



**NEW EFFECTIVE METHODS OF TREATMENT OF PERSISTENT INFERTILITY IN
COWS (CORPUS LUTEUM PERSISTENS)**

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Abstract

This article examines the persistent corpus luteum, the causes of infertility among cows, quantitative levels of steroid hormones in the serum of experimental cows, experimental cows were fertilized twice at 12-hour intervals using the manoservical method, and 3 months after insemination, cows were examined by commission-rectal studies. The application of symptomatic and operative therapies in the treatment of persistent corpus luteum, and the results of experiments, discussions were noted.

Keywords: Persistent, corpus luteum, follicle, sexual cycle, exudate, ovulation, steroid hormone, ovary, manocervical method, cloprostenol, involutional processes.

Persistent yellow body. (Yellow body is preserved). Persistent or undigested yellow body is yellow body that is not absorbed even 25-30 days after birth in the ovary of a non-pregnant animal. Most experts concluded that the persistent corpus luteum produces hormones that disrupt the maturation and development of follicles, and in 30-75% of cases can cause infertility in an animal [4.216-218]. However, special studies have shown that infertility due to persistent corpus luteum is practically observed only in 5.2-7.4% of animals. Persistent yellow body is more common in cows than in humans. other types. In 3-5 days after calving, the hormonal function of the corpus luteum stops, and by 15-16 days it is completely absorbed. Permanent corpus luteum can form from the corpus luteum and often from the corpus luteum of the sexual cycle as a result of the anovulatory sexual cycle.

Pathogenesis. The pathogenesis of luteal tissue persistence in cattle is not yet fully known. The immediate cause is undoubtedly insufficient secretion of the luteolytic factor-PGF_{2a}.

The following conditions were associated with long-term luteal function:

- infections of the uterus, including pyometra
- high milk productivity, especially in the early postpartum period
- long-term treatment with drugs that affect the prostaglandin pathways (NSAIDs, glucocorticoids)

Reasons. Prolonged keeping of animals in one place, unilateral feeding, skipping several sexual cycles without fertilization, latent endometritis, accumulation of exudate in the uterus and the presence of a dead child lead to the fact that the yellow body is not absorbed. Inadequate feeding of cows during high lactation, mineral metabolism disorders often lead to a decrease in ovarian function and a cessation of absorption of the corpus luteum [3.18].



Symptoms and diagnosis. The main sign of a persistent yellow body is that the animal does not show a heat. In rare cases, ovulation does not occur, although the animal is in heat. Examination through the rectum reveals that one or both ovaries are slightly enlarged, the surface is indistinct, and the ovary is denser than its own tissue. The uterus is loose, enlarged, hanging in the lower abdomen, in some cases without pathological changes.

Sometimes it is difficult to distinguish a persistent yellow body from a real yellow body found during pregnancy. Therefore, before starting treatment, it is necessary to make sure that the animal is not pregnant, since in case of pregnancy, the child can have an abortion. If the pregnancy or infertility of the animal is questionable, it should be checked again in 2-3 weeks.

Forecast. If no deep changes are observed in the uterus and adequate storage conditions are created for the animal, the persistent yellow body is absorbed during nutritious feeding.

2. MATERIALS AND METHODS OF RESEARCH

The experiment was conducted on a livestock farm "Niezmat bobo" in the Khorezm region.

For the experiment, cows aged 4-6 months with 30 heads of calves were isolated by laboratory studies. Laboratory work was carried out in the Khorezm regional veterinary Laboratory.

Experimental groups of cows were formed according to the principle of mating analogues, based on the physiological state, breed, age, fecundity, live weight, stage of the sexual cycle and after a gynecological examination.

Arrival time and number of fertilizations were monitored in all experimental groups.

Quantitative levels of steroid hormones in the blood serum of experimental cows produced in the ovaries: progesterone, testosterone, estradiol-17 α , and cortisol were studied by solid-phase immunoassay. These measurements are based on spectrophotometric readings of the optical density of color hormones associated with specific antibodies detected in the solid phase (Golovachenko V. A., Politsev-D. G., 2000) [2.111].

The number of red blood cells in the Goryaev counting chamber was calculated in 5 large squares by diluting 20 ml of a blood sample with 4 ml of isotonic or 3% sodium chloride solution.

White blood cells were counted using a Goryaev counting chamber in 50 large squares by diluting 20 ml of a blood sample with 0.4 ml of 3% glacial acetic acid (I. P. Kondraksin, 2004).

Differential counting of leukocytes (leucogram) was carried out on the basis of their different staining abilities under the action of Romanovsky-Giemsa dye and subsequent differentiation of their shape using an immersion system! A microscope using an 11-key leukocyte counter- (Bazhibina V. Ya., 1974).

Determination of the sex hormones follicle-stimulating hormone (FSH) and luteinizing hormone (LH), estradiol- α , progesterone, prolactin, testosterone, beta-hCG, dehydroepiandrosterone sulfate (DHEA-C) is performed on an ARChITECT 2000 analyzer with an immunochemical method [1.8].

Determination of 17- α -hydroxyprogesterone (17-OH progesterone) is performed using an enzyme-linked immunosorbent assay.

The resulting digital material is processed statistically. "When determining the reliability of the difference between the indicators of the control and experimental groups, we used the Student's



argument and the Fischer-Snedok table when calculating the reliability criterion (See F. F: 1990) 1. The results are considered reliable at p

The control group included healthy cows with a normal sexual cycle. The remaining experimental groups were selected from animals that were not exposed to sexual heat 60 days after calving, i.e., in a state of anaphrodisiac due to an active ovarian corpus luteum. The emergence of this functional state of the ovaries was organized by artificial insemination and rectal examination of the reproductive organs of cows. After more than 45 days of birth, a cow's ovary that persists and functions in the ovary is considered permanent. These cows were diagnosed with rectal examination twice a day at 2-week intervals and daily monitoring of animals.

Subsequently, the tested cows were fertilized twice using the Manoservic method at 12-hour intervals. Three months after fertilization, the pregnancy of cows was determined by laboratory rectal examinations.

Estrophan produced by Bioveta CJSC contains 250 mg of cloprostenol (D, L Cloprostenolum natricum) for veterinary use (from 1 ml). Cloprostenol is a synthetic racemic analog of prostaglandin F2a (PG F2a), which reduces the concentration of progesterone in blood plasma. In practice, a mixture of pure D (R) -cloprostenol or D (R) - and L-forms of cloprostenol is used. Studies have confirmed that pure R-cloprostenol exhibits significant luteolytic activity. When using pure R-cloprostenol, the dose can be reduced from the usual 500 mcg to 150 mcg in racemic D (R) form for of cattle. In addition to the luteolytic effect, the D, L-form of cloprostenol has uterotonic and cervicorelaxing effects. Both forms are administered intramuscularly.

Cloprostenol affects the ovaries, especially the yellow body (VT), causing luteolysis. It also increases the activity of the myometrium. The luteolytic activity of this synthetic prostaglandin is 200-400 times higher than that of natural PG F2a. Cloprostenol causes functional and morphological regression of the corpus luteum, which leads to the onset of estrus 2-5 days after ingestion.

Butamine. In appearance, the drug is a clear solution from pink to pink-red color, easily mixed with water. 1 ml contains 100 mg of butaphosphamide (which corresponds to 17.3 mg of phosphorus) and 0.05 mg of cyanocobalamin (vitamin B12), as well as excipients.

The main part. Symptomatic and operative therapy is used to treat persistent jaundice. Among the symptomatic remedies, ovariolytate prepared according to the recipe of M. P. Tushnov gives good results. When the drug is administered to cows subcutaneously for 20-30 ml every 15-18 days, in almost 100% of cases 2 times, the yellow body is reabsorbed, providing the beginning of the sexual cycle in the animal. Simultaneously with the use of ovariolytate 3-4 times a day for 3-5 minutes, the ovaries are massaged through the rectum for 3 days.

Most authors recommend the use of prostaglandin F2a preparations (estrophan, estuphalon, etc.), Progesterone in combination with gonadotropin and BBQZ (blood serum of bile bile of the throat).

Enucleation of the corpus luteum is a persistent treatment for crushing the corpus luteum, which is often used as a last resort, as it causes heavy bleeding, ovaritis and the development of periovaritis.

In our experiments, we used the drugs butamine and estrophan.



The biocorrective effect of butamine is characterized by an increase in the total protein content in the blood of cows to physiological indicators.

The hepatoprotective effect of the drug glutamyl-tryptophan complex is reflected in a decrease in AST activity within 3 days after butamine administration and a tendency to decrease alkaline phosphatase after thymogen administration in all groups of cows.

Bionormalizing properties of butamine dipeptide are manifested in an increase in the level of hemoglobin to the physiological norm, with the exception of the control group with a normal sexual cycle and the control group with a predominance of progesterone.

Natural resistance factors were more pronounced in the butamine-treated groups. The most effective (53.6% increase) response of the body's immune response by day 10 was recorded 9 days after butamine use. By the 20th day of the study (an increase of 74.2%), after taking butamine - 9 days and estrophan-10 days.

Histostructural changes in the genitals reflect luteolytic processes in the ovary for 9 days on the 12th day after butamine delivery and stimulation of proliferative processes in the endometrium, which is characteristic of the onset of the arousal phase of the sexual cycle.

The effectiveness of intramuscular administration of butamine was 15-20 ml of the solution-77.6%) due to yellow body retention in anaphrodisia at a dose of 2 ml / head of cattle in combination with estrophan). cows with a fertilization index of 1.4 The effectiveness of self-administration of butamine in a similar dose for 9 days was 59.4% fertilized cows with a fertilization index of 1.6 Fertilized 69.2%.

Practical suggestions

In cows with a permanent ovarian body, butamine is recommended to be administered 15-20 ml of the solution every 5 days intramuscularly, for 9 days, or in combination with estrophan as a stimulating sexual cycle for 10 days. Estrafan 1 day intramuscularly once at a dose of 2 ml / head.

Conclusion

Analysis of the literature shows that the creation of a high level of herd reproduction in dairy farming is impossible without effective insemination, the key to which is the normalization, activation and correction of neuroendocrine processes in the reproductive system of cows.

For animalss The reproductive system interacts with all organs and systems of the body through neuroendocrine regulation, in which the hypothalamus plays a central role. Through it, information from the upper parts of the central nervous system, peripheral endocrine glands is combined, and these impulses are converted into a humoral signal sent to the pituitary gland, thereby affecting the entire endocrine function of the body. This system of reciprocating connections during the sexual cycle, pregnancy and the postpartum period. Controls all complex biochemical reactions in the body of cows at all stages of the cycle.

Indicators of the physiological normal state of the reproductive system are the manifestation of the sexual cycle in cows at certain periods of time and subsequent fertilization. To start sexual cycles, cows need to complete the involutional processes in the genitals after birth in a timely manner and not have complications in the postpartum period.



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