

NON-SURGICAL TREATMENT OF CATS WITH PYOMETRA

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Problem statement. Recently, increasingly close attention has been focused on breeding noble breeds of cats and dogs with a genetic value. High pedigree value and uniqueness of certain subjects are powerful arguments in the timely diagnosis and development of non-surgical methods of treatment, prevention of endometritis and pyometras, which aim to save not only the life of animals, but also the ability of these animal units to future reproduction [1].

Analysis of recent research. Scientists argue about the effectiveness of non-surgical treatment of pyometra and endometritis in small animals and note rather high percentage of relapse. Most of the authors, whose works were analyzed, prefer surgical treatment and appropriate postoperative care. For non-surgical treatment of endometritis and pyometra different treatment regimens and modern preparations are used [2].

V.N. Bochkareva, N.A. Kochueva and N.V. Garntseva [3] treated dogs with clinical signs of endometritis and pyometra. In the treatment of the pyometra-endometritis aggregate of symptoms in animals, authors used oxytocin, metronidazole and cefazolin, mastometrin and ovariovit. According to their data, the highest efficacy of endometritis and pyometra treatment was noted in animals that were given homeopathic preparations. The effectiveness of treatment of these animals was 1.4-fold higher than in animals that were not administered mastometrin and ovariovit. In animals treated according to the classical scheme, the number of relapses approached 57%, and in animals treated with homeopathic remedies, relapses were recorded in 22%.

The purpose of the research. To investigate the effectiveness of non-surgical treatment in cats with pyometra.

Object and methods of the research. Cats of different ages and breeds diagnosed with pyometra under the clinical examination were the object of the research. The experimental animals were divided into two groups of five. Animals of the first group were injected Ceftriaxonum intramuscularly for 7 days, 0.2 g 2 times a day; Gamavit 1.0 ml once a day. Introduction per os: Enterogel for 1 tsp. 3 times a day; Rehydron 100.0 ml during the day, and the animals of the second group – intravenous fluid drip: a solution of sodium chloride 0.9% 100.0 ml with Ceftriaxonum 0.2 g 2 times a day; Glucose solution 5% 200.0 ml with ascorbic 5% 4.0 ml per 50.0 ml; Metrogyl solution 10.0 ml 2 times a day. Intravenous bolus: Gamavit 2.0 ml once a day. Intramuscularly injected: Thioprotektin 0.5 ml 2 times and No-Spa 0.5 ml 3 times with a 15-minute interval and after 30 minutes Oxytocinum 0.3 ml intramuscularly on the first day of treatment.

Results of the research. All the studied animals were divided into 2 groups according to their clinical condition. Clinical examination revealed that in all cats of the first group the body temperature ranged from 39.8 °C to 41.0 °C, the pulse was 86 ± 0.89 beats per minute and the number of respiratory movements was 150 ± 0.68 per minute. The abdominal wall during palpation was tense, painful; the uterine horns were enlarged in the abdominal cavity. When examining the external genital organs, we identified clumping of hair around the vulva and grayish-white purulent discharge. Considering the satisfactory condition of cats' organism of the first experimental group, good appetite and owner's desire to get an offspring in the future, non-surgical treatment was performed on the animals.

Body temperature fluctuations from 37.8 °C to 38.5 °C, apparent skin tightness in the withers area, visible mucous membranes of pale pink color were recorded during clinical examination of cats of the second experimental group. Vesicular and rapid breathing was found during auscultation. When palpating the abdomen, abdominal wall was tense and painful, and enlarged uterine horns were found in the interior of the abdominal cavity. From the external genitalia, a slight discharge of purulent exudate was observed.

At the beginning of non-surgical treatment, cats from both study groups were tested for cytology (Table 1). In cytological examination of cats' blood of both groups (Table 1) before the treatment a slight decrease in the number of erythrocytes was noted (6.3 ± 0.27 and 5.8 ± 0.41 M/uL) and hemoglobin (100.3 ± 8.47 And 95.6 ± 3.33 g / l). This reaction of hemoglobin and red blood cells indicates that against the backdrop of intoxication, triggered by absorption of products of uterine decay in the blood, hemopoietic suppression of bone marrow function occurs.

Cats of both study groups showed an increase in the number of white blood cells (29.2 ± 1.86 and 23.5 ± 4.27 g / l). In our opinion, the rising number of leukocytes in the blood of sick cats originated in the development of a purulent-inflammatory process in their bodies. However, as we see, in cats of the first experimental group the number of leukocytes was higher by 5.7% than in those of the second group, there is probably a rather pronounced protective function of the organism for the inflammatory process.

The ESR index was also high in all cats, at 46.6 ± 12.65 mm / h in the first test group, and 41.6 ± 10.36 mm / h in the second. The nucleus shifts to the left on the leukogram confirmed the course of a severe purulent inflammatory process in the body. A slight increase in the number of neutrophils in cats in both study groups ($12.2 \pm 1.28\%$ and $11.2 \pm 1.62\%$) also indicated the inflammatory process in the body of sick animals with the increased intoxication of the organism.

To monitor the post-treatment changes cats' bodies , on the 7th day the blood was let for the cytological examination. On the 7th day after the treatment the cytological blood test in cats of the second test group showed an increase in the number of red blood cells and in the hemoglobin concentration from 95.60 ± 3.33 to 106 ± 2.43 g / l (Table 1).

In cats of both study groups, the level of leukocytes decreased: in the first experimental - to 18.24 ± 0.68 g / l ($p < 0.001$), and in the second - to 20.58 ± 0.49 g / l. The ESR index was 23.8 ± 2.80 mm / year in cats of the first test group, and in the second - 24.2 ± 3.92 mm / year. However, the ESR index still significantly exceeded the upper physiological limit, attesting to incomplete cessation of the inflammatory process in cats.

Table

Morphological structure of blood of cats with pyometra in non-surgical treatment, M \pm m

Blood indices	Before the treatment		On the 7th day after the treatment	
	Examined groups		Examined groups	
	First, n=5	Second, n=5	First, n=5	Second, n=5
Red blood cells, M/uL	6.3 ± 0.27	5.8 ± 0.41	6.26 ± 0.16	6.3 ± 0.13
Leucocytes, g/l	29.2 ± 1.86	23.5 ± 4.27	$18.24 \pm 0.68^{***}$	20.58 ± 0.49
Hemoglobin, g/l	100.3 ± 8.47	95.6 ± 3.33	96.2 ± 4.79	$106 \pm 2.43^*$
ESR, min	46.6 ± 12.65	41.6 ± 10.36	23.8 ± 2.80	24.2 ± 3.92
Leucogram				

Basophils, %	0	0	0	0
Eosinophils, %	2.6±0.60	3±1.55	3.2±0.37	3.2±0.80
Neutrophils: young, %	1.4±0.73	1.2±0.55	0	0
Stabbed, %	12.2±1.28	11.2±1.62	7.4±0.51**	7±0.71*
Segmented, %	45.0±2.87	55.2±5.18	42.2±2.03	43.4±2.84
Lymphocytes, %	35.2±1.77	27.6±2.14	44.4±1.63**	44±1.64
Monocytes, %	3.6±1.12	1.8±0.92	2.8±0.86	2.4±0.51

Note: * - $p < 0,05$, ** - $p < 0,01$, *** - $p < 0,001$ compared with the indices before the treatment.

Conclusion. A 7-day non-surgical treatment of cats with pyometra in the second group promoted the release of the uterus from exudate, inhibited the course of the inflammatory process and intoxication of the body, confirmed the effectiveness of symptomatic therapy and ensured the recovery of 60% animals.

Bibliography

1. Merkt, H. Die Bursa ovarica der Katze. Mit einer vergleichenden Betrachtung der Bursa ovarica des Hundes, Schweines, Rindes und Pferdes sowie des Menschen / H. Merkt // Diss. med. vet. Hannover. - 1948. - P. 185-220.
2. Пиометра у кошек и сук – противопоказания к экстренной операции / Н.Н. Гиренко, Н.М. Семенисова, В.О. Мислюк, А.В. Малышко // 4-й Міжнародний конгрес спеціалістів ветеринарної медицини, 3-6 жовт. 2006 р. – Київ, 2006. - С. 21-25.
3. Комплексное гомеопатическое лечение эндометрита собак / В.Н. Бочкарёва, Н.А. Кочуева, Н.В. Гарнцева, Л.А. Рябуха // Материалы Московского междунар. конгресса. – М.: Колос, 2006. – С. 89-93.