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OVARIAN CYSTS AND COWS' REPRODUCTION

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The main task of reproduction is to provide the population with environmentally friendly food production.

The quantity and quality of sexual cycles are significantly influenced by housing conditions, feeding, environmental temperature, and stresses. Normal feeding ensures normal hormonal levels in the blood, which contributes to the functioning of the reproductive system of cows and heifers. It is limited to quantity of offspring and the efficiency of reproduction.

Due to the agricultural crisis in Ukraine, the effectiveness of breeding in dairy cattle reduced due to a shortage of breeding of cows (on the south region of Ukraine).

Recently, there has been an import of highly productive dairy cattle and embryos from Western European countries.

The ovary is a gland of double secretion, it performs generative and hormonal functions [1]. In highly productive dairy herds, non-inflammatory gynecological diseases (dysfunction) of the ovaries and uterus take first place. These organs have an increased functional and physiological load associated with insemination, pregnancy, childbirth, which are aggravated by chronic stress (environmental, emotional, feeding). If these negative factors combine, then a blockage of sexual function occurs, which manifests itself through dysfunction of the uterus and ovaries [2]

Long-term exposure of females to these stress factors leads to the release of the anterior pituitary gland of the hormone lutropin, which controls the maturation of follicles and ovulation. Cysts are gynecological diseases of dysfunctional nature. There is no consensus among researchers to the etiology and pathogenesis of follicular and lutein ovarian cysts in cows [3].

Follicular, and then luteal cysts, form from persistent follicles with low progesterone levels. Their occurrence is preceded by feeding feeds that contain phytoestrogens in significant quantities (corn silage, moldy hay, straw, haylage [4].

Cystic ovarian disease is influenced by a some of factors: breed, number of calving, the duration the stage of current lactation.

Unsuccessful insemination influence on cystogenesis. Link between the pathogenesis and degenerative changes in the tissues of the ovaries has not been revealed [5].

The aim of the study was to estimate the level of reproduction a domestic dairy breed cows' that controlled for ovarian cysts and with normal ovariogenesis and folliculogenesis.

During the research period (2021-2022) 350 cows were controlled (6,850 kg of milk per cow with a fat content of 3,7 %).

It has been estimated norms of feeding different age groups (14,8% crude protein and 6,5 MJ of energy of cows lactation). The control and experimental groups have been formed according to the principle of analogs. They were treated (5.0 ml of Surfagon injected intramuscularly - 3 days) and hormonal treatment was applied standard Ovsynch, PreSynch.

The biochemical components of blood were investigated in a multisectoral biochem. laboratory of the faculty of veterinary medicine of Odessa State Agrarian University- semi-automatic analyzer.

Clinic-gynecological examination of the ovaries of artificially uninseminated cows (n =97) were diagnosed with ovarian follicular cysts in 55 females, 56, 7% of the cows total number has been performed). Two groups were formed: 1st —cows treated for cystic ovarian disease (experimental one); 2nd —females with normal ovaries (control one).

It was also determined a significant increase in prenatal losses in the experimental group: the number of newborn calves and abortions were 23.64%, which is 15.53% higher than those in control.

The ration of the controlled herd was designed for the secretion of 23 kg of milk with an actual milk yield of 18-20 kg. Such a ration contained an elevated protein: crops, products of processing of oilseeds, vitamin feed additives. This occurs to degenerative changes in the liver weaken its function.

A low blood glucose level was detected in all dairy cows.

The glucose content was 67,98 – 80,74% compared with the lower level of normal.

Liver enzymes level in controlled cows groups also showed an increase of AST levels to 141,0 units / l and was noted in the peak of lactation and increased during experiment to 199.50 units/l (at a standard level 18.0-153.1) or in 2.28 times, which indicates significant metabolic disorders.

Cystic ovarian disease leads not only to significant degenerative changes in the reproductive tract. Disorders of trophism of the cortical layer affect the processes of fertilization, the formation of a zygote, embryo and the fetus, but also reduces the number of calves.

The metabolic processes in a lactating cows affect folliculogenesis, and afterwards the quality of oocytes and eggs, manifestations of their physical, biological inequality.

The metabolic disorder influenced the development of the embryo. The ooplasm of the ovine is a self-sufficient formation in the zygote. This happens created combination of hereditary information [4].

Chronic subclinical disorders influenced to cows' ovarian cystogenesis. Heterogeneity influenced to the formation of embryos with reduced adaptability. This leads to inhibition of breeding progress.

The active genetic progress influenced to the formation of productive and reproductive qualities of animals. It was experimentally established, that cows with ovarian follicular cysts, during the year had a significant worse rates of reproduction and number of calves was as follows compared of cows with a normal morphofunctional state of ovaries

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ETYOLOGY, DIAGNOSIS AND TREATMENT OF CANINE CHOLANGIOHEPATITIS

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The biliary system in dogs is made of ducts that collect and direct bile from the liver and the gall bladder which stores bile. Just like any other tissue in the body, the ducts, gall bladder, and the liver can become inflamed. Inflammation of the ducts and gall bladder is called cholangitis. Inflammation of the liver is called hepatitis. These conditions can occur independently or together in what is termed cholangiohepatitis [1].

According to Richard Goldstein, DVM, an associate professor of small animal medicine at Cornell University's College of Veterinary Medicine, there are two potential sources of inflammation. He highlights that one of the origins is likely a bacterial infection, which may start in a close vicinity of an animal's gut, such as the pancreas or small intestine, and then progress up the biliary tract. This process typically results in inflammation of neutrophilic cells, which are mobilized by the body to combat bacteria. Dr. Goldstein notes that this type of infection, known as suppurative or pus-forming, generally shows a favorable response to antibiotic therapy.

The alternative situation, which occurs more frequently, involves an immune-related process that impacts lymphocyte cells. Dr. Goldstein states that these cases, referred to as nonsuppurative, typically do not react positively to antibiotics. Therefore, the common approach is to address this form of cholangiohepatitis with immunosuppressive medications like steroids, as mentioned by Dr. Goldstein. [2]

Given the frequent connection among canine cholangitis/cholangiohepatitis syndrome (CCHS), gallbladder issues, and enteric disease, there is substantial similarity in clinical symptoms across these conditions. The decreasing order of occurrence for clinical signs encompasses lethargy and vomiting (greater than 70%), reduced appetite (approximately 65%), and diarrhea (around 30%). Physical examination observations involve fever (approximately 30%), jaundice (about 25%), lethargy (26%), detectable enlargement of the liver (10%), and occasional instances of polyuria/polydipsia (PU/PD) and abdominal fluid accumulation (ascites).

Hematological characteristics associated with canine cholangiohepatitis may involve an elevated count of neutrophils, showing either a left shift with toxic neutrophils or a degenerative left shift. Alternatively, the hematology may fall within normal ranges. In the majority of cases, dogs exhibit heightened liver enzyme levels and total bilirubin, and a subset may also present with elevated cholesterol levels during the initial assessment.