



DEVELOPMENTAL CHARACTERISTICS OF ANTERIOR GASTRIC DYSTONIA IN DAIRY COWS

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Abstract

The article describes the cause, pathogenesis of the foreground and changes in fluid cicatrix in productive cows.

Key words: Cows, diet, physical inactivity, proventriculus, hypo- and atony, acidosis, dystonia, ciliates, exercise.

Relevance of the Topic

In many decrees and decisions of the President, it is clear that on the basis of the rapid development of our country's animal husbandry, it is an important task to further improve the provision of high-quality and cheap animal products for the people. In particular, according to paragraph 2 of the Decision of the President of the Republic of Uzbekistan dated March 18, 2019 PQ-4243 "On further development and support measures for the livestock sector", all economic entities producing livestock sector are provided with preferential products and production of animal feed Enterprises also have applications. Internal non-communicable disease of cattle anterior part dystonia is one of the biggest obstacles to carrying out these urgent tasks.

The frequent occurrence of dystonia in the front part of the stomach of cows in the conditions of livestock farms in our republic is associated with negative changes in the environmental situation and the introduction of fast technologies, changes in feeding and feeding conditions. feeding animals. Nevertheless, the etiology, course, early diagnosis, effective and minimal treatment and prevention methods of these diseases have not been fully studied and developed.

In ruminants, the environment, the ratio of volatile fatty acids and the activity of microorganisms are important for the normal digestion of food in the large stomach. When animals were fed a standard diet, the ratio of volatile fatty acids (VFA) in the rumen was: 65% acetic acid, 20% propionic acid, 15% fatty acid [4].





Nutritional imbalances cause pregastric disease in cattle, including alkalosis and acidosis, rumen volatile fatty acid (VFA) imbalance, reduced Trichomonas counts, and pregastric motility [5].

Tasks of research. The purpose of the study is to study the etiology of pregastric dystonias in cows in the conditions of cattle farms, the characteristics of the course, and the indicators of large abdominal fluid during the disease.

Study place, objects and methods. In our study, a pharmacy study was performed to determine the pathogenesis of dystonia in the anterior part of the stomach in dairy cows and to investigate indicators of massive peritoneal fluid.

To this end, according to the principle of "similar pairing", 10 dairy cows were separated from the Smental cows on the farm, and clinical examination was carried out every 30 days. Blood, the environment of large amounts of rumen fluid, the number and activity of trichomonas.

Hemoglobin (Sali hemoglobin meter), red blood cell count (Goryaev counting grid), glucose (o-toluidine chromogenic method), total serum protein (refractive method) and base reserves (I.P. Kondrakhin method) in blood by laboratory tests), the environment of a large amount of peritoneal fluid (using rN-meter), the number of Trichomonas (in the Goryaev counting type) was determined [1].

Research Results

Cows are mostly chained together in one cattle farm. Cows were fed by hand 3 times a day. Breeding is not enough for cows. The nutritional content of the diet was 6.08 units, which is 1.92 units lower than the recommended feeding rate, and the level of satisfying the animal's nutritional needs was 76%. The feed consists of 21.6% wheat straw, 21.6% cotton straw and 32.4% low quality corn silage. Animal silage is mainly corn straw separated from the bran.

The digestible protein in the diet was 801.5 grams, the animal satisfaction level was 86.3 percent, and the sugar content was 304.1 grams, which was 680 grams below the norm. The animal's digestible carbohydrate requirement was met by 44.7%, and the ratio of glycoprotein to protein was 0.38%.

According to A.P. Kalashnikov and others (2003), a diet containing 100-110 g of digestible protein per kilogram of food unit is considered optimal according to nutritional criteria [2].



1- table. Diet of experimental dairy cows

Type of food	Amount, kg	Food unit	Digestible protein, g	Sugar, g	Carotene, m	Kal'tsiy, g	Phosphorus, g	Klechatka, g
Mecca silage	6	1,14	72	159	79,2	23,8	4,38	688,2
Wheat straw	4	1,48	84	2,08	16,0	20,4	2,4	708
Alfalfa hay	2	0,62	190	22,0	46	19,2	4,0	162
Cotton wool	4	0,84	152	-	-	19,4	4,6	2315
Amishta feed	2,5	2,0	302,5	121	-	3,25	18,5	-
In the diet	18,5	6,8	801,5	304,1	141,2	85,0	33,88	4323,8
According to the norm		8,0	840	680	385	70	40	2850
The difference, ±		-1,92	-38,5	-375,9	-243,8	+15,0	-6,12	+1473,8

The ratio of sugar to protein is -0.38; phosphorus - calcium ratio - 0.49.

Cows' appetite, body temperature, heart rate and respiration rate, ruminal motility, tailbone condition, and teeth of productive cows are evaluated using generally accepted clinical examination methods. During the examination, the body temperature of the dairy cows in the field was within physiological parameters, the heart rate at the beginning of the examination was 52.8 ± 2.4 beats/min, and at the end of the examination was 86.4 ± 4.1 beats/min. min. check Check (average 50-80 breaths per minute), corresponding breath count 16.3 ± 0.88 - 28.6 ± 1.85 breaths (standard 12-25 breaths per minute).

The number of previous contractions of the stomach 2 minutes before the start of the test was 3.8 ± 1.28 times (on average 3-5 times in 2 minutes), and at the end of the test it was 2.8 ± 1.9 times.

The reason for the low function of the front part of the stomach in breeding cows can be their gathering in one place throughout the year, on the one hand, silage feeding, and low quality of food and nutrients.



At the beginning of the inspection, 20.0 percent of cows had a change in appetite (lizukha), 50.0 percent had pale mucous membranes, and at the end of the inspection, these indicators were 60.0 and 80.0 percent, respectively. In addition, hair loss, joint enlargement, leather coating and hoof shine were noted in almost all cows.

At the beginning of the examination, the average number of red blood cells in the blood of dairy cows was 4.88 ± 0.03 million/ μl (standard 5.0-7.5 million/ μl). At the end of the examination, hemoglobin concentration decreased from 101.6 ± 7.6 g/l to 78.2 ± 5.7 g/l (normal 99-129 g/l) ($R < 0.05$).

At the beginning of the pharmacy inspection, it was noticed that the glucose concentration in the cow's blood was far below the standard target, with an average value (standard 2.22-2.33 mmol/L) of 2.16 ± 0.24 mmol/L. During lactation, this indicator decreased, and at the end of the test, it averaged 2.05 ± 0.25 mmol/l. The sustained decrease in blood glucose levels during the test period could be explained by the low satisfaction of lactating cows with energy-related needs.

Total protein levels in the serum of production cows were within the physiologically normal range at the beginning of the test (average 72.7 ± 5.3 g/l) and 64.5 ± 5.8 g/l by the end of the test. Alkaline reserves in cow serum were well below normal (normal 46-66 vol.%SO₂), averaging 42.0 ± 2.90 vol.%SO₂ at the start of the test and 40.4 ± 2 by the end of the test. A reduction of up to 78% by volume of SO₂ was noted. The reduction of alkaline substance reserves in the blood indicates that the internal environment of dairy cows changes to acidity, that is, the acidosis state is aggravated. The rumen fluid environment (rN) was at the lower limit of physiological norms at the beginning of the study, with an average of 6.50 ± 0.09 (normal rN - 6.5-7.5), which was characterized by an average decrease to 6.02 ± 0.06 during lactation and at the end of the study ($R < 0.001$).

The average number of trichomonas in the large peritoneal effusion was $52.48 \pm 28,600$ /ml at the beginning of the test, and decreased to $3.168 \pm 15,800$ /ml at the end of the test ($R < 0.01$). Furthermore, at the end of the test, a decrease in microbial activity was noted. According to literature reports, during the period of mineral metabolism disorder and secondary osteodystrophy in dairy cows, compared with healthy animals, the average rN in the large abdomen decreased to 6.30 ± 0.09 units, and the number of trichomonas decreased to 295,000/ml [5].



**2- table. Morphological and biochemical parameters of dairy cow blood
(n=10).**

Inspections time	Erythrocyte, mln/ml	Hemoglobin, g/l	Glucose, mmol/l	General protein, g/l	Alkaline spare, volume %CO ₂
20.09.22 й.	4,88±0,03	101,6±7,6	2,16±0,24	72,7±5,3	42,0±2,90
20.10.22 й.	4,89±0,03	92,3±6,8	2,12±0,24	70,8±5,1	41,6±2,88
20.11.22й.	4,86±0,02	86,5±6,4	2,10±0,24	69,5±5,4	41,1±2,83
20.12.22 й.	4,84±0,03	81,0±5,9	2,08±0,24	65,2±5,5	40,8±2,81
20.01.23 й.	4,80±0,02	78,2±5,7	2,05±0,25	64,5±5,8	40,4±2,78

Conclusions

1. The cause of gastric dystonia in the early stage of dairy cows. The ration is silage-enriched type. The main component of the ration is coarse grains. The ratio of sugar-protein and calcium-phosphorus is out of balance. The lack of sugar is 375.9 g, carotene-243.8 g, fiber It is Caused by excess +1473.8 g and lack of nutrition (hypomotivation).
2. Dystonia in the gastric anterior chamber of dairy cows, changes in appetite, pale mucous membranes, rapid pulse (86.4±4.1 times), rapid breathing (28.6±1.85 times), and the average number of gastric anterior chamber contractions in 2 minutes 2. Reduced to 8±1.9 times (hypotonia), compared with physiological indicators, the hemoglobin, glucose, total protein, and alkaline reserves in the blood decreased, the acidity of large peritoneal effusions increased, and the number of trichomonas decreased (up to 316.8±15.8 thousand/ml), which is characterized by Disappears with less exercise.

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