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Subject: PRO/AH/EDR> COVID-19 update (58): Belgium, animal, cat, clinical case, RFI

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CORONAVIRUS DISEASE 2019 UPDATE (58): BELGIUM, ANIMAL, CAT, CLINICAL CASE, REQUEST FOR INFORMATION

A ProMED-mail post
http://www.promedmail.org
ProMED-mail is a program of the
International Society for Infectious Diseases
http://www.isid.org

[1]

Date: Fri 27 Mar 2020

Source: The Brussels Times [abridged, edited]

https://www.brusselstimes.com/all-news/belgium-all-news/102984/coronavirus-belgium-reaches-7284-confirmed-cases/

"Recently, the veterinary medicine faculty in Liege reported that a coronavirus infection has been determined in a cat. The cat lived with her owner, who started showing symptoms of the virus a week before the cat did," said professor Steven Van Gucht [head of the Division of Viral Diseases in humans at Sciensano, Brussels (Belgian national research institute of human and animal health)].

"We want to stress that this is an isolated case. There are no indications that this is common. Additionally, in this case, we are talking about a human-to-animal transmission, not the other way around. The risk of animal-to-human transmission is very small," he added.

The virus can survive on objects for several hours or even days, according to the FPS Public Health. "Good hand hygiene is still the most important to stay healthy. We must also clean flat surfaces, surfaces that are touched often by several people, very often," added Van Gucht.

[Byline: Maithe Chini]

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[2]

Date: Fri 27 Mar 2020 15:44 CET

Source: RTL INFO, Belgium [in French, machine trans., edited]

https://www.rtl.be/info/belgique/societe/un-premier-cas-de-transmission-du-covid-19-de-l-homme-vers-un-chat-confirme-a-liege-ce-n-est-pas-la-regle--1207988.aspx?dt=13:32

During the daily press briefing, the crisis center addressed the 1st proven case of transmission of the COVID-19 disease from a man to an animal in Belgium.

"Our colleagues from the Liege Faculty of Veterinary Medicine were able to demonstrate that a cat belonging to a person infected with COVID-19 had caught the disease. The animal developed symptoms, and the infection has been confirmed," Emmanuel Andre, virologist and inter-federal spokesperson for COVID-19, said on Friday [27 Mar 2020] noon.

A week after its owner, the animal presented symptoms such as diarrhea, vomiting, and difficulty in breathing.

"This type of transmission, from human to animal, required close daily contact. This is an isolated case; it is not the rule." Experts, nevertheless, suggest adopting a series of precautions for infected people who have a pet: Keep the animal at home as much as possible, and ask a loved one to take care of it if you are sick.

So far, reassures the crisis center, "there is therefore no reason to think that animals can be vectors of the epidemic in our society."

Yves Van Laethem, virologist at St. Pierre hospital, puts things into perspective. "We know that the coronavirus (the one currently affecting us) can infect any mammal globally. Other coronaviruses can do it."

In addition, "nothing, in the evolution of COVID-19 suggests that the animal plays a role in infecting humans," he said.

A similar conclusion was issued 2 days ago by the French Academy of Medicine [following a report about 2 infected dogs in Hong Kong]. "To date, there is no scientific evidence on the risk of contamination of [humans] by the virus from domestic animals," wrote the institution, based upon the conclusions of an [ad hoc] committee established 19 Mar 2020 to follow the new coronavirus.

However, "these risks cannot be ruled out," continued the Academy, because the SARS coronavirus from 2002-2003 (genetically close to the current one) could have been "isolated in several animal species" and because "2 dogs tested positive" in Hong Kong whose owner had COVID-19.

Note, however, that the 1st dog had a "very low virus load" and that the following tests were "negative." If the 2nd dog is still under surveillance, neither of the 2 animals showed clinical signs, underlines the Academy.

Following the announcement of the described [human-to-animal] transmission, the Charleroi SPA veterinarian sent us a message. He calls on the population to be careful with this information and not to panic. "Do not abandon your animals either," he told us.

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[3]

Date: Fri 27 Mar 2020

Source: Belgium's Federal Agency for the Safety of the Food Chain (AFSCA) [in Dutch, trans. Mod.AS, edited] http://www.afsca.be/consumenten/dagelijksleven/andere/coronavirus/

### Questions about the coronavirus - 27 Mar 2020

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Q. Can pets infect humans if they have been in contact with infected persons?

A. It is known that the environment of COVID-19 patients can be highly contaminated. Pets that live together with infected persons are highly exposed to the virus. So far, only 3 cases are known (2 dogs in Hong Kong and one cat in Belgium) where the pet has been infected by humans. The dogs did not show any disease symptoms, and the cat had transient respiratory and digestive disorders. So far, there is no evidence that the virus is being transmitted from pet to humans or to other pets. Although it is suspected that the virus that causes COVID-19 in humans originally came from wild animals, it has since adapted to humans ("humanized" virus). The risk of transmission of the virus from pets to humans is negligible compared to the risk of transmission through direct contact between people.

Nevertheless, it is strongly recommended to continue applying the classic hygiene rules (avoid close contact with your animal, especially if you are sick, wash your hands after touching an animal, and do not let the animal lick your face). This is to prevent you from transmitting the virus to your pet and to prevent your pet from becoming a carrier and excretor of the virus as a result of environmental contamination.

## Q. Can my pet get sick from COVID-19?

A. Only a few pets have tested positive for COVID-19. These were living in isolation with people infected with COVID-19. So it indicates that they were infected by the people they shared the home with. Veterinarians are asked to show greater vigilance to register and investigate any additional cases.

## Q. Can my pet be infected by humans?

A. The Scientific Committee of the AFSCA stated in its opinion that this risk is low. However, COVID-19 patients are advised to take the necessary hygienic measures regarding contact with their pet (no close contact, wash hands after touching, do not allow pet to lick the face) to prevent the pet becoming, for a short period, a carrier and excretor of the virus.

# Q. How should one care for the pet animals of infected patients?

A. It is recommended to keep pets of infected patients on the spot and as much as possible indoors, while avoiding close contact between the patient and these animals. Admittedly, further attention should be paid to the welfare of the animal, and the animal should be let out at regular intervals with due regard to the rules of social distance. In the case of a hospital admission by the owner, the pet should be taken care of locally in the familiar environment by a family member or acquaintance.

It is also advisable to minimize contact with pet animals in infected households and to comply with all hygiene measures.

## Q. Should a dog or cat with COVID-19 be euthanized?

A. No, absolutely not. The companion animal that has become infected has been infected by close contact with an infected person. They should be quarantined together. So far, we are aware of only one cat that has developed disease symptoms that are suggestive of coronavirus infection. This cat, meanwhile, is recovering. The 2 dogs in which the virus was diagnosed have never shown any symptoms of disease.

# Q. May I still walk with the dog that lives with an infected patient?

A. Yes, it is important to maintain the welfare of the animal. Admittedly, it is advisable to keep animals, just like humans, at a social distance from other animals and humans. An animal can carry the virus just as objects could. Also avoid freely walking the dog as well as being patted by other people. Feces should be hygienically removed from the environment.

### Q. Can I have my dog or cat tested for COVID-19?

A. At this point in time absolute priority should be given to the use of the tests for humans.

## Q. My dog or cat is sick. Can I still see the vet?

A. Yes, we do not lose sight of the health of your pet. 1st, call your veterinarian to find out how they can receive you and treat your pet.

Q. Are animal shelters open?

A. Animal shelters are closed, but the admission and care of animals is crucial and thus allowed [in need of some further clarification. - Mod.AS]. Volunteers may also contribute to this.

Q. Are animal barber shops open?

A. No, animal barber shops are closed.

Q. Are animal owners allowed to attend their animals in the pasture or stable?

A. Yes, as long as they follow the social-distancing rules.

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[According to the official information (item 3 above) and media, the infected cat has recovered or is recovering. The described symptoms -- diarrhea, vomiting, and difficulty in breathing -- are indicative of the involvement of the digestive and respiratory systems. Felines are known to suffer from 2 disease entities caused by \_Alphacoronavirus\_, namely, FECV (feline enteric coronavirus), causing a transient, mild GI illness in kittens, and FIPV (feline infectious peritonitis virus), capable of infection and replication within macrophages, causing feline infectious peritonitis (FIP), a highly fatal, multisystemic disease. SARS-CoV-2, the causative pathogen of COVID-19, is a \_Betacoronavirus\_ (similar to the causative pathogens of SARS and MERS). Details of the test(s) applied for the diagnosis of the case while excluding the named feline \_Alphacoronavirus\_ infections, as well as data of the cat itself (e.g., age, gender, past vaccinations) will be helpful.

Diarrhea has also been reported from some human COVID-19 cases, an issue deserving attention, also from the epidemiological aspect.

Since the SARS-CoV outbreak in 2002, extensive structural analyses revealed key interactions between the SARS-CoV spike protein RBD ("receptor-binding domain") and its host receptor ACE2 ("angiotensin-converting enzyme 2"), which regulate both the cross-species and human-to-human transmissions of SARS-CoV. The potential receptor usage by the new coronavirus, SARS-CoV-2, in relation to several animal species, has been subject to a study (ref 1; abstract in 20200217.6997782) based on the accumulated knowledge about SARS-CoV. The authors concluded that pigs, ferrets, cats, and non-human primates contain largely favorable contacting residues in their ACE2 receptor, and hence may serve as animal models or intermediate hosts for SARS-CoV-2. This deserves further studies, with special reference to cats in view of their status as companion animals.

The most recent press release of WSAVA (World Small Animal Veterinary Association) concerning COVID-19 in companion animals was published 20 Mar 2020, following the news about the 2 infected dogs in Hong Kong (but before the recent report of positive serology; see 20200326.7146438). Selected excerpts are presented:

"WSAVA President Dr. Shane Ryan said: 'While there is still much we don't know about COVID-19, we do know that the Pomeranian dog did not die from the virus, and the 2nd dog is also showing no signs, either of the disease or of being able to transmit it to other pets or people. The current evidence still strongly indicates that COVID-19 cannot be contracted from pets.'

"The WSAVA says its priority is to support its member veterinarians who care for companion animals around the world, and it urges pet owners not to panic and, instead, to continue to care for their companion animals and to enjoy their company. In difficult times, such as these we face today, says the WSAVA, pets can play a very positive role, providing companionship to the isolated and lonely.

"The WSAVA's Scientific Committee and One Health Committee have worked together in providing advice to its members and pet owners, which can be found here: https://wsava.org/wp-content/uploads/2020/03/COVID-19\_WSAVA-Advisory-Document-Mar-19-2020.pdf.

"Dr. Michael Lappin, chair of the WSAVA's One Health Committee, and Dr. Mary Marcondes, co-chair of the WSAVA Scientific Advisory Committee, recommend that veterinarians remind owners to:

- Keep their companion animals with them if they are self-quarantined,
- Maintain good hygiene practices, including washing hands when interacting with their pets,
- Arrange care for any animals left at home with family or friends should they be hospitalized, and
- Contact their veterinarian immediately if they have questions or concerns."

The above and additional information from WSAVA is available at https://wsava.org/wp-content/uploads/2020/03/WSAVA-Reassures-Pet-Owners.pdf. - Mod.AS

#### Reference

1. Wan Y, Shang J, Graham R, et al. Receptor recognition by novel coronavirus from Wuhan: an analysis based on decade-long structural studies of SARS. J Virol. 2020; pii: JVI.00127-20. doi: 10.1128/JVI.00127-20.

HealthMap/ProMED-mail map:

Belgium: https://promedmail.org/promed-post?place=7151215,99]

# See Also

COVID-19 update (56): China (Hong Kong) animal, dog, final serology positive 20200326.7146438

COVID-19 update (50): China (Hong Kong) animal, dog, 2nd case PCR positive, OIE 20200323.7129951

COVID-19 update (45): China (Hong Kong) animal, dog, 2nd case PCR positive 20200319.7112693

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

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