Short communication

THE POSSIBLE INFLUENCE OF THE SARS-CoV-2 VIRUS ON THE DISORDER OF THE REPRODUCTIVE CYCLE IN SAMOYED DOGS - case report

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Summary:

During the testing of dogs and cats for the SARS-CoV-2 virus using the RT-PCR method as well as the Elisa method for the antibody titer of this virus in the Republic of Serbia in 2020/2022, a reproductive cycle disorder was observed in one of the tested Samoyed dogs. The owner contacted the veterinarian due to the suspicion that the dog may have contracted the SARS-CoV-2 virus because it came into contact with a sick person. Testing for the above-mentioned virus was done in cooperation with the Scientific Institute for Veterinary Medicine Novi Sad in Novi Sad. After receiving a positive finding on the titer of antibodies to the SARS-CoV-2 virus, the dog was monitored on an outpatient basis during the entire duration of the positive finding on the titer of antibodies for several months. During the monitoring of the duration of immunity and the existence of antibodies to the SARS-CoV-2 virus using the Elisa method, an unpleasant-smelling vaginal discharge was observed, with a disturbed sexual cycle, and swollen caudol mammary glans. An ultrasound examination diagnosed pyometra with the presence of fluid in the horns of the uterus. The Samoyed female was not sterilized, was not used for breeding, and was never mated. In the case of a female Samoyed, the presence of bacteria was confirmed by a vaginal swab. After the implemented therapy, which included the use of antibiotics, infusion solutions, aglepristone injections, oxytocin injection preparation, the dog was cured, the reproductive cycle was completely stabilized. The bitch was not sterilized because in the following period, pathological changes were visible that would require the intervention of aveterinarian.

Key words: aglepristone, dog, pyometra, SARS-CoV-2, Samoyed

EPIDEMIOLOGICAL ASPECT OF SARS-COV-2 VIRUS TRANSMISSION FROM HUMANS TO PETS IN THE PERIOD 2020-2022

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Summary

During the Covid-19 pandemic in the Republic of Serbia, 41 domestic dogs and cats were tested for the presence of SARS-CoV-2 virus in humans or confirmation of past infection with this virus (determination of the presence of specific antibodies against SARS-CoV-2). During the period of research 2020-2022 and monitoring the transmission of the SARS-CoV-2 virus from humans to pets, there were various epidemiological data on the possibility of infecting humans and their pets. At the time of the survey, pet owners (41) tested positive for SARS-CoV-2 virus during pet collection for sampling and diagnostic testing for SARS-CoV-2 virus / past RT-PCR infection and ELISA method. It is important to note that the owners had different immune and the infectious status during the study period of their pets (the owners were vaccinated or unvaccinated, became ill or had Covid-19. Some of the clients surveyed had symptoms of Covid-19 but they did not consult a doctor, and their pets became infected at the time of contact in the house. For such owners, we considered that they had contact with an infected person and that, based on the appearance of clinical symptoms, they contacted the veterinarian further because of the care of their pet and the possible transmission of the infection to him. In pets of the mentioned owners, SARSCoV-2 was diagnosed at the time of testing the pet as a currently present infection or as a past infection based on the detection of specific antibodies. In the waves of the epidemic in the Republic of Serbia, the reinfection of owners who were previously vaccinated was confirmed, with confirmed and unconfirmed infection in pets after testing by RTPCR and ELISA methods. 509 The pets that became ill during these periods were of different ages, different species and different breeds. The owners of these pets who fell ill during that period were also of different ages. The research was done at the level of the city of Belgrade, and positive findings in pets were determined in periods when the number of patients was at the expected higher peak. This type of testing tool finds its use in moments when we have little knowledge about the way the virus is transmitted from humans to pets to apply preventive procedures due to the existing risk of getting sick during work. For the application of preventive procedures during the collection and work with pets from houses where people are sick or there is a suspicion based on symptoms reported by the owner to the veterinarian, the existing regulations are adequate both in our country and in the world. All these types of information are supported by an adequate survey used in outpatient settings (Zeleni venac vet), and certificates for pet owners that came from officially approved laboratories (Institute of public health of Serbia-Batut, City Institute of Public Health, etc.). Although according to the obtained data and knowledge, the probability of infection with SARS-CoV-2 virus from cats/dogs to humans is very low, there is a high possibility of occupational disease in contact with veterinarians and animal owners in case of inadequate preventive measures.

Keywords: Covid-19, SARS-CoV-2, Serbia, pets, preventive measures

FREQUENCY OF THE DISTEMPER INFECTION IN DOGS TODAY, CASE STUDY

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Summary:

Distemper is a highly contagious infectious disease that affects mostly dogs from shelters and an unvaccinated dogs. It can be found in wild carnivores such as: raccoons, foxes, hyenas, tigers, some furries. The cause is *Morbili virus* from *Paramyxoviridae family*. It can be detected in early stages of the disease in very young puppies. Spreading is by a nasal and oropharyngeal discharge or by upper respiratory system. It can be found in other systemic organs too. This virus can get localized in lymph nodes where it can reproduce itself. Belongs to a group of viruses that can lead to immunodeficiency status complicated by a secondary bacterial infections.

In this case study, the virus of Distemper was detected in puppy of 3 months of age. The owner received a puppy from the shelter with the first dose of vaccine at the age of 8 weeks. Owner had missed the second dose of the primary vaccination course against Distemper virus. The owner contacted the veterinary surgery once there was a nasal discharge and mild cough present in puppy. After completed diagnostic tests the Distemper virus with secondary bacterial infection was diagnosed. There were obvious complications on the thoracic imaging already. Pneumonia was present and during post-mortem. After the confirmed diagnoses there were episodes in health improvement and remissions of the Distemper virus in this ill puppy. Presence of the disease (virus) in the body of puppy usually gives poor prognosis particularly if primary vaccination was not done promptly as advised by a veterinary surgeon. There were few factors that helped development of this disease in the puppy such as inadequate care of the owner, acute viral disease, lack of puppy's body immune response, and contact with potential diseased dogs in the shelter…

Conclusion can be drawn that Distemper virus is still present today not because of lack of vaccines but due to an uneducated owners about the preventative medicine and potential serious risks that this disease can have onto young puppies. Non adequate support and care in shelters, inability to isolate and treat ill dogs with clinical signs of potential disease so to stop spreading the disease are just few reasons why is this disease present today still.

Keywords: distemper, pneumonia, dog, virus, morbili

CHANGES IN HEMATOLOGICAL AND BIOCHEMICAL PARAMETERS IN INFECTIOUS VIRAL DISEASES OF CATS FIV, FeLV, FIP

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Summary:

Changes in haematological and biochemical values can indicate a disease that can be of different origins. Systemic changes can be represented equally due to viral, bacterial or certain immunological changes in cats, which can be observed as a change in reference values in haematology and biochemistry. During the examination, white blood cells, red blood cells, haemoglobin, transaminases, urea, creatinine, and globulins are most often monitored. Lymphopenia (FIV, FIP, FeLV) or neutropenia (FeLV) can be observed in certain viral diseases. In that period, cats often show visible changes in the clinical picture when the owner comes to the veterinarian to consult about the treatment of the animal. Neutropenia with anaemia, thrombocytopenia are not rare in FeLV, FIV infected cats. These types of changes can occur independently of each other in the mentioned diseases. Anaemia can be one of the indicators for FIP, but so can thrombocytopenia. Proper sampling, the way the sample is processed can affect the final result. A high-quality history isimportant in the further steps of diagnosis. All this is very important to us when we decide on how to treat cats in the case of identified changes at the level of haematology and biochemistry. The availability of preparations that will affect the strengthening of immunity based on beta-glucan, vitamin K for thrombocytopenia, and iron supplements for anaemia are part of supportive therapy. Most often, immunosuppressants are included. Antibiotics are included according to the established diagnosis. Preparations based on silymarin and SAMe products have a positive effect on the reduction of transaminases (ALT, ALP) in case of damage to parenchymatous organs, and improve liver in FIP, FIV-afflicted cats. When and how to start therapy in such animals is influenced only by the clinical condition of the pet, i.e., the presence of vomiting and diarrhoea or the absence of appetite and respiratory changes. In the case of the above-mentioned present symptoms, start compensation with electrolytes, and clear solutions of supplements. Changes in haematological and biochemical findings help in therapy and more closely determining the diagnosis of certain viral diseases, but to establish a definitive diagnosis, it is necessary to perform other tests using available methods: rapid tests, PCR diagnostics, serological analyzers.

Key words: FiLV, FIP, FIV, lymphopenia, neutropenia, thrombocytopenia

DIAGNOSTICS IN A PUG DOG WITH ALLERGY REACTION ON RABIES VACCINE, CLINICAL PICTURE AND ATOPIC DERMATITIS – CASE REPORT

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ABSTRACT

The presentation of this case is a dog of the age of 7 years. The clinical picture of this dog was monitored periodically for years on an outpatient basis before a definitive diagnosis of Atopic Dermatitis was made. The symptoms included ear reactions with mixed infections and swelling, increased secretion from the eyes and nose with occasional changes in the skin. Diarrhoea was rarely present. After the annual vaccine, the dog showed a rapid allergic reaction after four years of regular rabies supplementary vaccines. The same reaction was after two years on the rabies vaccine again. During the allergy testing, other diagnostics were also performed according to usual procedures. In the haematology findings of the complete blood count, changes were recorded in white blood cell parameters: lymphopenia, neutropenia, eosinopenia and monocytosis. A positive reaction to both types of allergens was confirmed by serological testing using the Elisa method of dog serum for inhalant allergens and food allergens. A positive and highly positive result was obtained for even 20% of inhalant allergens and 37.71% of food allergens. A positive reaction to an external (OUT) allergen group of 15% included pollen while 5% of positive reactions included indoor (IN) allergen group. The total number of tested allergens is 40+21 on a large panel. Screening Elisa method is recommended for easier and faster determination of therapy in patients with Allergic Dermatitis (AD).

Key words: Atopic Dermatitis, dog, food allergens, inhalant allergens, SAT

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