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Susceptibility of Microbes to Antibiotic Samples are Taken from the Uterus of Cows with Endometritis

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Annotation: Samples are taken from the uterus of cows infected with gynecological diseases on farms when the pH environment was examined, in the acute course of the disease the pH of the medium is 6.6 to 6.9, when microbial colonies are examined, it includes staphylococcus 31-39%, streptococcus 21-27%, escherichia coli 17-29%, blue pus rod 11-15%, fungi 7-13% and the highest rate of antibiotic susceptibility zones in microbes is a specially prepared emulsion (oxytetracycline and penstrep – 400) in dipped discs, and the lowest rate is observed in cefazalin dipped discs.

Keywords: endometritis, microbial species, staphylococcus, streptococcus, escherichia coli, fungi, and blue pus rod.

Relevance of the topic. Livestock breeders of our country have an urgent task to supply ecologically clean local food products to the population of our country. To accomplish this task, increase the number of herds, prevent various uterine diseases and infertility in cows, and increase milk productivity, it is necessary to reduce the early write-off of cows. The main factors influencing the fertility of cows in dairy farms are congenital and postpartum diseases, as a result of which endometritis, cervicitis and ovarian dysfunction in cows cause great economic damage to farms.

In the study of obstetric and gynecological diseases in cows, purulent-catarrhal endometritis averaged 86.1-94.7% and catarrhal endometritis 1.9-4.8%, fibrinous endometritis 2.7-5.8% and also postpartum necrotic endometritis found to be 0.7–2.8% [4,10].

Moreover, some researchers have concluded that when postpartum nonspecific endometritis is detected in cows, mainly in 57.5-61.3% of cases in the winter-spring season, and in 37.5-45.3% in the autumn-winter period [5].

Postpartum septicemia is a complication of pathological births mainly in carnivorous animals, abortions and endometritis as a complication is noted in mares and cows. The causative agents of postpartum sepsis are often hemolytic streptococcus in some cases may include staphylococcus, escherichia coli, pneumococci, and others. When the injured areas are infested with dangerous tumor bacilli, anaerobic staphylococcus and streptococcus, the general

infection is dominated by decay processes. When Cl.chauvoei, Cl.septicum, Cl.hustolyticum and other anaerobic bacteria develop, the general infection takes the form of gas gangrene [3,8].

The mucous membrane of the uterus can often become inflamed when microorganisms (streptococcus, staphylococcus, escherichia coli, etc.) enter it directly or pass through the vagina. In addition, germs sometimes enter the uterus through blood vessels [1].

In animals with sexually transmitted diseases, the cervix and its branches separated the same and the same amount of microflora. Cows in endometritis isolated staphylococcus (golden, white and yellow), purulent streptococcus, intestinal and blue purulent rods, diplococci. In most cases, streptococcus and diplococci were isolated from the uterus of sick cattle. In 9 head of cattle, streptococcus, diplococci, and other cocci were isolated in the uterus, and in 20 head of cattle, the condition ended with clinical recovery [2; 6,7,9].

The purpose of the study. In view of the above, the factors that cause postpartum endometritis among imported cows in our country, to determine the types, percentages and susceptibility of microbes to antibiotics and other drugs, as well as the biochemical and plasmocoagulase properties of microbes in samples are taken from the uterus and cervix of cows.

Object and methods of research. In postpartum endometritis, microbial species of samples are taken from the uterus and cervix of cows percent and microbial antibiotics and susceptibility to other drugs and biochemical and plasmocoagulase properties by in vitro research work at the livestock farm "Farovon Grand Invest" in Akdarya district of Samarkand region, In Narpay district “Agro Gold Spring” livestock farm, in Pakhtachi district “Hirmonga baraka Ikrom” and “Utkir chorvo invest” livestock farms and in addition to this it is held in the laboratory of the Department of Epizootology, Microbiology and Virology of the Samarkand Institute of Veterinary Medicine.

All large horned animals kept on the experimental livestock farms were tested for obstetric and gynecological diseases. For this, general and laboratory tests were performed. A pH meter (105 Ph-meter ORION StarA211 X26087) was used to determine the environment of samples taken from the uterus and cervix of cows infected with postpartum endometritis.

In general examinations, the general condition of the animals were examined, the uterus was examined by hand palpation through the rectum, and attention was paid to the leakage of mucus from the vagina of the cows.

In laboratory tests, samples were taken from the uterus and cervix of cows with obstetric and gynecological diseases by the methods of N.N.Mikhailov and others, microbiological, i.e. generally accepted bacteriological examination methods were used in the examination of the obtained samples.

At the same time, samples taken were from the uterus and cervix of cows infected with gynecological diseases and cultured in different nutrient media. Pure culture was isolated from colonies of microflora developed in the nutrient medium. Planted nutrient media were placed in a thermostat (Heratherm 1MI 41839123).

Analysis of the obtained results: Biochemical and plasmocoagulase properties of samples taken from the uterus and cervix of five cows with gynecological diseases on farms were studied by in vitro method in the laboratory.

A pH meter (105 Ph-meter ORION StarA211 X26087) was used to determine the environment of samples taken from the uterus and cervix of cows infected with postpartum endometritis. At the same time, samples were taken from the uterus and cervix of five cows with gynecological diseases in the farms were examined at pH and this results were found pH-6.7 in a cow with tag number 1214, pH-6.8 in a cow with tag number 50310, pH-6.6 in a cow with tag number 07103, pH-6.6 in a cow with tag number 3799 and in a cow with tag number 3794 pH was found to be 6.9 (Table 1).

Samples are taken from the uterus and cervix of infected cows using special sterile tampons if the nutrient medium prepared for streptococcus is Velli, if nutrient medium prepared for staphylococcus is Shayli, if the nutrient medium prepared for the blue pus rod Difko planted in sterilized Petri dishes. When the inoculated media were placed in a thermostat (Heratherm 1MI 41839123) and inspected at 24 C after 24 h the streptococcal colony was red, indicating that the mannitol had formed acid as a result of decomposition, the pathogenic staphylococcus resembled the color of a lemon peel in yellow, and the colony of the blue pus rod appeared to be cream in color.

Samples are taken from the uterus and cervix of five head of cows infected with gynecological diseases on farms when Petri dishes were examined for microbial colonies planted in nutrient media, the results were performed staphylococcus 31-39%, streptococcus 21-27%, escherichia coli 17-29%, blue pus rod 11-15%, fungi 7-13% were found (Table 2).

In order to determine the susceptibility of microbes to antibiotics and other drugs I order to isolate a pure culture from a microbial colony grown in Petri dishes, one colony was taken from each Petri dish, diluted 1:10 in 0.9% saline, and discs soaked in antibiotics and emulsion were placed in a thermostat. It was noted that zones were formed around the discs when the Petri dishes were removed from the thermostat. When the formed zones were measured using a ruler on specially prepared emulsion-impregnated discs (oxytetracycline and penstrep - 400), the staphylococcus was 29 mm, streptococcus 23 mm, Escherichia coli 25 mm, blue pus rod 23 mm, fungi 27 mm. In oxytetracycline-impregnated discs, staphylococcus was 28mm, streptococcus 21mm, escherichia coli 26mm, blue pus rod 23mm, and fungi 25mm. Similarly, staphylococcus 24mm, streptococcus 20mm, ash pus 22mm, blue pus rod 21mm, fungi 23mm and furazolidone soaked discs staphylococcus 22mm, streptococcus 18 mm, escherichia coli 15mm, blue pus rod 13mm, fungi 12mm. In cephazaline-impregnated discs, relatively small zones appear, in which staphylococcus 9 mm, streptococcus 6 mm, escherichia coli 7 mm, blue pus rod 5 mm, and fungi 7 mm (Table 3).

The pH of samples are taken from the uterus and cervix of cows with postpartum endometritis.
Table 3

№	Animal's tag №	pH in a sick animal	Normal in a healthy animal
1	1214	6,7	6.9 acid 7.0 alkaline
2	50310	6,8	6.9 acid 7.0 alkaline
3	07103	6,6	6.9 acid 7.0 alkaline
4	3799	6,6	6.9 acid 7.0 alkaline
5	3794	6,9	6.9 acid 7.0 alkaline

Types and percentage of microbes in samples taken from the uterus and cervix in postpartum endometritis.
Table 2

№	Types of microbes	№ 1214	№50310	№ 07103	№ 3799	№ 3794
1	Staphylococcus	36%	35%	39%	33%	31%
2	Stereptococcus	23%	21%	23%	27%	21%
3	Escherichia coli	17%	19%	17%	21%	29%
4	Blue pus rod	13%	15%	11%	15%	11%
5	Fungi	11%	9%	9%	13%	7%
6	**Total**	100%	99%	99%	99%	99%

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Susceptibility of microbes in samples are taken from the uterus and cervix in postpartum endometritis to antibiotics and specially prepared emulsions

Table 3

№	Emulation	Oxytetracycline	Ditrim	Furazolidone	Cefazalin
The diameter of the area where the microbes grew was measured with a ruler and used in mm.	**mm**	**mm**	**mm**	**mm**	**mm**
Staphylococcus	29 mm	28 mm	24 mm	22mm	9mm
Stereptococcus	23 mm	21 mm	20 mm	18mm	6mm
Escherichia coli	25 mm	26 mm	22 mm	15mm	7mm
Blue pus rod	23 mm	23 mm	21 mm	13mm	5mm
Fungi	26 mm	25 mm	23 mm	12mm	7mm

Conclusion

1. Examination of the pH of samples from the uterus and cervix of five head cows with gynecological diseases in farms revealed that the pH of the acute course of the disease was 6.6 to 6.9.
2. Samples are taken from the uterus and cervix of five head of cows infected with gynecological diseases on farms When examining microbial colonies planted in Petri dishes, it includes staphylococcus 31-39%, streptococcus 21-27%, escherichia coli 17-29%, blue pus rod 11-15%, fungi 7-13%.
3. The highest rate of the formed zones was observed on discs impregnated with specially prepared emulsion (oxytetracycline and penstrep - 400), it included staphylococcus 29 mm, streptococcus 23 mm, escherichia coli 25 mm, blue pus rod 23 mm, fungi 27 mm and also the lowest incidence was observed in cefazalin-impregnated discs, with staphylococcus 9 mm, streptococcus 6 mm, escherichia coli 7 mm, blue pus rod 5 mm, and fungi 7 mm.

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