Covid-19

Role of veterinarians in the view of global pandemic

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President/SLVA
What is Coronavirus?

• Coronaviruses are a large family of viruses that cause illness in humans and animals.

• In people, coronaviruses can cause illnesses ranging in severity from the common cold to Severe Acute Respiratory Syndrome (SARS).

Common human coronaviruses

1. 229E (alpha coronavirus)
2. NL63 (alpha coronavirus)
3. OC43 (beta coronavirus)
4. HKU1 (beta coronavirus)

Other human coronaviruses

5. MERS-CoV (the beta coronavirus that causes Middle East Respiratory Syndrome, or MERS)
6. SARS-CoV (the beta coronavirus that causes severe acute respiratory syndrome, or SARS)
7. SARS-CoV-2 (the novel coronavirus that causes coronavirus disease 2019, or COVID-19)
Corona viruses that jumped in to human
What is Covid-19

• The disease caused by SARS Cov-2 virus in known as ‘Covid-19’

• The predominant route of transmission of COVID-19 is from human to human.

• Genetic sequence data reveals that the COVID-19 virus is a close relative of other CoV found circulating in *Rhinolophus* bat

• Investigations are needed to find the source, to determine how the virus entered the human population, and establish the potential role of an animal reservoir in this disease.
Can animals be infected with COVID-19 virus?

• There is a possibility for some animals to become infected through close contact with infected humans

• Studies are underway to better understand the susceptibility of different animal species to the COVID-19

• Preliminary findings from laboratory studies suggest that, of the animal species investigated so far, cats are the most susceptible species for COVID-19, and cats can be affected with clinical disease.

• In the laboratory setting cats were able to transmit infection to other cats.

• Ferrets also appear to be susceptible to infection but less so to disease.

• To date, preliminary findings from studies suggest that poultry and pigs, are not susceptible to SARS-CoV-2 infection.
SARS-CoV-2 in animals

• On April 22, the CDC announced the first National Veterinary Services Laboratories (NVSL)-confirmed cases of SARS-CoV-2 infection in two pet cats.

• These are the first pets in the United States to test positive for SARS-CoV-2.

• Currently we have no information that suggests that pets might be a source of infection for people with the coronavirus that causes COVID-19.
Leading Veterinary Diagnostic Company Sees No COVID-19 Cases in Pets

Thousands of canine and feline specimens tested surfaced no positive results to date.

WESTBROOK, Maine, March 13, 2020—IDEXX Laboratories, Inc. (NASDAQ: IDXX), a global leader in veterinary diagnostics and software, today announced that the company has seen no positive results in pets to date of SARS-CoV-2, the coronavirus strain responsible for the coronavirus disease 2019 (COVID-19) respiratory outbreak in humans. IDEXX evaluated thousands of canine and feline specimens during validation of a new veterinary test system for the COVID-19 virus. The specimens used for test development and validation were obtained from specimens submitted to IDEXX Reference Laboratories for PCR testing.

Since mid-February, IDEXX Reference Laboratories has tested over 5,000 specimens for the COVID-19 virus, from cats, dogs, and horses with respiratory symptoms in 17 countries. To date, IDEXX has found no positive results. This suggests dogs and cats living with infected people generally remain uninfected, except in rare and isolated cases. For more in-depth information, read the IDEXX coronavirus diagnostic update.

What do we know about COVID-19 virus and companion animals?

• The current spread of COVID-19 is a result of human to human transmission.

• To date, there is no evidence that companion animals play a significant a role in spreading the disease.

• Therefore, there is no justification in taking measures against companion animals which may compromise their welfare.
OIE and WVA joint press release: Covid-19 and Designation of Veterinary Work as Essential Business

• **Maintaining the activities that are crucial to public health**
• Veterinarians are an integral part of the global health community. Beyond the activities linked to the health and welfare of animals, they have a key role in disease prevention and management, including those transmissible to humans, and to ensure food safety for the populations.

• In the current situation, it is crucial that, amongst their numerous activities, they can sustain those necessary to ensure that:
  • - national and regional veterinary regulatory and inspection services can oversee the integrity of public health,
  • - only healthy animals and their by-products enter the food supply to guarantee food safety for the populations,
  • - emergency situations can be addressed,
  • - preventative measures, such as vaccination against diseases with a significant public health or economic impact, are maintained.
  • - priority research activities continue.
Surveillance and events in animals

Animal surveillance in China

• After the detection of human cases, veterinary departments of China have carried out 2019-nCoV testing towards samples of pigs, poultry and dogs and other domestic animal animals collected since 2019 (mainly in late 2019). So far, results of such testing are all negative.

• Molecular epidemiology analysis indicates the first published sequence of 2019-nCoV (WHHuman 1/China/2019-Dec) released by the Chinese Health Department shows high homology (87.99%) to bat-derived coronavirus, and low homology (lower than 66%) to the whole genome of domestic animal-derived coronavirus (such as IBV, PEDV, TGEV, etc.)
SARS-CoV-2 positive test results in dogs in Hong Kong

Epidemiological comments

Two dogs from one household were placed under quarantine on 18 March 2020 after their owner was hospitalised due to COVID-19 infection. Following veterinary examination nasal, oral, and rectal swab samples were taken after the dogs' admission to the quarantine facility. Samples from one of the dogs taken on 18 and 19 March 2020 tested positive for SARS-CoV-2. Both animals did not exhibit any specific clinical signs. Investigations are continuing. Risk management measures are in place for this case, including cleansing and disinfection of the premises, and proper personal hygiene and protection. Mammalian pets from households with confirmed human cases of COVID-19 will be be placed under quarantine and veterinary surveillance for 14 days. Samples will be collected for testing of SARS-CoV-2 as appropriate.

Diagnostic test results

<table>
<thead>
<tr>
<th>Laboratory name and type</th>
<th>Species</th>
<th>Test</th>
<th>Test date</th>
<th>Result</th>
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<tbody>
<tr>
<td>Tai Lung Veterinary Laboratory, Agriculture Fisheries and Conservation Department (National laboratory)</td>
<td>Dogs</td>
<td>real-time reverse transcriptase/polymerase chain reaction (RRT-PCR)</td>
<td>19/03/2020</td>
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SARS-CoV-2 positive test result in a cat in Belgium (28/03/2020)

On 18/03/2020, the FASFC, was informed by the Faculty of Veterinary Medicine of the University of Liège that viral RNA of the SARS-CoV2 virus (the aetiological agent of Covid-19) had been detected in the stools and vomits of a cat showing clinical signs of digestive and respiratory disease.

The cat belonged to a person confirmed infected by SARS-CoV2. The presence of SARS-CoV2 in the cat was confirmed by high throughput sequencing. A productive infection is suspected but has not yet been confirmed.

On 19/03/2020, on request of the National Risk Assessment Group (crisis manager in Belgium for the Covid-19 pandemic) and informed by the CVO in contact with the Faculty of Veterinary Medicine of the University of Liège, the FASFC requested an urgent opinion to the independent Scientific Committee established at the FASFC. This urgent opinion was approved and delivered on 23/03/2020. According to this Committee, the elements reported do not allow to conclude that there is a productive viral infection, but allow to suspect it (PCR Ct values compatible with a high number of viral genome copies and clinical signs compatible with a coronavirus infection).
SARS-CoV-2 positive test result in a tiger and lions in the USA

Epidemiology

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<th>Suspected human transmission</th>
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Epidemiological comments

17 Apr 2020 Update—One of the three previously reported exposed lions at a zoo was confirmed positive for SARS-CoV-2/COVID-19 on 15 Apr 2020. This follows the initial report of a tiger confirmed on 4 Apr 2020. It is likely that the infection was transmitted by an infected human. Clinical signs previously noted in the lions and tigers included dry cough and some wheezing. All of the animals who exhibited clinical signs are progressively improving. There are no other suspected cases of SARS-CoV-2/COVID-19 in any animals from the zoo at this time.

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Two cats in USA

**Epidemiology**

| Source of the outbreak(s) or origin of infection | Suspected human transmission |

**Epidemiological comments**

22 Apr 2020 Update-- Two cats from separate households were sampled for respiratory illness. Clinical signs included sneezing and ocular discharge. Samples from the cats were tested by SARS-CoV-2 PCR after testing negative for other respiratory pathogens. One cat is from a two-cat household with a known COVID-19 affected person, the other from a household in an affected neighborhood and allowed to go outdoors. SARS-CoV-2 was confirmed in samples based upon molecular testing (PCR and sequencing) of samples from the initial testing laboratory and follow up samples obtained directly. Both cats are expected to fully recover, and testing of follow up samples indicated both cats were clearing the infection.

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Role of veterinarian in this backdrop

• There is a panic and confusion among general public in the country regarding the role of pets in the transmission of the SARS CoV-2 (COVID-19) virus.

• This situation got aggravated in the wake of a widely published media report stating that a positive dog was identified in Suduwella area today.

• As SLVA we would like to the veterinarians as animal health care professionals, we should react responsibly in this situation and convince the general public based on scientific evidence
Prevention of spreading the virus to pet animals

• Clear communication is required to inform clients and others that animal welfare must be ensured.

• Animals continue to need safe shelter, nutritious food, clean water, companionship and exercises

• Individuals sick with COVID-19 should distance themselves from their pets to minimize virus transmission
  • wash their hands before and after touching animals,
  • keep cats indoors
  • maintain appropriate physical distances from other people when exercising their pets outside,
  • develop an emergency plan for how care will be provided for their pets in the event of serious illness.

• As veterinarians we are bound to ensure animal welfare and wellbeing while protecting ourselves adhering to the guidelines issued by human health authorities.
Making statements relying only on scientific evidence

• Presence of antigen (virus) does not confirm that the animal is infected as it could be a mere contamination.

• Furthermore, the specificity of the use of primers and probes which are used for human PCR testing are not validated for testing animals.

• As substantial amount of scientific information is lacking in this backdrop it is not advisable to make statements in mass media or social media which may lead to unnecessary panic among general public.

• We urge our members to refrain from issuing statements regarding the transmission of COVID-19 by animals especially pets to people, which may create unnecessary issues under the circumstances that the country is fighting against this pandemic with the limited resources.
Message to the veterinarians

• The veterinarians to be united and help clear the ambiguous opinions among general public

• Educate the clients/owners of pets or other animals in this regard.

• Convey a message to the public that there is no risk of associating with animals if they are not Covid-19 patients.

• If the owner/handler is a Covid-19 patient then there is a need to keep the animals at proper distance to prevent infecting them (especially cats, ferrets and dogs).

• It is reiterated that there is no evidence of transmission of the disease from domestic animals to human to date and hence, the animals should never be neglected and their welfare should be assured.
Thank You; Stay Safe; Protect Animals

Follow us;

https://www.slva.org/

Statement issued for Veterinarians – 25th April 2020

Q & A for pet owners – issued 25th April 2020