breast and udder. Milk sampling from 12 dairy cows, milk plate MKP-1 using 5% dimastin was tested to determine the frequency of cases of latent mastitis in cows. In order to study the hematological parameters in dairy cows with mastitis, the number of erythrocytes and leukocytes in the blood is determined (according to the type of counting Goryaev), hemoglobin (according to the Sali hemometer), glucose (color reaction with ortho-toluidine), total serum protein (Refractometric method), alkaline reserve (I.P. Kondrakhin method), the leukoformula is determined.

Analysis of the results obtained. On the farm, dairy cows are bred in a group way (60-40 heads in a group) without a leash. Fertilizing is carried out three times a day, watering - with the help of water endings. Cows are kept mostly in one place, without having an active mouth and diet for them. The diet of silage-concentrate cows containing 30 kg of silage (56.6%), 10 kg of haylage (17.2%), 2 kg of alfalfa hay (3.4%), 4 kg of canned residues (6.9%), 4 kg of wheat groats (6.9%), 5 kg of poppy seeds (8.6%), Consisting of 2 kg of sunflower meal (3.4%), 1 kg of soy meal (1.7%), 100 g of vegetable oil, 150 g of chalk, 150 g of table salt, 200 g of primex. The overall sensitivity of the diet is on average 24.0 feed units. The ratio of phosphorus to calcium was 0.38 (the norm is 2.0:1). The first experiment was in a group; in milk samples from 7 heads of cows suspected of mastitis, 12 heads in an experiment to identify hidden mastitis in 80 cows, the consistency of milk did not change (test negative), a partial change was observed in 3 cows (test uncertain) and the presence of milk clots in milk samples from 2 cows (the test is positive), that is, subclinical mastitis was registered in 16.7% of cows. Out of 120 dairy cows in the second group, mastitis was found in 13 cows. of these, 56% (7 heads) were cows with serum mastitis, 25% (3 heads)-with catarrhal mastitis, 17% (2 heads) - with catarrhal-purulent mastitis, 8% (1 head) - with fibrin mastitis. If the blood counts of cows in the experiment were at the lower limit of physiological indicators at the beginning of the studies, there was a deterioration of these indicators by the end of the studies, which led to a decrease in the concentration of hemoglobin in the blood by an average of 5 g / l, erythrocytes - by 5.24 ± 0.36 million / ml, total protein - by 60.8 ± 0.8 thousand/ μ l, leukocytes - by 5.76 ± 0.12 thousand/ μ l, the leukoformula was characterized by a shift of the nucleus to the left due to an increase in the percentage of lymphocytes, eosinophils and a decrease in the percentage of rod-shaped, segmental-nuclear neutrophils and young neutrophils

(1-table). Hematological parameters of cows with latent mastitis

No	Indicators	units of measurement	at the beginning of week	at the end of the
1	hemoglobin	g/l	110 \pm 0,24	94 \pm 0,19
2	erythrocytes	million/ml	6,36 \pm 1,34	5,24 \pm 0,36
3	Total protein	g/l	76,5 \pm 0,09	60,8 \pm 0,8
4	leukocytes thousand/ μ l	thousand/ μ l	8,56 \pm 0,14	5,76 \pm 0,12
5	eosinophils	%	2,0 \pm 0,6	4,2 \pm 0,5
6	lymphocytes	%	40,3 \pm 0,25	68,0 \pm 2,5
7	monocytes	%	2,3 \pm 0,3	2,5 \pm 0,27
8	Rod-shaped neutrophils	%	8,4 \pm 2,3	2,0 \pm 1,3
9	Segmented neutrophils	%	28,2 \pm 1,2	44,8 \pm 1,4

10	young neutrophils	%	0	1,1±0,5
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Conclusions:

1. Etiological factors in the disease of cows with mastitis are non-compliance with the conditions of their maintenance and milking rules, an excess in the diet of protein and juicy feeds and a lack of easily digestible carbohydrates and fiber, insufficient massaging and diet of active seedling sites for cows.

2. Among cows, subclinical mastitis was noted in 16.7%, a decrease in the concentration of hemoglobin in the blood by an average of 5 g / l, erythrocytes - by 5.24 ± 0.36 million / ml, total protein - by 60.8 ± 0.8 thousand / ml, leukocytes - by 5.76 ± 0.12 thousand / ml, leukoformula indicators are mainly basophilic. up to 2.3% of rod neutrophils is characterized by an increase of up to 21% of young neutrophils, up to 2% of monocytes, up to 17% of eosonophils and a decrease of up to 1% of eosonophils, up to 7% of nuclear neutrophils of the segment.

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