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COMPARATIVE EFFICIENCY OF TREATMENT OF ENDOMETRITIS IN DAIRY COWS ACCORDING TO THE SCHEMES OF THE REPUBLIC OF BELARUS

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There is a farmes LLP "Sadchikovskoe" and LLP Saryagash "of Kostanay region tested 3 of the effectiveness of treatment of endometritisregimens to the schemes of the Republic of Belarus: in Group I: uteroton (i.m. 10 ml.) - from 1 to 3 days. Amoxigard (i / m 30), flunex (i / m, 24), cyanocobalomin (i / m 2) from 1 to 5 days. Nitamin (i / m 24) twice on days 1 and 7. Group II: uteroton (i / m 10 ml) and lexoflon (i / m 18), three times - from 1 to 3 days. Flunex (i / m, 24), butofan (i / m 2) from 1 to 5 days. Nitamin (i / m 24) twice on days 1 and 7. Group III: iodipene intrauterine - 1-2 pc in 1.3 days. Ihglukovit (i / m 60 ml.) multiples in 1 day. Trivit (5 ml. / M) on days 1 and 7. Huberin / Butofani / m, 25 ml. 1-4 days. Fertadine (2 ml. I./m.) On

days 1 and 7-10. The duration of treatment in all groups was 7 days. At the end of the treatment, 86.7% of the cows in Group I were clinically healthy, 85.7% in Group II, and 86.7% of cows in Group III. The cost of treatment for 1 head was: in the 1st group - 12953.33 tenge, in the second -9733.3 tenge. and in group 3 - 4 320 tenge.

Key words: cattle breeding, Holstein breed, infertility, endometritis, treatment.

БЕЛАРУСЬ РЕСПУБЛИКАСЫНЫҢ СХЕМАСЫ БОЙЫНША СҮТТІ СИЫРЛАРДА ЭНДОМЕТРИТТІ ЕМДЕУ ӘДІСТЕРІН САЛЫСТЫРМАЛЫ ТАЛДАУ

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Мақалада сиырлардың эндометритін емдеуде Белорус Республикалық сызбаларының Қостанай облысы шаруашылықтарындағы 3сызбасы тиімділігінің анықтамасы берілген: I сызба: утеротон 1 күнен 3 күнге дейін (10 мл.бұлшық етке). Амоксигард (30, бұлшық етке), флунекс (24, бұлшық етке.), цианкобаломин (2 бұлшық етке) бұлшық етке Нитамин (24 бұлшық етке) 1 және 7 күн екі рет. II сызба: утеротон (10 мл. бұлшық етке) және лексофлон (18 бұлшық етке), 1 күнен 3 күнге дейін үш рет. Флунекс (24, бұлшық етке.), бутофан (2 бұлшық етке) бұлшық етке. Нитамин (24,бұлшық етке) 1 және 7 күн екі рет. III сызба: йодипен (1-2 дана, жатыр ішіне) 1,3 күн. Ихглюковит (60 мл, бұлшық етке.) 1 күнен кейін 4-рет. Тривит (бұлшық етке, 5 мл.) 1 және 7 күндер. Юберин/ Бутофан 1- 4 күндер, 25 мл. бұлшық етке. Фертадин (бұлшық етке 2 мл.) 1 және 10 күндер. Емдік шаралар жасалған соң, 7 күннен кейін I топта - 86,7%, II топта - 85,7 % және III топта - 86, 7% клиникалық сау сиырлар болды.1 сиырды емдегендегі шығын: 1 топта- 12953,33 тг, 2 –де -9733,3 тг. және 3 топта – 4 320 теңге болды.

Түйінді сөздер: ірі қара шаруашылығы, голштин тұқымы,бедеулік, эндометриттер,емдеу.

СРАВНИТЕЛЬНАЯ ЭФФЕКТИВНОСТЬ ЛЕЧЕНИЯ ЭНДОМЕТРИТА У МОЛОЧНЫХ КОРОВ ПО СХЕМАМ РЕСПУБЛИКИ БЕЛАРУСЬ

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В статье дан анализ эффективности лечения эндометрита у коров по схемам, Республики Беларусь вхозяйствах Костанайской области по 3 схем: схема I: утеротон (в/м.10 мл.) – с 1 по 3 дни. Амоксигард (в/м 30), флунекс (в/м, 24), цианкобаломин (в/м 2) с 1 по 5 дни. Нитамин (в/м 24) двухкратно в 1 и 7 день. схема II: утеротон (в/м.10 мл.) и лексофлон (в/м 18), трехкратно – с 1 по 3 дни. Флунекс (в/м, 24), бутофан (в/м 2) с 1 по 5 дни. Нитамин (в/м 24) двухкратно в 1и 7 день. Схема III : йодипен (в/мат. 1-2 шт) в 1,3 дни. Ихглюковит (в/м 60 мл.) 4-кратно через 1 день. Тривит (5 мл. в/м) в 1 и 7 дни. Юберин/ Бутофан в/м, 25 мл. 1- 4 дни. Фертадин (2 мл. в./м.) в 1 и 10 дни. По завершении лечения через 7 дней клинически здоровыми были в Группе I - 86,7%, Группа II - 85,7 % и Группа III- 86, 7% коров. Затраты на лечение 1 коровы составили: в 1 группе- 12953,33 тг, во 2 –ой -9733,3 тг. и в 3 группе – 4 320 тенге.

Ключевые слова: скотоводство, голштинская порода, бесплодие, эндометриты, лечение.

Introduction

Reproduction of offspring is the most important part of animal husbandry. To organize the most effective reproduction, it is necessary to comply with the rules of veterinary and sanitary safety, monitor the

health of animals, timely carry out all planned preventive measures, monitor the balance of exercise, and also diagnose infertility [1, p. 23-25].

The main task of animal husbandry is to obtain products of animal origin, but due to the development of diseases of the reproductive system, the reproduction of new livestock is reduced, the quantity, quality and biological safety of products of animal origin are reduced. Endometritis play the most important role among the causes of infertility [2, p. 4].

Endometritis is observed in 22.5 - 38.4% of calving cows, occupying a leading place in the structure of postpartum complications. Mostly dairy cows get sick. Measures for the treatment and prevention of endometritis take up to 80% of the working time of veterinarians [3, p.20].

In the scientific literature, there is information about the relationship between the state of the ovaries and endometrium in cows. The publication provides data on changes in the histological structure of the uterine mucosa, which confirms well-founded arguments in favor of the need to take into account the state of the ovaries in the pathogenesis of reproductive dysfunctions in cows. [4, p. thirteen]. As the authors note, from the moment the calf is born, the uterus is exposed to various influences of environmental microbes. After getting pathogenic microbes on the lining of the uterus, they begin to multiply. The mucous membrane becomes irritated and begins to produce toxins [5, p. 18-20].

There are various methods of treating endometritis, but the main tasks invariably remain the suppression of pathogenic microflora and the removal of accumulated exudate from the uterine cavity by increasing the contractility of the myometrium, under conditions of complex therapy, which consists of etiotropic, pathogenetic and symptomatic treatment of cows and heifers [6, p. 85-87]

Factors limiting high fertility: a decrease in the body's resistance against the background of metabolic disorders, as well as the microbial background, which indirectly affect through the immune status in highly productive cows or even a direct effect on fertilization, pregnancy and the postpartum period [7, p. 7].

In the process of development of animal husbandry, veterinary medicine is faced with many problems, such as infertility and a decrease in the rate of reproduction of animals. One of the common pathologies of livestock reproduction is inflammation of the uterine lining, or endometritis. The solution to this problem requires the study of various treatment regimens for endometritis in shelter in the conditions of Kazakhstan.

The aim of the research in this work is to compare the effectiveness of treatment regimens for endometritis in cows, recommended by scientists of the Republic of Belarus. To resolve this issue, the following tasks were set:

1. To study the degree of distribution of endometritis in cows in livestock enterprises of Kostanay region.

2. To carry out a comparative analysis of the effectiveness of treatment regimens for endometritis in cows using the schemes recommended by scientists of the Republic of Belarus.

Material and research methods. The research was carried out at Olzha Agro LLP, p. Sadchikovskoe, Kostanay region and Saryagash LLP, Denisov region, Kostanay region. Tests of treatment regimens were carried out in the framework of the scientific and technical program for the implementation of applied scientific research in the field of the agro-industrial complex for 2018-2020 under the budget program 267 "Increasing the availability of knowledge and scientific research" "Increasing the efficiency of breeding methods in cattle breeding", under the project: "Development effective breeding methods in the industry of dairy cattle breeding ", for the event:" Increasing the reproductive capacity of dairy cows in the Kostanay region. " For the experiment, during the obstetric-gynecological clinical examination, Holstein cows were selected at the age of 3-9 years, with a live weight of 550-600 kg. and an average annual productivity of 5800-7200 kg. Keeping animals loose. Feeding according to the norms, in accordance with the physiological state and productivity.

According to the results of obstetric and gynecological examination of infertile cows using an ultrasound scanner, DRAMINSKI I-Scan in dairy farms of Kostanay region (in Olzha Agro LLP (n = 242 heads, Saryagash LLP (n = 84 heads) for the experiment) three groups of cows with a diagnosis of chronic catarrhal endometritis were selected.In the first experimental group (n = 15), the treatment of endometritis was carried out according to scheme No. 1: uteroton (10 ml i.m.) three times - from 1 to 3 days. Amoxigard (i/m 30), flunex (i / m, 24), cyanocobalomin (i / m 2) from 1 to 5. In this regimen of treatment of chronic endometritis, an analogue of butofan proposed by scientists from Belarus was used - cyancoblamin. Nitamin (i / m 24) twice in Day 1 and 7. In the second experimental group (n = 14), treatment was carried out according to the scheme: uteroton (i / m 10 ml.) And lexoflon (i / m 18), three times - from 1 to 3 days. m, 24), butofan (i / m 2) from 1 to 5. Nitamin (i / m 24) twice on days 1 and 7. In the third group (n = 15) according to the scheme: iodipene (replaced povidone) intrauterine - 1-2 pc in 1.3 days. Ihglukovit (i / m 60 ml.) multiples in 1 day. Trivit (5 ml. I / M) on days 1 and 7. Butofan (replacement of yuberin) i.m., 25 ml. the first 4 days of treatment. Fertadine (2 ml. I./m.) On days 1 and 10.

At the beginning and at the end of treatment, biochemical studies of blood serum and a complete blood count (CBC) of cows were carried out. Blood was taken from the animals in the morning, before feeding, from the tail vein. Biochemical analysis of blood serum was carried out in the scientific laboratory of

the ICM South Ural State Agrarian University (Chelyabinsk, Russia). Determination of the content of total protein, albumin, glucose and urea was carried out using universal CPK 3 - 01-ZOM-03. A general blood test (CBC) was examined in a private clinic "Zoodiagnostika" on a Micros 3000 hematology apparatus.

Based on the results of the treatment, the effectiveness of treatment and reproduction rates in cows was evaluated. We took into account the recovery, the duration of treatment, the time of the onset of the first sexual cycle after treatment. Statistical processing of research results was carried out using Excel-2010).

Research results. At the first stage of the experiment, the conditions of keeping, feeding and exploiting dairy cows were assessed. Then, an obstetric-gynecological dispensary examination was carried out. According to the results of a gynecological examination of dairy cows using an ultrasound scanner DRAMINSKI I-Scan in Olzha Agro LLP (n = 242 cows), 6% (14 cows) pregnant cows and 94.0% (220 cows) were barren cows. Of the barren animals, 47.4% (111 head) cows had no pathology. In the group of animals with pathology of the reproductive system, pathologies of the uterus prevailed - 30.34% (71 animals). Including 27.4% (64 cows). - clinical forms of endometritis. Subinvolution of the uterus in 7 (3.0%) cows. Ovarian dysfunction was registered in 16.2% (38 cows). Including 2.6% (6 cows) have follicular cysts, and 6.4% (15 cows) have ovarian hypofunction. In LLP "Saryagash" during gynecological examination of cows (n = 85), pregnant 7.1% (6 cows), sterile - 92.9% (79 cows) were revealed. Among infertile cows, 44.7% (38 heads) are without pathology. Uterine pathologies from among the examined animals were found in 40.38% (34 heads) of cows; chronic catarrhal endometritis was revealed. Moreover, in 6 animals (7.1%), chronic catarrhal endometritis was combined with ovarian hypofunction.

According to the results of a gynecological examination, experimental groups were formed from among animals with impaired reproductive function according to the principle of paired analogs to test the effectiveness and treatment regimens and prevention of diseases of the reproductive system:

Three treatment regimens for chronic endometritis were tested: group 1 in Olzha Agro LLP, groups 2 and 3 in Saryagash LLP:

In the first and second experimental groups, an identical treatment regimen was used, with the exception of antibiotic therapy. In the first experimental group, Amoxigard was used, in the second - Lexoflon. In addition, in the treatment regimen for chronic endometritis in 1 experimental group, an analogue of butofan proposed by scientists from Belarus, cyanoblamin, was used.

Treatment of animals of group 3 was carried out in accordance with the proposed scheme of Belarus (Figure 1). In this scheme, the drugs were replaced with analogues. Povidone, taking into account the active substance, was replaced with iodipene (intravenously 1-2 pcs. On days 1 and 3. Injection of ichglucovite intramuscularly in the area of the skin fold in the area of the tail root (40-60 ml) at 1, 3, 5, 7 days of treatment Trivit (i.m. 5) twice on the first and seventh days.Uberine recommended in this scheme was replaced by butofan, which was used for five days in a row - from 1 to 5 intramuscularly, at a dose of 25 ml / head Fertadine 1-2 times (according to individual indications).

Figure 1- Testing of the treatment regimen for chronic endometritis in cows in LLP "Saryagash"

In all experimental groups, in order to control the physiological state and the effectiveness of treatment, studies of a general blood test were carried out twice. At the beginning of treatment and after its completion.

Since, when studying the conditions of keeping and feeding animals, studies of feed rations were carried out, and deviations were noted that affect the metabolism of dairy cows in the Kostani region. We, in order to avoid distortion of the assessment of the results of clinical trials, preliminarily studied the background indicators of the OAC and biochemical composition on the farms.

Thus, conditions were created for an objective assessment of the clinical state of animals. This was necessary to maintain the purity of the experiment.

In general, the hematological blood profile of the animals in both farms was identical.

They have a decreased level of metabolic processes and, as a result, a decrease in hemoglobin, erythrocytes, and color index. The results of studies of hematological parameters of the blood of cows after the completion of treatment returned to the average statistical data characteristic of animals in the respective farms.

Another indicator for assessing the clinical state of the experimental animals was blood biochemical parameters. They fairly objectively reflect the state of metabolism of proteins, carbohydrates, fats, vitamins, hormones and allow monitoring the general state of the animal's body, before treatment and in the process of carrying out therapeutic measures. Studies of the biochemical composition of the blood of cows diagnosed with chronic endometritis also illustrated deviations from the norm. We explain these changes in indicators by violations of the diet of lactating cows.

In the blood of cows at the beginning of treatment, there was a decrease in indicators of total protein, potassium, phosphorus and hemoglobin, etc. After the completion of trials of treatment schemes for endometritis in cows, the indicators slowly recovered and returned to the variant of the physiological norm for animal farms where the studies were conducted.

The duration of treatment in all experimental groups was 7 days. At the end of the treatment, an ultrasound examination of the animals was performed. In the first experimental group, recovery was noted in 13 cows (86.7%). Endometritis was diagnosed in 2 cows (13.3%). Within 30 days after the completion of the treatment, 2 heads came into the hunt and were inseminated.

The economic costs of the treatment regimens for chronic endometritis (per 15 goals in each group) are distributed as follows.

When treating chronic endometritis in cows according to the schemes proposed by scientists from Belarus, the duration of treatment is 7 days. Treatment costs in groups 1 and 2 (for 15 cows) are 194300 and 146600 tenge. Treatment costs in group 3 (for 15 cows) - 64800 tenge. Treatment costs per head were: in group 1 - 12953.33 tenge, in group 2 - 9733.3 tenge. and in group 3 - 4 320 tenge.

Conclusion. The therapeutic effectiveness treatment regimens for endometritis in dairy cows according to the regimens recommended by scientists of the Republic of Belarus.

As a result of obstetric and gynecological examination of the cattle breeding stock in Olzha Agro LLP, Sadchikovskoe farm and Saryagash LLP, Kostanay region, clinical forms of endometritis were diagnosed in 27.4% and 40.38% of the surveyed cows. Three treatment regimens for endometritis were tested: Group I: uteroton (i / m 10 ml) three times - from 1 to 3 days. Amoxigard (i / m 30), flunex (i / m, 24), cyanocobalomin (i / m 2) from 1 to 5 days. In this regimen for the treatment of chronic endometritis, an analogue of butofan proposed by scientists from Belarus, cyanoblamin, was used. Nitamin (i / m 24) twice on days 1 and 7. Group II: uteroton (i.m. 10 ml.) And lexoflon (i.m. 18), three times - from 1 to 3 days. flunex (i / m, 24), butofan (i / m 2) from 1 to 5 days. Nitamin (i / m 24) twice in 1 and 7 days. Group III: iodipene (povidone replacement) i / m. - 1pc in 1.3 days. Ihglyukovit (i / m 60 ml.) 4 - multiples in 1 day. Trivit (5 ml. I / M) on days 1 and 7. Butofan (replacement of Yuberin) i.m., 25 ml. the first 4 days of treatment, fertadine (2 ml. i./m.) on the 1st and the last day.

Analysis of the results of testing treatment regimens showed that the duration of treatment in all groups was 7 days. At the end of the course of treatment, 86.7% of cows in Group I were clinically healthy, 85.7% in Group II, and 86.7% of cows in Group III. The cost of treatment per head was: in group 1 - 12953.33 tenge, in group 2 - 9733.3 tenge. and in group 3 - 4 320 tenge.

Thus, all treatment regimens for endometritis in cows proposed by scientists of the Republic of Belarus showed almost the same results in terms of the duration of the course of treatment and therapeutic efficacy. Taking into account the economic costs of the course of treatment, the minimum costs can be distinguished in the third group.

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