International Journal of
Biological Engineering and Agriculture
ISSN: 2833-5376
Volume 1 | No 3 | Sep-2022

Etiopathogenesis of Uterine Subinvolution in Cows

Eshburiyev Baxtiyar Mamatqulovich [1], Urazov Sherali Abdug'aniyevich [2], Rasulov Sharofiddin Shovqin o'g'li [3]

[1] Scientific leader professor at SamDVMCHBU
[2] Basic doctoral students at SamDVMCHBU
[3] Assistant at SamDVMCHBU

Abstract: The presented analysis presents an analysis of scientific sources and research results, clinical features and the possibility of developing uterine subinvolution, a characteristic for fertilized cows.

Keywords: uterus, subinvolution, hypovitaminosis, latent endometritis, loxium, fetus, pregnancy.

Relevance of the topic: Despite the rapid development of animal husbandry in terms of numbers, due to the benefits provided by the government to livestock breeders and practical assistance, animal productivity levels on livestock breeds remains low. Identifying the causes of low productivity in breeding, eliminating the shortcomings and creating a healthy and productive herd of cattle on the farm is one of the urgent tasks that veterinary staff is facing.

In this regard, veterinary science and practice are faced with the urgent task of combating and treating livestock diseases as well as reducing the cost of livestock breeding through the development and implementation of effective and cost-efficient methods for improving fertility and reproductive traits of livestock belonging to both personal assistants and farmers.

Among genetical disease of animals, uterine subinvolution in cows is central and remains one of the most obstructive disease in terms of creating new species in livestock and increasing cattle fertility.

Study and research show that, despite the fact that disease of uterine subinvolution and widely spread among imported pedigree caws and often blamed to be the main cause of infertility, causes of the disease the features of its development, effective methods of early detection, treatment and effective ways of prevention are not yet fully developed.

Due to the detrimental effect of the disease of uterine subinvolution, large economic losses of farms continue due to the sharp decline in animal productivity as the result of infertility caused by deterioration of animal reproductive traits.

The main causes of uterine subinvolution may be excessive fetal fluid and excessive fetal size, functional defects of posterior pituitary gland and placenta. Secondary causes of the disease are insufficiency of masonry for pregnant animals, milking cows until the last days of pregnancy, one-sided feeding, excessive or insufficient amount of milk-driving nutrients in the diet, lack of vitamins and minerals are the factors that lead to a decrease in resistance of organism [2].

According to A.M.Chomayev and others optimal time to inseminate cows with a milk yield of 4,000 kg is considered to be approximately 40 days after birth as it takes 50-60 days for the uterus to recover after calving.

The aim of the study includes identifying the prevalence and causes of uterine subinvolution among recently calved cows, identification of clinical sign and morpho biochemical changes in the blood occurring as the result of the disease.

Object and methods of research. In order to study the prevalence, causes and developmental features, clinical signs and morpho biochemical changes in the blood and the consequences of

uterine subinvolution disease among recently calved cows on farms, "standard pairs" of animals were identified as "etalons" The obtained 8 head of dairy cows were examined once every 20 days from the 1st month of calving until their fertilization, in which the clinical-physiological status and morpho biochemical parameters of the blood were determined.

Attention was paid to the general condition of the cows on the farm, appetite, persistence of obesity, reaction to out-side impressions. Following commonly accepted clinical examination methods condition of mucous membranes, skin and skin coating, locomotor organs, the number of contractions of upper extremities in 5 minutes, body temperature, heart rate and respiratory rate in a minute were identified.

External examination of the genitals in cows revealed the condition of the labia, the flow of mucous fluid, its color, odor and consistency as well as the color of the mucous membranes. Examination of the rectum revealed the condition of the uterus and its involution, as well as the condition of the ovaries, which contained follicles or corpus luteum. Vaginal examination revealed the condition of the vaginal mucosa, the cervix, the degree of its closure, the nature of the fluid secreted from the uterus. Cows were studied for sexual desire period and sexual cycle.

The zootechnical analysis of the composition and nutrition of cows' rations, the amount of digestible protein, sugar, carotene, calcium, phosphorus, fiber was carried out, and the level of satisfaction of the needs of animals was studied on the basis of comparison with feeding standards.

Analysis of the obtained results. Analysis of the obtained results. On the farm, the ration of cows was mainly of the silage-concentrate type, with a shortfall of 2.08 feed units relative to the feeding norms. Digestible protein in the diet was 911.8 grams, and its content was 105.8%.

Satisfaction of cows' needs for easily digestible carbohydrates was 46.4%, precisely 364.4 grams of sugar in the diet was less than the norm, 2.4 grams of calcium was above average norms and shortage of 6.3 grams of phosphorus are identified. The ratio of sugar to protein was 0.34 in comparison to standard norms 0.8-1.2, and the ratio of phosphorus to calcium was 0.46.

The amount of fiber in the diet was 3392 grams instead of the normal 2850 g, and the amount of carotene was 169 mg. After analyzing the nutrition of dairy cows, we came to the conclusion that the type, composition and nutrition of rations do not fully meet the satisfactory needs of cows in nutrients, biologically active substances, macro- and micronutrients. Protein and energy imbalances in rations, low sugar-protein and phosphorus-calcium ratios, delayed postpartum recovery in cows are the main etiological factors in the occurrence of uterine subinvolution. Year-round storage of cows in one place, hypodynamics and hypo insulation leads to metabolic disorders in them as well as pathological changes in the genitals.

Clinical and gynecological examination of cows in the study of the nature of uterine diseases showed the following results: uterine subinvolution - 75%, catarrhal-purulent endometritis - 41%, purulent-fibrinous endometritis - 4%.

General symptoms in cows with uterine subinvolution include general weakness, lethargy, loss of appetite, hypotension of the anterior gastrointestinal tract; whitening of the mucous membranes (anemia), catarrhal-purulent exudate from the vagina, enlargement of the uterus when examined through the rectum and clinical signs such as the presence of fluid in the cavity and incomplete absorption of the corpus luteum in the ovaries found out to be clinical signs and general characteristics of the disease. An average increase in body temperature of 0,5-1^{o}C and heart rate of 10-15 beats per minute. These findings suggest that uterine subinvolution is accompanied by a rise in body temperature and an increase in heart rate.

Hematological parameters of cows with uterine subinvolution were characterized by an average increase in hemoglobin in the blood by 5 g/l, erythrocytes - by 1,54 million/µl, total protein – 6,5 g/l, and a decrease in leukocytes - by 3,20 thousand/µl.

Conclusion.

1. The main etiological factors in the occurrence of uterine subinvolution in cows are considered incomplete satisfaction of the needs of pregnant women in nutrients, vitamins, macro- and micronutrients, lack of reproduction and unsanitary storage of recently calved cows.

2. Symptoms of uterine subinvolution in cows include general weakness, changes in appetite, catarrhal-purulent exudate from the vagina, enlargement of the uterus when examined through the rectum, excessive fluid, delayed absorption of corpus luteum in the ovaries and is characterized by a decrease in the number of erythrocytes in the blood, hemoglobin, total protein, and an increase in the number of leukocytes.

References.

1. Xramsov V. V. Vliyanie sezonnыx faktorov na vosproizvoditeltnыe funksii i produktivnost korov [Tekst] / V. V. Xramsov, R. A. Shundulaev, N. A. Saenko // Veterinariya. - 2004. - №11. - S. 13-14.
2. Chomaev A.M., Chernisheva M.N., Goldina A.A. Molochnaya produktivnost i sroki osemeneniya korov. J. Zootexniya, №6, 2003, s.30.
3. Eshburiyev B.M. Veterinariya akusherligi. Darslik. 2018 y. 334-336 b.
4. http://www.allvet.ru/diseases/-vetobstetrics