

# THE OCCURRENCE OF INFERTILITY IN PRODUCTIVE COWS DUE TO ENDOMETRITIS.

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**Received:** 2024 15, Jan

**Accepted:** 2025 21, Feb

**Published:** 2025 31, March

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**Annotation:** This article discusses the swelling of the vaginal mucous membranes in purulent-catarrhal endometritis, the presence of hyperemia foci and pinpoint hemorrhages in the cervix, the enlargement of the uterus, and the accumulation of viscous, catarrhal-purulent exudate that is gelatinous upon palpation. It has been identified that hyperemia, hemorrhages, swelling, and the formation of erosions and ulcers occur in the uterine mucous membranes. Additionally, it has been determined that the cycle of calving in cows affected by purulent-catarrhal endometritis is related to the mild, moderate, and severe degrees of endometritis. After treating a total of 97 affected cows in the farm, it was reported that 40 cows (41.2%) calved in the first cycle, 25 cows (25.7%) in the second cycle, and 11 cows (11.3%) in the third cycle.

**Keywords:** Nutritional deficiency, climate-related deficiency, symptomatic deficiency, catarrhal endometritis, purulent-catarrhal endometritis, bacterial and fungal etiology purulent-catarrhal endometritis.

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## INTRODUCTION

In our republic today, among cows, the average percentage of obstetric-gynecological diseases is 86.1-94.7% for purulent-catarrhal endometritis, 1.9-4.8% for catarrhal endometritis, 2.7-5.8% for fibrinous endometritis, and 0.7-2.8% for post-partum necrotic endometritis. [1] In particular, among the obstetric-gynecological diseases of animals, uterine diseases, especially endometritis, significantly reduce the milk yield obtained from high-yielding cows due to their illness. [4,5]. Sick animals lose weight significantly, and serious problems arise in reproductive indicators. [2]. Therefore, the types of endometritis in productive cows, the incidence rate by seasons, economic losses, characteristics of the disease, and their detection are of significant scientific and practical importance [3].

**The purpose of the study.** Taking the above into account, the study involves examining the clinical signs of endometritis caused by regional factors among the imported pedigree cows in our republic, as well as the resulting infertility due to endometritis.

**Place, object and methods of research.** Studies on the incidence and clinical signs of postpartum endometritis were conducted at the "Sulton" livestock farm in the Sirdaryo district of the Sirdaryo region, "Shurazak imkon puls" and "Zulmanov Baxtiyor" livestock farms in the Paxtachi district of the Samarqand region, as well as at the "O'tkir chorva invest" livestock farm in the Paxtachi district of the Samarqand region.

The incidence of endometritis within the farms, the day after birth when the disease occurs, clinical symptoms, etiology and pathogenesis of the disease, comparative clinical signs were studied. G.A.Chermisinov and others' (2003) methodology for obstetric-gynecological examination was used: timing, amount (ml), color, and consistency of the fluid secreted from the reproductive organs of cows; clinical signs of the disease, secretion discharge.

**Analysis of the obtained results.** When analyzing the collected test data seasonally, it was noted that cases of catarrhal-purulent endometritis, whose clinical signs were clearly evident, were more common in winter and spring. In 2024, when 100 heads of cattle born in winter from a total of 4 farms were clinically examined, 22 heads (22.0%) of cattle were found to be affected. When 197 heads of cattle born in spring were clinically examined, 43 heads (21.82%) were affected. When 100 heads of cattle born in summer were clinically examined, 11 heads (11%) were affected, and when 165 heads of cattle born in autumn were clinically examined, 21 heads (12.72%) were found to be affected by the initial stage of catarrhal-purulent endometritis and processes with clearly evident clinical signs.

The initial clinical signs of catarrhal-purulent endometritis in cattle after birth were noted as a flow of gray-white fluid from the uterus 5-6 days after birth. In some cattle, a mixture of necrotic caruncles and placental vesicles with purulent fluid was observed to flow from the uterus when the animal moved, lay down, or was massaged manually through the rectum. In many cases, the exudate was noted to be solidified in the ventral part of the tail. Initially catarrhal, then after the addition of pus, purulent-catarrhal fluid flowed out. In sick animals, fluid flowed out in large quantities from the genital organ when urinating or defecating, and especially in the morning, 50-130 ml of fluid was noted to have accumulated where the animal lay overnight. The general condition of the cattle was poor, peristalsis increased, the feces were liquid, and the animal stood with its back arched and tail raised, with dried crusts of fluid secretions covering the sitting tubercles and the base of the tail. The general condition of the sick animal worsened, becoming weak, and as a result of loss of appetite, a decrease in milk yield was observed. When the uterus of a lying cow was massaged rectally, a large amount of foul-smelling, gray-brown or yellow-

brown liquid exudate flowed out. The cow periodically tried to urinate, arching its back and standing with its tail raised for a long time.

Upon vaginal examination, the mucous membranes of the vagina and the cervix were bright red and swollen, with some animals showing bleeding. Fluid from the uterus accumulated in front of the vagina and mainly in the cervix. The cervical canal was open to the width of 1-2 fingers, and fluid was flowing out of it. When examined rectally, at the onset of the disease, the uterus was swollen in various sizes and gradually shrank and spread towards the abdominal cavity. The uterine wall thickened and softened, became painful and doughy, and did not contract even when massaged. The amount of fluid flowing from the uterus increased during massage. In some sick animals, a slight increase in body temperature, heart rate, and respiratory rate above the physiological norm was noted.

During the examination of animals affected by post-partum purulent-catarrhal endometritis, it was noted that the disease manifested in mild, moderate, and severe degrees.

In the mild degree of post-partum purulent-catarrhal endometritis, it was found that the appetite of the sick animals was preserved, and the body temperature of the animals was within the physiological norm. Upon vaginal and rectal examination, redness of the mucous membranes of the vagina and cervix, the location of the uterus at the border of the abdominal cavity, and its weak contraction were noted. A small amount of mucous fluid of gray, yellow, or green mixed color flowed out of the uterus.

In the moderate degree of post-partum purulent-catarrhal endometritis, a decrease in appetite in the sick animals, body temperature within or at the upper limit of the physiological norm, and the base of the tail covered with dried crusts of fluid secretions were noted. Upon vaginal and rectal examination, redness and bleeding of the mucous membranes of the vagina and cervix, the location of the uterus in the abdominal cavity, and its weak or no contraction were found. Up to 60-70 ml of mucous fluid of various shades of gray, yellow, or green flowed out of the uterus overnight.

In the severe degree of post-partum purulent-catarrhal endometritis, loss of appetite, weakness, body temperature above the physiological norm, and the base of the tail covered with dried crusts of fluid secretions were noted in the sick animals. Upon vaginal and rectal examination, redness and bleeding of the mucous membranes of the vagina and cervix, the location of the uterus in the abdominal cavity, and its complete lack of contraction were found. Up to 100-130 ml of foul-smelling mucous fluid of uniform gray, yellow, or green color flowed out of the uterus overnight.

It has been shown that in heifers that have become ill with endometritis after calving, the results of their breeding indicate that after various treatment methods were applied to the sick heifers, a resumption of the estrous cycle was observed in all heifers.

In the "Sulton" farm of the Sirdaryo district, out of 44 heifers, conception was observed in 18 heads (40.9%) in the first cycle, in 12 heads (27.3%) in the second cycle, and in 4 heads (9.0%) in the third cycle. Overall, during the experiment, 44 heifers, or 77.3%, became pregnant.

In the "Shurazok Imkon Puls" farm of the Sirdaryo district, out of 28 heifers, conception was observed in 11 heads (39.3%) in the first cycle, in 6 heads (21.4%) in the second cycle, and in 5 heads (17.8%) in the third cycle. Overall, during the experiment, 23 heifers became pregnant.

In Paxtachi district, "Zulmanov Baxtiyor" farm, 10 cows' insemination in the first cycle was observed in 4 cows (40%), in the second cycle in 3 cows (30%), and in the third cycle in 1 cow (10%). In total, 8 cows (80%) showed conception during the experiment.

### Results of calving in cows affected by endometritis in 2024

T/r	Farm name	Number of animals in the experiment	Sexual cycle of ovulation						All domesticated animals	
			1		2		3		Head number	%
			Head number	%	Head number	%	Head number	%		
1	“Sulton” farm	44	18	40,9	12	27,3	4	9	34	77,3
2	“Shurazok imkon puls” farm	28	11	39,3	6	21,4	5	17,8	23	82,1
3	“Zulmanov Baxtiyor” farm	10	4	40	3	30	1	10	8	80
4	“O’tkir chorvo invest” farm	15	7	46,6	4	26,6	1	6,6	12	80
5	Total	97	40	41,2	25	25,7	11	11,3	77	79,4

It should be noted that in the Paxtachi district, the fertilization of 15 heads of cattle in the "O'tkir chorvo invest" farm was observed as follows: in the first cycle, 7 heads (46.6%), in the second cycle, 4 heads (26.6%), and in the third cycle, 1 head (6.6%). In total, during the experiment, 12 heads of cattle or 80.0% of fertilization were observed.

When we analyzed the fertilization of sick cattle in all farms according to the sexual cycle, it was observed that after treating the 97 sick cattle in the farm, in the first cycle, 40 heads (41.2%), in the second cycle, 25 heads (25.7%), and in the third cycle, 11 heads (11.3%) were fertilized.

### Conclusions.

1. In purulent-catarrhal endometritis, there are foci of hyperemia in the swollen cervical mucosa, pinpoint hemorrhages, the uterus enlarges, and upon palpation, a viscous, catarrhal-purulent, gelatinous exudate accumulates, revealing hyperemia of the uterine mucosa, hemorrhages, swelling, and the formation of erosions and ulcers in some areas.

2. When analyzing the sexual cycles of cows affected by purulent-catarrhal endometritis in farms, the conception rates were found to be dependent on the severity of endometritis, with a total of 97 affected cows treated in the farm, resulting in 40 cows (41.2%) conceiving in the first cycle, 25 cows (25.7%) in the second cycle, and 11 cows (11.3%) in the third cycle.

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