

## Clinical and Morphological Manifestations of Disorders of the Gastrointestinal Tract of Cats with Regular Consumption of Lactose

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**Annotation.** Currently, in domestic cats (*Felis silvestris catus*), degenerative processes of the intestine and stomach are widespread. The leading place among pathologies is occupied by conditions caused by the regular consumption of lactose. Veterinary gastroenterology as an independent area is a relatively young science, which is being improved from year to year. The increase in cases of visits to veterinary clinics of owners of cats with pathological conditions of the intestines and stomach causes increased professional interest among veterinarians of general practice, as well as the felinological community. The article presents the results of studies proving the important role of food antigens in the early formation of degenerative processes of the intestine and stomach, leading to a significant deterioration in the standard of living of the animal with a subsequent fatal outcome.

**Keywords:** Domestic cat, Atopy, Allergy, prevention, Food antigens, Lactose deficiency.

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To date, the clinical and morphological manifestations of gastrointestinal disorders in case of lactose deficiency have been studied in detail in humanitarian medicine. For felinology, this is not a fully understood topic.

Difficulties of timely effective prevention of the development of degenerative processes of the intestines and stomach of domestic cats are associated with the lack of unified substantiated programs of primary and secondary prevention of conditions.

In the past 20 years, a wide spread of diseases of the gastrointestinal tract has been observed all over the world. A significant contribution to the development of processes is

made by such a factor as inadequate feeding of the cat by the owner. At the same time, a high rates of diseases is associated with an increased sense of responsibility of owners for their pets and, as a result, the number of visits to veterinary institutions.

Disorders from the gastrointestinal tract (GIT) - conditions that interfere with proper digestion or alter the rate of passage of food through the gastrointestinal tract. Avoidance of contact with lactose can be considered as one of the important measures aimed at preventing the development of disease in domestic cats.

Lactose intolerance (hypolactasia) is a pathological condition caused by a decrease in lactase levels.

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Some researchers consider it necessary to exclude the product from the diet of all representatives of the species as a preventive measure. However, a number of scientists are of the opinion that milk should be regarded as a high-calorie treat, and no more than once a month it can be included in the diet of the animal. Scientists consider this justified, because one of the most important substances for cats is taurine, the lack of which in the diet leads to poor health and can cause blindness due to degradation of the central region of the retina. Cow's milk contains taurine to a small extent.

Standard cow's milk contains much more lactose and casein than domestic cats can absorb.

Cats, like many adult mammals, have lactose intolerance. The amount of lactase (an enzyme that digests lactose) in their body decreases after the kittens stop consuming breast milk. Milk feeding in cats ends after 8-10 weeks after the birth of kittens.

After the first year of life in most cats, the enzyme completely ceases to be produced.

As a result, undigested lactose sugars draw water into the intestines, causing diarrhea. Sugars are fermented in the intestines and cause bloating and flatulence. We followed the dynamics of deterioration of condition of domestic cats, who regularly consumed cow's milk for three months.

The study included 181 cats older than one year and younger than the fifth year of life regularly consuming lactose in various foods. Research conducted in the laboratory of the Department of Anatomy, Pathological Anatomy and Animal Surgery of the State University.

Scientific research of the SCO countries: synergy and integration. International Conference. In the observed domestic cats, an allergic history and diet were carefully analyzed, and food preferences and restrictions imposed by the owners were identified. At the beginning of the study, each individual have already consumed cow's milk daily for at least six months.

Preliminary examination showed that all animals had skin manifestations of allergies (fur was faded, brittle) of varying severity. The anamnesis was burdened in the 41st animal (there were areas of alopecia covered with a crust).

General clinical blood test (processing of this analysis does not require the use of expensive

reagents and can be performed in any clinic) showed that all the studied individuals had an increased level of leukocytes in the blood, which is characteristic of a chronic inflammatory process.

The level of monocytes was lowered, which is a sign of the development of various infectious diseases. In 34 cats of the study group, ultrasound revealed enlarged abdominal lymph nodes and pancreas. All animal groups had problems with bowel movements, regular attacks of vomiting and diarrhea.

It was revealed that cats with a burdened allergic history and skin manifestations of allergies were statistically significantly more likely to have such nutritional preferences as the active use of whole cow's milk and its products (200 g per day).

Lactose intolerance is not a pathology for the feline family; rather, on the contrary, the ability of an adult animal to digest lactose sugars is an exception and needs to be studied.

Due to the regular consumption of lactose, the symptoms of intolerance in cats have worsened. If initially diarrhea and vomiting went away on their own (drugfree) within 8-12 hours, then after a month of daily milk use, cats stopped vomiting, bowel movement began to happen 3-4 times a day.

Constant diarrhea led to dehydration. It was found that the higher the percentage of milk fat, the more clearly and soon degenerative processes develop.

Typical symptoms of GIT disease in a domestic cat: soft crap or diarrhea, vomiting, regurgitation, flatulence, general weakness. Cats are carnivores. The cat's intestines, like many carnivores, are short and do not exceed 1.8 m in length.

With a normal body temperature of a domestic cat of 37.5–39°C, animals receiving lactose exhibit a constantly elevated temperature in the range of 39–41.5°C. Rapid breathing of 25-30 breaths per minute is also observed at a rate of 22-24 breaths.

GIT disorders lead to dehydration. Most often, cats have been diagnosed with the following. Acute gastroenteritis - inflammation of the digestive tract.

Colitis - inflammation of the colon, accompanied by painful bowel movements, blood in the stool. It is important to note that the pathology was caused precisely by lactose intolerance. Tumors, polyps,

formations of a different kind were not found. Irritable bowel syndrome. As a result of a chronic inflammatory process in the intestines of a cat.

Disruption of the processes of absorption in the small intestine. Inflammation of the small intestine leads to loss of appetite in the animal, vomiting, weight loss and dehydration.

Four cats of the fifth year of life were diagnosed with parenchymal inflammation and hepatic lipidosis (impaired fat metabolism). With characteristic signs in the form of jaundice, conjunctiva of the eyes, dark urine, heart rhythm disturbance as frequent cardiac bigemina. Salivation, the smell of acetone in exhaled air were also noticed.

A change in the psyche caused by various somatic diseases has always been the subject of careful study as an essential component of the clinical picture. Mental factors can adversely affect the somatic state of patients. The attention of all pet owners was focused on the psychological state of pets. As a result of observations, it was recorded that 150 cats showed apathy, lethargy, lost the desire to play. 112 animals showed atypical behavior for them in the form of long sitting in the corner. Three cats showed extremely aggressive behaviors. The behavior of the remaining animals remained unchanged.

During the study, the data of 235 medical records of patients of the veterinary clinic, introduced from January 1, 2017 to December 31, 2018, were retrospectively analyzed. The stages of the analytical study included determining the qualitative and quantitative size of the samples, collecting and processing the necessary information. Similar pathological conditions of cats have been established. 101 animals out of 235 died or were euthanized, which may indirectly indicate aggravated degenerative processes.

After three months of observation, symptomatic treatment was performed. In cats on a lactose-free diet, the general condition began to improve by the third week. By the sixth week of observation, the animals were healthy.

The natural purpose of milk is to feed the offspring of mammals, including domestic cat kittens, one of the most common companion animals in the country.

Due to its dependence on the owner, the domestic cat eats food at its discretion. Due to the

erroneously widespread stereotype that a cat needs to be given milk, the vast majority of owners feed it to their animals. This actually leads to a systematic poisoning of the animal over several years of life, which ultimately reduces its standard of living and inevitably leads to dehydration and, as a result, death.

It is important to understand the seriousness of the prolonged degenerative process of an inhibitory GIT. Since the appearance of malignant neoplasms is often preceded by prolonged inflammatory processes and hyperplastic processes.

And lead to the deactivation of tumor suppressor genes. The research results were reported and approved at the Regional Conference of Young Scientists "Actual Issues of Agriculture" (Belgorod, 2019). Practical suggestions. Before the appointment of therapeutic measures, it is necessary to study the diet of the animal.

It is necessary to give a lecture to the owner of the animal about lactose sugars and the inadmissibility of milk for cat feeding.

General blood test, ultrasound GIT must be included in the comprehensive routine examination of healthy cats.

With standard conservative treatment for GIT diseases and diet, an animal younger than five years old will not require surgical treatment.

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