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Subject: PRO/AH/EDR> COVID-19 update (45): China (Hong Kong) animal, dog, 2nd case PCR positive

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CORONAVIRUS DISEASE 2019 UPDATE (45): CHINA (HONG KONG) ANIMAL, DOG, SECOND CASE PCR POSITIVE

A ProMED-mail post

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[1] A second PCR-positive dog, Hong Kong

[2] OIE, Q&A COVID-19 and companion animals

[1] A second PCR-positive dog, Hong Kong

Date: Thu 19 Mar 2020, 8:15 PM HKT

Source: Press release, Government of Hong Kong SAR [edited]

<https://www.info.gov.hk/gia/general/202003/19/P2020031900606.htm>

A spokesman for the Agriculture, Fisheries and Conservation Department (AFCD) said today [Thu 19 Mar 2020] that a pet dog sent to the AFCD has repeatedly tested positive for the COVID-19 virus. This is another infected case following an earlier case in which a 17-year-old Pomeranian dog tested weak positive during repeated tests for the virus.[see comment].

The current case involves a German Shepherd dog that lived in a residence at Pok Fu Lam. When the owner was confirmed with COVID-19, the dog was sent for quarantine with another mixed breed dog from the same residence to the animal keeping facility at the Hong Kong Port of the Hong Kong-Zhuhai-Macao Bridge yesterday (18 Mar 2020). No positive results were obtained from the mixed breed dog and neither dog has shown any signs of disease.

The Department will continue to closely monitor both dogs and conduct repeated tests on the animals.

The AFCD will continue to work together with the Department of Health in handling relevant cases. To ensure public and animal health, the Department strongly advises that mammalian pet animals including dogs and cats from households with persons confirmed as infected with COVID-19, or close contacts of COVID-19 infected persons, should be put under quarantine in AFCD facilities.

The spokesman reminded pet owners to adopt good hygiene practices (including handwashing before and after being around

or handling animals, their food, or supplies, as well as avoiding kissing them) and to maintain a clean and hygienic household environment. People who are sick should restrict contact with animals. If there are any changes in the health condition of the pets, advice from a veterinarian should be sought as soon as possible.

The spokesman emphasised that there is currently no evidence that pet animals can be a source of COVID-19 for humans or that this virus can cause the disease in dogs. Pet owners should always maintain good hygiene practices and under no circumstances should they abandon their pets.

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[This is the 2nd case of a domestic dog in Hong Kong, owned by a COVID-19 patient, undergoing tests for the pandemic's virus. Data of the 1st case involved was included in an interim summary which became available in an official report dated 12 Mar 2020 (see 20200312.7081842):

"The AFCD collected samples from the dog 5 times for tests since late February [2020] and detected low levels of the COVID-19 virus from its nasal and oral cavity samples. A blood sample was also taken from the dog on [3 Mar 2020] for serological testing and the result is negative. The negative result indicates that there is not a strong immune response and that there are no measurable amounts of antibodies in the blood at this stage.

"The negative serological test result does not suggest that the dog has not been infected with the virus. It is known in some asymptomatic or mild cases of human infections with other types of coronavirus that antibodies may not always develop. It is also not uncommon in the earlier stages of infections to have a negative result as it often takes 14 days or more for measurable levels of antibodies to be detected. Another blood sample will be taken later for further testing".

"On the other hand, the Department, together with the School of Public Health of the University of Hong Kong, has conducted gene sequencing of the COVID-19 virus found from the dog and its close contact persons who were confirmed infected. The viral sequences are very similar. The sequence results indicate that the virus likely spread from the infected persons and subsequently infected the dog.

"The dog has not shown any signs of the disease related to COVID-19. It is currently under quarantine at the animal keeping facility at the Hong Kong Port of Hong Kong-Zhuhai-Macao Bridge. The Department will continue to closely monitor the dog which tested weakly positive for the COVID-19 virus and repeat the test later. It will only be returned to its owner when the test result is negative. The Department has stepped up cleansing and disinfection of the facility."

Unfortunately, the said elderly Pomeranian died on Mon [16 Mar 2020], 2 days after it was released (Sat 14 Mar 2020) from quarantine following the recovery of its owner and "after further tests produced negative results". According to AFCA's report, the cause of death couldn't be determined since the owner declined to conduct an autopsy (media report at <https://www.bloomberg.com/news/articles/2020-03-18/hong-kong-dog-tested-for-coronavirus-dies-after-quarantine>). Hence, serological and clinical follow-up has become impossible. Though the cause of death is unknown, it may be assumed that it is related to the very old age of the animal and not necessarily to the dog's COVID-19 history.

The age, gender and detailed timeline of the current, 2nd case (German shepherd) will help in assessing the significance of the PCR results and of the information obtained in relation to the 1st case. Such information is of relevance to households with pets, to their medics and their vets in all COVID-19-affected countries. - Mod.AS]

[2] OIE, Q&A COVID-19 and companion animals

Date: Wed 18 Mar 2020 [accessed]

Source: OIE, Q&A on the 2019 Coronavirus Disease (COVID-19) [abridged, edited]

<https://www.oie.int/en/scientific-expertise/specific-information-and-recommendations/questions-and-answers-on-2019novel-coronavirus/>

[The following 4 segments are copied from the updated Q&A document]:

1. 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 can spread the disease. Therefore, there is no justification in taking measures against companion animals which may compromise their welfare.

The Veterinary Services of the Hong Kong Special Administrative Region of the People's Republic of China reported to OIE evidence that a dog had tested positive to the COVID-19 virus following close exposure to its owners who were sick with COVID-19 - see Immediate Notification (1 Mar 2020) and Follow-up report no.1 (9 Mar 2020) [20200302.7040373]. The test, conducted by real time PCR, showed the presence of genetic material from the COVID-19 virus. The dog was not showing any clinical signs of the disease.

There is no evidence that dogs play a role in the spread of this human disease or that they become sick. Further studies are needed to understand if and how different animals could be affected by COVID-19 virus. The OIE will continue to provide updates as new information becomes available.

There is no evidence to support restrictions to movement or trade of companion animals.

2. What precautionary measures should be taken by owners when companion or other animals have close contact with humans sick or suspected with COVID-19?

There have not been any reports of companion or other animals becoming sick with COVID-19 and currently there is no evidence that they play a significant epidemiological role in this human disease. However, because animals and people can sometimes share diseases (known as zoonotic diseases), it is still recommended that people who are sick with COVID-19 limit contact with companion and other animals until more information is known about the virus.

When handling and caring for animals, basic hygiene measures should always be implemented. This includes hand washing before and after being around or handling animals, their food, or supplies, as well as avoiding kissing, licking or sharing food.

When possible, people who are sick or under medical attention for COVID-19 should avoid close contact with their pets and have another member of their household care for their animals. If they must look after their pet, they should maintain good hygiene practices and wear a face mask if possible.

3. What can National Veterinary Services do with regards to companion animals?

Public Health and Veterinary Services should work together using a One Health approach to share information and conduct a risk assessment when a person with COVID-19 reports being in contact with companion or other animals.

If a decision is made as a result of a risk assessment to test a companion animal which has had close contact with a person/owner infected with COVID-19, it is recommended that RT-PCR be used to test oral, nasal and fecal/rectal samples.

While there is no evidence of a COVID-19 infection spreading from one animal to another, keeping animals that test positive for COVID-19 away from unexposed animals should be considered best practice.

4. What are the Veterinary Authority's international responsibilities in this event?

The detection of COVID-19 virus in animals meets the criteria for reporting to the OIE through WAHIS, in accordance with the OIE Terrestrial Animal Health Code as an emerging disease.

Therefore, any detection of the COVID-19 virus in an animal (including information about the species, diagnostic tests, and relevant epidemiological information) should be reported to the OIE.

It is important for Veterinary Authorities to remain informed and maintain close liaison with public health authorities and those responsible for wildlife, to ensure coherent and appropriate risk communication messages and risk management.

It is important that COVID-19 does not lead to inappropriate measures being taken against domestic or wild animals which might compromise their welfare and health or have a negative impact on biodiversity.

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[Hong Kong's One Health-based system is highly commendable, contributing to essential epidemiological data, which pertain to man and animal, becoming available for all. According to the Thematic Household Survey Report No. 66 of HK's Census and Statistics Department, a total of around 221 100 dogs and 184 100 cats were being kept by households in Hong Kong in 2018. The numbers of registered veterinary surgeons, during the years 2015 - 2019, were, respectively, 823, 861, 920, 988 and (during 2019), 1049. The veterinarian-to-pet (dog and cat) ratio (2018 data) was around 1:410 (official information; <https://www.info.gov.hk/gia/general/202003/18/P2020031800555.htm>).

The following excerpt from article 2 above is of particular significance: "currently there is no evidence that (in-contact companion animals) play a significant epidemiological role in this human disease. However, because animals and people can sometimes share diseases (known as zoonotic diseases), it is still recommended that people who are sick with COVID-19 limit contact with companion and other animals until more information is known about the virus". Hopefully, additional similar observations will allow considering the epidemiological role of companion animals (dogs AND cats) in human COVID-19 as negligible; at present, it cannot be viewed as such. Additional gathered experience, including PCR and serologic test results of in-contact company animals in HK and elsewhere, is warranted. - Mod.AS

HealthMap/ProMED map available at:

Hong Kong: <https://promedmail.org/promed-post?place=7112693,198>

See Also

COVID-19 update (37): China (Hong Kong) animal, dog, prelim. serology negative 20200312.7081842

COVID-19 update (30): China (Hong Kong) animal, dog, susp, serology pending 20200306.7057595

COVID-19 update (25): China (Hong Kong) animal, dog, susp, OIE 20200302.7040373

COVID-19 update (22): companion animals, dog susp, RFI 20200229.7036661

COVID-19 update (17): China, animal reservoir, wildlife trade & consumption 20200225.7024245

COVID-19 update (11): animal reservoir, intermediate hosts, pangolin susp 20200220.7009213

COVID-19 update (08): companion animals, RFI 20200218.7002276

COVID-19 update (06): animal reservoir, intermediate hosts 20200217.6997782

Novel coronavirus (40): animal reservoir, pangolin poss intermediate host, RFI 20200210.6972104

Novel coronavirus (28): China (HU) animal reservoir 20200201.6943858

Novel coronavirus (22): reservoir suggested, bats 20200129.6930718

Novel coronavirus (20): China, wildlife trade ban 20200127.6922060

Novel coronavirus (18): China (HU) animal reservoir 20200125.6915411

Novel coronavirus (15): China (HU) wild animal sources 20200123.6909913

Novel coronavirus (03): China (HU) animal reservoir suggested, RFI 20200114.6887480

Novel coronavirus (01): China (HU) WHO, phylogenetic tree 20200112.6885385

Undiagnosed pneumonia - China (HU) (07): official confirmation of novel coronavirus 20200108.6878869
2019

Undiagnosed pneumonia - China: (HU) RFI 20191230.6864153

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