

UDC 619, 636.7.045
 МРПТИ 68.41.53

DOI: <https://doi.org/10.37788/2022-3/104-111>

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Analysis of the epizootic situation of canine distemper among dogs in the city of Tula

Abstract

Main problem: At present, service, decorative and hunting dog breeding is intensively developing in Russia and in the Tula region. So, in 2020, 119 high-breed puppies were registered in the Book of Pedigree Breeding, and in 2021 already 164 puppies, mostly decorative and service breeds. Thus, the number of pedigreed dogs susceptible to various infectious diseases is increasing annually.

Canine distemper is one of the most widespread viral diseases of dogs all over the world, including in Russia. Analyzing the "Patient Admission Logs" of veterinary clinics in the city of Tula, it was found that 44 % of dogs that fell ill with diseases of infectious etiology were diagnosed with canine distemper.

Purpose: The aim of our research was to study the epizootological features of the course of canine distemper among dogs in the Tula region of Russia.

To achieve the intended goal, it was necessary to solve the following problem: to analyze the breed and age factors for the incidence of canine distemper.

Methods: Analysis of data from private veterinary clinics reporting on the incidence of small domestic animals was used.

Results and their significance: As a result of studying the epizootic situation of canine distemper among dogs, the following data were obtained:

The disease is observed throughout the year and has the character of undamped fluctuations subject to sharp seasonal changes. The maximum number of diseased dogs in all years of observation is recorded in March - 6.2 cases per 1000 individuals.

It has been established that among the infectious diseases of dogs, distemper occupies the first place, and there is an annual increase in the number of dogs with distemper.

Key words: canine distemper, morbidity, mortality, dog breed, symptom complex.

Introduction

At present, service, decorative and hunting dog breeding is intensively developing in Russia and in the Tula region. So, in 2020, 119 high-breed puppies were registered in the Book of Pedigree Breeding, and in 2021 already 164 puppies, mostly decorative and service breeds. Thus, the number of pedigreed dogs susceptible to various infectious diseases is increasing annually.

Of the currently known about 3.5 thousand viruses, 7 DNA-containing infections cause infections in dogs (canine adenoviruses serotypes 1 and 2, canine papillomavirus, canine herpesvirus I, Aujeszky's disease virus, canine parvoviruses types I and II) and 7 RNA-containing (rabies, canine distemper, parainfluenza, rotavirus and coronavirus infections, dog and cat caliciviruses) viruses [1].

Canine distemper is one of the most widespread viral diseases of dogs all over the world, including in Russia [2]. Analyzing the "Patient Admission Logs" of veterinary clinics in the city of Tula, it was found that 44 % of dogs that fell ill with diseases of infectious etiology were diagnosed with canine distemper.

Materials and methods

The aim of our research was to study the epizootological features of the course of canine distemper among dogs in the Tula region of Russia.

To achieve the intended goal, it was necessary to solve the following problem: to analyze the breed and age factors for the incidence of canine distemper.

Results

When analyzing the reporting data, it was found that in the city of Tula, there are 298 dogs per 1,000 inhabitants, i.e. 1 dog for 3 people. The average annual growth rate of the number of dogs in Russia was also revealed – 9.8 % of the absolute number of the population. The growth in the number of dogs is directly proportional to the growth in population. According to the Russian Cynologists Union, the number of purebred dogs has increased, so from 2015 to 2021 the number of puppies received has more than doubled (Table 1).

Table 1 – Number of dog puppies in Tula

Years	2017	2018	2019	2020	2021
Number of puppies	3700	4400	9000	9000	9500

As can be seen from the data presented in Table 1, a significant increase in the number of puppies of high-bred dogs is observed annually, which leads to an increase in the number of carnivores susceptible to plague.

When studying the data of veterinary reporting on canine distemper in dogs for 2015-2021, the following data were obtained.

Seasonality. The activity of the epizootic process for canine distemper among dogs per 1000 individuals, depending on the season, is shown in Figure 1.

It has been established that the disease is fixed throughout the year and has the character of undamped fluctuations subject to sharp seasonal changes. The maximum number of diseased dogs in all years of observation is recorded in March – 6.2 cases per 1000 individuals. The closest in terms of indicators are also January (3.5), February (3.0), May (3.3) and April (3.0).

The data obtained indicate a pronounced winter-spring peak in the incidence. Apparently, this is due to the fact that in the spring time the natural resistance of the dog's body decreases and the walking of animals on the street is also activated, and therefore the possibility of their contact with sources of the infectious agent increases.

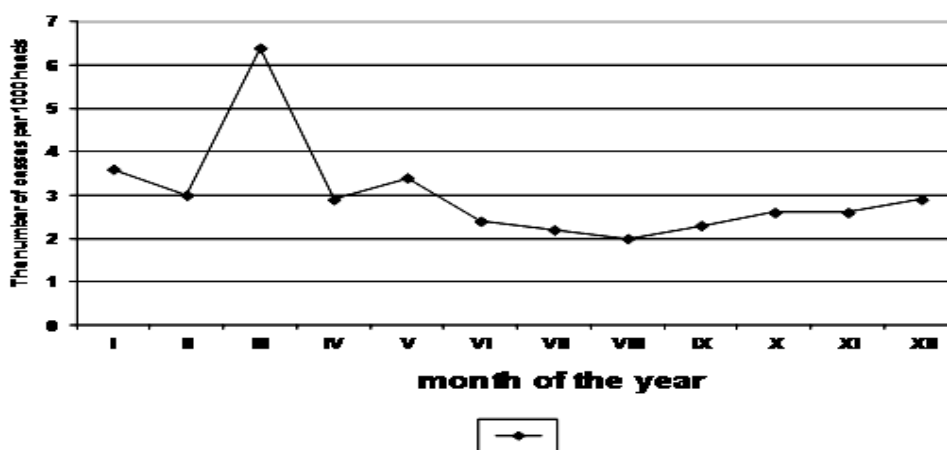


Figure 1 – Activity of the epizootic process for canine distemper among dogs depending on the season

The frequency of detection of canine distemper. Analyzing the data obtained as a result of receiving patients in 10 veterinary clinics in Tula in 2015-2021, it is possible to establish a progressive increase in the number of dogs with infectious diseases. Thus, infectious and parasitic diseases were registered in 56 % of animals, and 44 % of patients accounted for internal non-infectious and surgical diseases. In a detailed analysis of the occurrence of infectious diseases, the most common infectious diseases of dogs were established (Table 2).

Table 2 – The frequency of occurrence of infectious diseases among dogs, n = 3452

Name of the disease	Number of cases	%
Plague of carnivores	1450	42
Parvovirus and coronavirus enteritis	519	15
Parainfluenza	517	15
Infectious hepatitis	69	2
Dermatomycosis	897	26
Note - n - the number of diseased animals		

Schematically, the data presented in Table 2 are shown in Figure 2.

As can be seen from the data presented in Table 3, the level of immunity intensity after vaccination with various types of vaccines is approximately the same. The effectiveness of vaccination up to 1 year after treatment is 85 % for monovalent vaccines, 87 % for 3-4-valent vaccines, and 75 % for six or more valent vaccines. The obtained results indicate sufficient effectiveness of the first two groups of preparations for the prevention of canine distemper in dogs (according to the standards for live vaccine preparations, the effectiveness should be at least 85 %). The effectiveness of polyvalent vaccines is much lower and is only 75 % of the number of vaccinated dogs. In our opinion, this may be due to the overload of the immune system with a large number of antigens, as a result of which the intensity of immunity becomes relatively low. This is also confirmed by the fact that in the period above 3 months after vaccination with six or more valent vaccine preparations, there is a 2-4-fold increase in the relative number of diseased dogs compared with the incidence of animals immunized with 1-4 valent vaccines at the same time after vaccination.

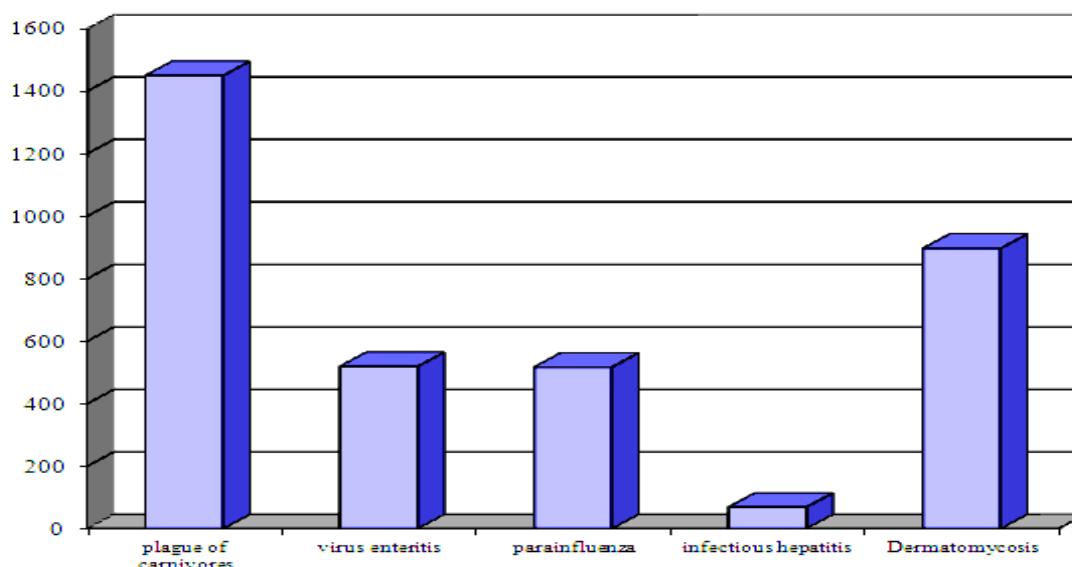


Figure 2 – The frequency of occurrence of infectious diseases among dogs, n = 3452

The results of these studies, based on the analysis of veterinary reporting data from veterinary clinics, are presented in Table 3.

Table 3 – The level of natural incidence of canine distemper among the population of vaccinated animals

Vaccine valency	Vaccinated in 2017-2021	Of them got the plague of carnivores in time after vaccination, head/%					
		Up to 1 month	1-3 months	3-6 months	6-9 months	9-12 months	12-24 months
1	1263	12/0,9	17/1,3	54/4,3	47/3,7	58/4,6	65/5,1
3-4	4856	52/1,1	66/1,4	178/3,7	136/2,8	189/3,9	224/4,6
6-12	1034	9/0,9	14/1,4	67/6,5	87/8,4	84/8,1	76/7,3

The incidence index, the severity of the course of the disease and the natural resistance in different breeds of dogs is different. According to numerous studies consistent with our data, plague is more severe in those breeds of dogs that are more common in the area. In our opinion, this is due to some antigenic variability of the pathogen, in which its virulence increases for the body of those breeds of dogs that are more common in a certain region.

The Cynologists Union compiled a rating of the most popular breeds in the Tula region (table 4).

Table 4 – The number of different breeds of dogs in the Tula region

Dog breeds	Livestock (2021)
Rottweiler	4442
German Shepherd	4363
German boxer	2699
Poodle	1803
Central asian shepherd dog	1669
Pekingese	1252
American Staffordshire Terrier	1247
Dachshund	1126
Caucasian Shepherd Dog	1065
American Cocker Spaniel	1066

For the Tula region, the most popular are the German Shepherd, Rottweiler, East European, Caucasian and Central Asian Shepherd Dogs.

Analyzing the data obtained in veterinary clinics, it was found that the highest percentage of cases (both vaccinated and not immunized against canine distemper) was observed among outbred dogs - 27.5 %, German and East European Shepherds - 20.8 %, Central Asian shepherd dogs - 7.5 %, Russian spaniels – 5 %, and less than 5 % in Rottweilers, Dachshunds, Caucasian Shepherd Dogs, American Cocker Spaniels, Black Russian Terriers, Poodles and other breeds. This ratio can be explained by the fact that pedigreed animals, as a rule, are vaccinated, in contrast to their outbred counterparts.

According to our own observations and data from veterinary clinic patient registers, in the most common breeds of dogs, canine distemper is more malignant, with various complications and a high mortality rate. In a milder form, such breeds as the poodle, Doberman, American Staffordshire terrier, and pit bull terrier carry the plague. For dogs of the Chow-Chow, Shar-Pei, Black Terrier, St. Bernard, Rottweiler and some other breeds that have been ill with plague, the manifestation of skin diseases – dermatitis and eczema – is typical some time after the plague, they also have an increased susceptibility to scabies.

When analyzing the age indicators of dogs with distemper, it was found that young dogs are more susceptible to the disease. Thus, the maximum incidence rate is set for puppies 3-7 months of age – 18 per 1000 puppies of this age group, 8 – for puppies aged 7-12 months, 5 – for dogs from 1 to 2 years old, 3 – for puppies from 1 to 3 months and 1 for dogs older than 2 years. It was also revealed that the maximum lethality – more than 15 % falls on the age group from 3 to 7 months, then – 12% in the age group of 1-3 months, about 8 % – in the age group of 7-12 months and in dogs older than 2- x years – less than 5 %. These results are presented in table 5.

Table 5 – Dependence of morbidity and mortality in canine distemper in dogs, depending on the age of the animals

Age of dogs, months	Incidence per 1000 head	Of them fell, %
1-3	3	12
3-7	18	15
7-12	8	8
12-24	5	6
Over 24 months	1	Less than 5

Analyzing the data presented in Table 5, we can conclude that, despite the fact that the incidence in puppies under 3 months of age is low, which is associated, firstly, with a high intensity of residual colostral immunity and, secondly, with the fact that at this age, almost 100% vaccination coverage of animals is achieved, their mortality rate is quite high. This fact can be explained by the weak development of the immune system in young animals, primarily the factors of cellular immunity.

The lowest incidence of canine distemper and lethality was noted in adult dogs, which can be explained by the presence of rather intense natural and (or) artificial specific immunity against this disease.

Among the group of dogs aged 3-7 months, the highest levels of morbidity and mortality were noted, which is explained by their complete absence of colostral immunity and insufficient development of active natural or artificial immunity.

Plague of carnivores is characterized by a polysystemic lesion of the body, which explains all the variety of manifestations of the forms of this disease. The severity of canine distemper is associated with complex features and relationships of a specific pathogen, secondary microflora and macroorganism. Own studies, confirmed by literature data, have shown that the clinical picture of the disease in modern conditions is gradually changing and losing its typicality. The frequency of manifestation of one or another clinical form of canine distemper, as well as the severity of the course of the disease, are subject to significant fluctuations. Such changes have become relevant especially in recent times, when extensive preventive measures are being taken. Clinical signs of canine distemper are also very diverse and depend on the type of animal, their age, the immune status of the body and the degree of virulence of the pathogen.

Given the fact that canine distemper in dogs can occur in various forms, we conducted studies to determine the degree of morbidity in animals depending on the forms of the disease.

The results of the analysis of information on the forms of canine distemper in dogs obtained from veterinary clinics are presented in Table 6.

Table 6 – Forms of canine distemper in dogs, n = 1450

Form of the plague	Sick, heads	%
intestinal	199	13,7
Cutaneous	87	6,0
Pulmonary	178	12,4
articular	102	7,0
nervous	565	38,9
mixed	319	22,0
Note – n is the number of carnivorous dogs with distemper		

As can be seen from the data presented in Table 6, various forms of canine distemper in dogs occur unequally often. So, in our studies, in 39% of sick dogs, the nervous form of canine distemper was registered, in 22 % – mixed, in 13.7 % – intestinal, pulmonary form – 12.3 %, articular – 7 %, skin – in 6 cases. In addition, it was found that the cutaneous form often proceeds easily – 90.5 % of the absolute number of diseases, the severe course accounts for 0.5% of cases. The intestinal form often proceeds in severe form 49.8 %,

moderate course is typical for 29.7 % of cases, mild course was noted in 20.3 % of cases. The pulmonary form in dogs is severe in 36 %, the course of moderate severity was recorded in 49 % of cases, 15 % are mild. The severity of the clinical course of the nervous form is determined by the severity of the damage to the central nervous system, as well as its peripheral parts. This form of the disease is most often characterized by a severe course – 63 % of cases, 28 % – moderate and 12 % – mild. The data obtained by us are consistent with the data of literary sources.

Depending on external conditions, the state of the dog's body, its age, as well as the properties and characteristics of the plague virus – its virulence, the clinical symptoms of plague dogs have a very diverse picture. In some cases, the disease proceeds with pronounced symptoms characteristic of this disease, in other cases an incomplete clinical picture appears, and sometimes the infectious process is accompanied by the so-called erased form, that is, it has barely noticeable clinical signs.

Plague can proceed superacutely (lightning fast), acutely, subacutely, chronically, as well as typically and atypically. The course of distemper in adult dogs is not the same, as the disease is often accompanied by complications and recurs. Registering the degree of manifestation of the infectious process – superacute, acute, subacute, chronic and abortive – it was noted that the chronic course of canine distemper to a greater extent (almost 94 % of cases) is observed in the nervous form of the disease, subacute – in mixed (83%) and intestinal (78 %) forms, acute – with skin (in 91 % of cases) and pulmonary (79 %) forms of the disease.

In the process of studying the clinical manifestations of the disease, it was found that the disease can last from 24 hours to several days, weeks and even months. The hyperacute course of the disease in the course of our studies was characterized by a sudden rise in body temperature to 40-41°C, significant depression of the animal, refusal to feed, acute rhinitis and conjunctivitis, lesions of the nervous system and sudden death of the animal, sometimes within a day. Usually, the duration of the acute process was 7-10 days, subacute – 3-4 weeks and protracted – over a month with a wide variety of symptoms. passed unnoticed. In adult dogs with a strong immune system, distemper sometimes manifested itself only with fever and depression of the general condition, in such cases the disease lasted 3-5 days and ended in recovery.

Distemper in dogs began, as a rule, with the appearance of subfebrile fever (characteristic of the development of catarrhal lesions). The first attack of fever occurred with an increase in temperature from a few tenths of a degree and often went unnoticed. The second attack began a few days later, in parallel with the manifestation of various symptom complexes and an increase in temperature by 1-3°C. During the period of fever in dogs, the nasal planum was usually dry, and in some cases the skin of the nose cracked and became covered with dried crusts. Along with an increase in temperature, the dogs developed a depressed state, chills, playfulness disappeared, the sick dog lies more, tries to go into a dark shelter and reluctantly responds to the call. The dog completely loses its appetite, or it can be capricious: it refuses ordinary food and eats only tasty food, and even then in small quantities.

In the course of our research, it was noted that, simultaneously with the intensive development of pathological processes in the gastrointestinal tract and respiratory organs, and in some cases in the central nervous system, distemper disease in dogs can take such a form in which clinical signs are pronounced only or from the gastrointestinal tract, or the respiratory system, or the central nervous system. Apparently, this is due to the influence of environmental factors that weaken the body, as well as the state of the organism of a sick dog and the characteristics of a second infection.

When describing the clinical manifestations of the disease, we identified several symptom complexes of canine distemper.

Ophthalmic symptom complex. Usually, on the 2-3rd day of the disease, a serous outflow from the eyes appears, which, with the further course of the disease, turns into mucous and mucopurulent. A sick animal tends to hide in a dark place. In some cases, there is serous conjunctivitis, more rarely – purulent. Drying purulent secretions glue the cut of the eyelids and the eyes are closed. Rarely, keratitis occurs in one or both eyes. In severe cases of the disease, partial or complete loss of vision in sick animals is possible.

Respiratory symptom complex. Respiratory disease usually begins with catarrhal inflammation of the mucous membrane of the nasal cavity, then it spreads to the deeper airways. Appearing at the beginning of the disease, serous rhinitis is characterized by periodic or constant outflow of a clear liquid from the nasal cavity. In the future, the discharge from the nose becomes mucous or mucopurulent. With mucopurulent rhinitis, due to severe inflammation of the mucous membrane, the lumen of the nasal passages narrows, clogged with secretions, which prevents free access of air. Breathing becomes sniffling, patients often sneeze, spraying the secret of the respiratory tract. Sometimes there is a complete blockage of the nasal passages, as a result of which breathing through the nose becomes impossible. In such cases, the dog breathes through the mouth. During illness, dogs may lose their sense of smell. When the bronchi are affected, a short dry cough is initially observed, and as inflammation of the lower respiratory tract is covered and secondary bacterial infections develop, it becomes lingering and wet. On auscultation, accelerated vesicular breathing and dry or wet rales can be heard, subsequently bronchitis and catarrhal, rarely catarrhal-purulent, pneumonia can join, breathing in such cases in sick dogs becomes more frequent and reaches 70-80 respiratory movements per minute, with percussion of the chest you can find blunting in places of damage to the lungs. Acute pneumonia is often fatal. However, inflammation in the lungs can also occur chronically, more often it happens in cold, damp weather.

Alimentary symptom complex. With catarrhal processes in the gastrointestinal tract, the tongue is usually covered with a white coating, and in rare cases, ulcerative stomatitis is noted. When the gastrointestinal tract is affected, dogs experience increased thirst. There is also infrequent and unrelated vomiting. With the development of catarrhal processes in the gastrointestinal tract, diarrhea appears. Fecal masses in some cases are liquefied to the consistency of water, their color is yellowish at the beginning of the disease, later it becomes gray-yellow, and then brown with a sharp unpleasant odor. The stool often contains large amounts of mucus and undigested food particles. Often, blood clots are found in the feces, or the feces are uniformly stained with blood, which is often observed at the onset of the disease. As a result of increased peristalsis of the large intestine, both puppies and adult dogs may experience rectal prolapse. The manifestation of diarrhea may alternate with intermittent constipation. As a result of the noted disorders, the animal develops rehydration of the body, cachexia, which can progress and lead to a sharp lag in growth and development in puppies or significant weight loss in adult dogs.

There was also such a course of the disease, in which, after the disappearance of catarrhal phenomena from the gastrointestinal tract and mucous membranes of the nasal cavity and eyes, puppies and dogs, with normal appetite, still continued to lose weight and died with symptoms of complete exhaustion.

Some dogs have seen a visible improvement in their general condition after a different period of time (from 5 days to 3 weeks) there is a relapse with a sharp exacerbation of the disease. Relapses sometimes repeat 2-3 times. The relapsing course of the disease is usually severe and in most cases ends in death.

Skin symptom complex. When dogs are infected with plague, the hairline undergoes drastic changes, especially in puppies, the coat loses its luster, is tousled and becomes brittle. The skin becomes dry and peeling of the epidermis is often observed, especially in hairless places. When dogs recover, a large amount of exfoliated epidermis (dandruff) appears in the hairline, which disappears when the animal is fully recovered. A characteristic sign of the plague is skin exanthema, especially often appearing on hairless places – in the groin, inner thighs and, in rare cases, on other places of the skin - the inner surface of the chest limbs and ears. Usually, skin exanthema is detected in the first days of the disease in the form of separate scattered red spots, which turn into nodules after 2-3 days, then into vesicles filled with yellowish-green pus, they quickly burst and dry out with the formation of crusts, which after 2-3 days are gone and the skin heals. In rare cases, an eczematous rash is scattered over the entire surface of the body. Then the wool sticks together with the contents of the burst bubbles, and in places of the pustules grayish scabs form, falling off along with the hair. With the syndrome of "hard-footedness" there is hyperkeratosis of the skin (growth and keratinization of the outer layers of the skin). The keratinized layers of the skin become hard, rough and tend to crack. Pyogenic microflora can get into cracks in the skin (especially on the paws), aggravating the severity of the disease, which is manifested by difficult painful movements of the animal. Similar lesions can be noted in the area of the nasal mirror. However, it should be noted that cutaneous exanthema is not observed in all cases of plague in dogs. Often, the cutaneous form of plague develops before the onset of other clinical manifestations of the disease and goes unnoticed for a long time.

Nervous symptom complex. Disorders of the central nervous system in plague occur more often at the end of the disease. The nervous syndrome begins with a change in the behavior of the dog - depression, periodically appearing periods of excitement, sometimes in such a form in which the sick dog gnaws its tail or limbs. In a sick animal, a violation of coordination of movements is observed, periodically shaking the head, nystagmus, rigidity of the muscles of the head, convulsive contractions of the masticator muscles and other muscles of the head and neck appear. Subsequently, tonic and clonic convulsions of individual muscles of the limbs, chest, and abdominal wall appear. In severe cases, rhythmic muscle contractions become generalized.

In recent years, atypical forms of the disease are more common, when instead of discharge from the nose, bronchopneumonia and severe depression, disorders of the nervous system come to the fore. Often the disease immediately begins with epileptic seizures, ataxia, there may be paresis and paralysis. Some dogs suddenly lose their sight. Sometimes nervous symptoms in canine distemper can occur without previous pronounced clinical signs of a disease of the gastrointestinal tract or respiratory organs. In such cases, in dogs, the disease begins with the manifestation of acute encephalomyelitis with the sudden onset of epileptic seizures lasting 2-3 minutes. An epileptic seizure begins, as a rule, with increased anxiety of the animal and chaotic movements in space, with the manifestation of hypersalivation in the animal. There is a spastic contraction of the facial muscles, tonic convulsions of the entire muscles of the body with a simultaneous loss of consciousness for a short time. The tonic convulsion turns into a clonic one - the animal beats, making swimming movements with its legs, the muscles on the muzzle twitch. The pupils of the eyes are greatly dilated. In this case, involuntary urination, excretion of feces can occur. After a seizure, the dog may experience an excited state, which can be expressed in circular and other types of movements, while the dog, like a blind man, stumbles on foreign objects, then a breakdown and a depressive state occur. Later, as the disease progresses, dogs may develop status epilepticus, manifested by the above-described seizures at short intervals, usually ending in death. In the final stage of the nervous syndrome, paresis and paralysis may appear, usually in one or both hind limbs. Recovery is rare, more often with the preservation of neurological disorders (muscle twitching, loss of vision, incomplete paresis or paralysis of the limbs).

Sometimes it is necessary to observe that 2-4 weeks after the apparent recovery, the dog reappears symptoms of damage to the central nervous system, expressed more often in epileptic seizures and less often in paralysis of the hind limbs.

The articular symptom complex is characterized, as a rule, by a chronic course. The disease in dogs manifests itself in the form of intermittent lameness more often in the absence of conjunctivitis, rhinitis and other symptoms characteristic of plague. It begins with the appearance of lameness on one limb, less often on two, which can spontaneously disappear and reappear on the other or other limbs. The disease is rheumatoid in nature, characterized by the development of structural and morphological changes in the form of atrophy, dystrophy, and proliferation of connective tissue that are formed during the course of the disease.

As a rule, distemper in dogs lasts 3-4 weeks. In rare cases, the disease ends in death or recovery within a week, sometimes the outcome occurs only a few months after infection.

If the disease lasted a long time and proceeded hard, then the recovery of the dog is very slow. The temperature decreases gradually, with fluctuations within half a degree for 2-3 weeks, for a long time there is a capricious appetite, periodically appearing diarrhea and cough. In some dogs, complications (muscle twitching, loss of vision, hearing, smell) remain for life.

Discussion

Thus, as a result of studying the epizootic situation of canine distemper among dogs, the following data were obtained:

The disease is observed throughout the year and has the character of undamped fluctuations subject to sharp seasonal changes. The maximum number of diseased dogs in all years of observation is recorded in March – 6.2 cases per 1000 individuals.

It has been established that among the infectious diseases of dogs, distemper occupies the first place, and there is an annual increase in the number of dogs with distemper.

The level of immunity tension after vaccination with various types of vaccines is approximately the same. The effectiveness of vaccination up to 1 year after treatment is 85 % for monovalent vaccines, 87 % for 3-4-valent vaccines, and 75 % for six or more valent vaccines.

Conclusion

The incidence index, the severity of the course of the disease and the natural resistance in different breeds of dogs is different. The highest percentage of cases (both vaccinated and not immunized against canine distemper) was observed among mongrel dogs – 27.5 %, German and East European shepherd dogs – 20.8 %, Central Asian shepherd dogs – 7.5 %. Young dogs are more susceptible to the disease. The maximum incidence rate is set for puppies 3-7 months of age – 18 per 1000 puppies of this age group, 8 – for puppies aged 7-12 months.

In 39 % of sick dogs, the nervous form of canine distemper was registered, in 22% – mixed, in 13.7% – intestinal, pulmonary form – 12.3 %, articular – 7 %, skin – in 6 % of cases. The chronic course of canine distemper to a greater extent (in almost 94 % of cases) is observed in the nervous form of the disease, subacute – in mixed (83 %) and intestinal (78 %) forms, acute – in skin (in 91 % of cases) and pulmonary (79 %) forms of the disease.

In the process of research, the main clinical signs of canine distemper in dogs were supplemented and systematized into symptom complexes.

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Тула қаласындағы иттер арасындағы ит ауруының эпизоотиялық жағдайын талдау

Қазіргі уақытта Ресейде және Тула облысында сервистік, сәндік және аңшылық ит шаруашылығы қарқынды дамып келеді. Мәселен, 2020 жылы 119 бас жоғары тұқымды күшік, 2021 жылы негізінен сәндік-қызметтік тұқымды 164 күшік «Асыл тұқымды өсіру кітабына» тіркелді. Осылайша, әртүрлі жұқпалы ауруларға бейім асыл тұқымды иттердің саны жыл сайын артып келеді. Ит ауруы – бүкіл әлемде, соның ішінде Ресейде иттердің ең көп таралған вирустық ауруларының бірі. Тула

қаласындағы ветеринарлық клиникалардың «Науқастарды қабылдау журналдарын» талдағанда, жұқпалы этиологиялы аурулармен ауырған иттердің 44 %-ында етқоректі бөртпе диагнозы қойылғаны анықталды.

Зерттеу жұмысымыздың мақсаты – Ресейдің Тула облысында иттердегі ит ауруының эпизоотологиялық ерекшеліктерін зерттеу. Қойылған мақсатқа жету үшін келесі мәселені шешу қажет болды: ит ауруының тұқымдық және жастық факторларын талдау.

Жеке ветеринарлық клиникалардың деректеріне талдау, оның ішінде ұсақ жануарлардың аурушандығы туралы ақпарат пайдаланылды.

Иттер арасындағы иттер ауруының эпизоотиялық жағдайын зерделеу нәтижесінде келесі мәліметтер алынды: ауру жыл бойы байқалады және күрт маусымдық өзгерістерге ұшырайтын сөндірілмеген ауытқулар сипатына ие. Бақылаудың барлық жылдарындағы ауру иттердің ең көп саны наурызда тіркелді – 1000 адамға шаққанда 6,2 жағдай. Анықталғандай, иттердің жұқпалы ауруларының ішінде бөртпе бірінші орында тұр және жыл сайын иттер санының көбеюі байқалады.

Түйінді сөздер: ит ауруы, аурушандық, өлім-жітім, ит тұқымы, симптомдық кешен.

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Анализ эпизоотической ситуации по чуме плотоядных среди собак в г. Тула

В настоящее время в России и Тульской области интенсивно развивается служебное, декоративное и охотничье собаководство. Так, в 2020 году в Книге племенного разведения зарегистрировано 119 высокопородных щенков, а в 2021 году уже 164 щенка, преимущественно декоративных и служебных пород. Таким образом, количество породистых собак, восприимчивых к различным инфекционным заболеваниям, ежегодно увеличивается. Чума собак – одно из самых распространенных вирусных заболеваний собак во всем мире, в том числе и в России. При анализе журналов приема больных ветеринарных клиник г. Тулы установлено, что у 44 % собак, заболевших болезнями инфекционной этиологии, была диагностирована чума плотоядных.

Целью исследования явилось изучение эпизоотологических особенностей течения чумы плотоядных у собак в Тульской области России. Для достижения намеченной цели необходимо было проанализировать породный и возрастной факторы заболеваемости чумой собак.

Использовался анализ данных частных ветеринарных клиник, включающих информацию о заболеваемости мелких домашних животных. В результате были сделаны выводы о том, что заболевание наблюдается в течение всего года и носит характер незатухающих колебаний, подверженных резким сезонным изменениям. Максимальное количество заболевших собак за все годы наблюдения зафиксировано в марте – 6,2 случая на 1000 особей. Установлено, что среди инфекционных болезней собак чума занимает первое место, и отмечается ежегодный рост числа больных собак.

Ключевые слова: чума собак, заболеваемость, смертность, порода собак, симптомокомплекс.

Date of receipt of the manuscript to the editor: 22/09/06