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CORONAVIRUS DISEASE 2019 UPDATE (26): ANIMAL, CHINA (HONG KONG) HAMSTER, OIE
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A ProMED-mail post
http://www.promedmail.org
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International Society for Infectious Diseases
http://www.isid.org

Date: Fri 21 Jan 2022
Source: OIE-WAHIS 2022 [edited]
https://wahis.oie.int/#/report-info?reportId=47079

SARS-CoV-2 in animals, Hong Kong

Summary
Report type: immediate notification
Started: 17 Jan 2022
Date of confirmation of the event: 18 Jan 2022
Reason for notification: emerging disease
Causal agent: SARS-CoV-2
Morbidity: 0.86%
Mortality: -
Zoonotic potential: yes
Zoonotic potential description: based on the current epidemiological findings, there is suspicion of animal-to-human transmission.
This event pertains to the whole country.

Outbreak location 1: Causeway Bay, Wan Chai
Started: 17 Jan 2022
Ended: 18 Jan 2022
Epidemiological unit: other
Total animals affected:
Species / Susceptible / Cases / Deaths / Killed and disposed of / Slaughtered or killed for commercial use / Vaccinated
Cricetidae (unidentified) (Cricetidae (incognita)): Cricetidae-Rodentia / 69 / 7 / 0 / 69 / 0 / 0

Affected population description: A staff member of this pet shop was diagnosed with COVID-19 on 17 Jan 2022. Subsequently,

samples from 50 hamsters were collected for SARS-CoV-2 testing and the virus was detected in oral and faecal samples from 7 hamsters with no observable clinical signs in this pet shop; other small mammals in the pet shop including rabbits and chinchillas were tested to be negative. To minimize the potential risks of COVID-19 infection and safeguard public safety, all 97 animals in the shop were humanely dispatched on 18 Jan 2022.

Outbreak location 2: Tai po, Tai po
Started: 17 Jan 2022
Ended: 19 Jan 2022
Epidemiological unit: other
Total animals affected:
Species / Susceptible / Cases / Deaths / Killed and disposed of / Slaughtered or killed for commercial use / Vaccinated
Cricetidae (unidentified) (Cricetidae (incognita)): Cricetidae-Rodentia / 863 / 1 / - / 863 / 0 / 0

Affected population description: This warehouse stores small mammals and supplies to 35 pet shops selling hamsters in Hong Kong including the pet shop in Causeway Bay where a staff member had been diagnosed with COVID-19. Samples from 79 hamsters were collected and oral sample from one hamster in the warehouse was tested SARS-CoV-2 positive; samples from other small mammals including mice, rabbits and guinea pigs were tested negative. Among the 863 hamsters in the warehouse, 4 were found dead and 2 were found to be weak; others had no observable clinical signs. It is uncertain whether this has any relation to the virus. To minimize the potential risks of COVID-19 infection and safeguard public safety, all 1116 animals in the warehouse were humanely dispatched.

Epidemiology
Source of the outbreak(s) or origin of infection: unknown or inconclusive
Epidemiological comments: SARS-CoV-2 was detected in multiple hamsters and/or environmental swabs from a pet shop and its warehouse. The samples were collected because a staff member at the pet shop (who had not been to the warehouse) was tested positive for COVID-19 and was found to be infected with a delta strain of virus that has never been detected in Hong Kong. All animals (small mammals -- hamsters, mice, guinea pigs, chinchillas, rabbits) in the pet shop and warehouse were humanely dispatched to minimize the potential risks of COVID-19 infection and safeguard public safety. Hamsters from all pet shops in Hong Kong will also be taken for testing and humane dispatch, and the other animals of these pet shops will also undergo testing. Business is suspended until there is satisfactory results. Import of small mammals has also been suspended. As the hamsters from the index pet shop were imported from Europe with the last 2 consignments arriving on 22 Dec 2021 and 7 Jan 2022, members of the public are also urged to surrender their hamsters purchased from local pet shops after 22 Dec 2021 to the government for testing and humane dispatch. Further testing and epidemiological investigation are continuing. Members of public and the veterinary community will be kept abreast of the development via government announcements.

Control measures at event level
Wild control measures applied: official destruction of animal products, movement control inside the country, screening, surveillance outside containment and/or the protection zone, traceability, disinfection, stamping out

Diagnostic test results
Laboratory name and type / Species / Outbreaks / Test / Test result date / Result
School of Public Health, The University of Hong Kong (local laboratory) / Cricetidae (unidentified) / 2 / real-time reverse transcription polymerase chain reaction (rRT-PCR) / 18-20 Jan 2022 / positive
Tai Lung Veterinary Laboratory, Agriculture Fisheries and Conservation Department (national laboratory) / Cricetidae (unidentified) / 2 / real-time reverse transcription polymerase chain reaction (rRT-PCR) / 19-20 Jan 2022 / positive

[The location of the outbreaks can be seen on the interactive map included in the OIE report at the source URL above.]

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[According to the information provided in the current OIE report, the zoonotic potential is described thus: "Based on the current epidemiological findings, there is suspicion of animal-to-human transmission." The epidemiological comment says: "SARS-CoV-2 was detected in multiple hamsters and/or environmental swabs from a pet shop and its warehouse. The samples were collected because a staff member at the pet shop (who had not been to the warehouse) was tested positive for COVID-19 and was found to be infected with a delta strain of virus that has never been detected in Hong Kong."

As mentioned before, "the current COVID-19 pandemic is being sustained through human-to-human transmission. Several animal species have tested positive for SARS-CoV-2, with infection being introduced to a population as a result of close contact with humans or animals infected with SARS-CoV-2 or in experimental infection studies performed in laboratory settings. The list of animal species for which information on natural or experimental infection is available is presented in Table 1" (of the OIE Technical Factsheet Infection with SARS-CoV-2 in Animals; link available below).

In laboratory experiments, Syrian hamsters (_Mesocricetus auratus_) have been shown to be highly susceptible to the SARS-CoV-2 virus infection, though, depending on age, show either no or only mild clinical signs. Such experiments have also shown hamsters-to-hamster transmission.

"Further studies are needed to understand if and how different animals could be affected by SARS-CoV-2. It is important to monitor infections in animals to better understand their epidemiological significance for animal health, biodiversity, and human health. Evidence from risk assessments, epidemiological investigations, and experimental studies indicate that animals do not play a significant role in the spread of SARS-CoV-2, which is sustained by human-to-human transmission" (https://www.oie.int/app/uploads/2021/11/en-factsheet-sars-cov-2-20211025.pdf; last update 25 Oct 2021).

From a One Health perspective, it will be important to follow the epidemiology of this event. - Mod.CRD

ProMED map of Hong Kong: https://promedmail.org/promed-post?place=8701017,198.]

See Also

COVID-19 update (23): China (Hong Kong) animal, hamster, public health hazard 20220119.8700956
COVID-19 update (19): animal, Slovenia (LJ) pet ferret, OIE 20220117.8700917
2021

COVID-19 update (413): animal, Canada, wild deer 20211202.8700020
COVID-19 update (384): animal, France, variant B.1.160, dog, clinical, research 20211110.8699586
COVID-19 update (373): animal, USA, wild deer, transmission 20211102.8699412
COVID-19 update (276): animal, Poland, mink, research 20210811.8587558
COVID-19 update (260): animal, USA, wild deer, exposure, RFI 20210729.8554149
COVID-19 update (170): candidate animal models, potential hosts, research 20210515.8362876
COVID-19 update (551): animal, pig, research, experimental infection 20201223.8041877
COVID-19 update (530): animal, mink, research, experimental infection, vaccine 20201210.8009205
COVID-19 update (450): animal, cattle, research, experimental infection 20201022.7883213
COVID-19 update (448): animal, raccoon dog, research, experimental infection 20201022.7880283
COVID-19 update (71): animal, mink, WHO/FAO/OIE risk assessment 20210218.8200008
2020

COVID-19 update (520): Denmark, Netherlands, mink, human-animal interface, WHO 20201204.7994061
COVID-19 update (516): China (Hong Kong) animal, dog, Lithuania, mink, OIE 20201203.7986508
COVID-19 update (387): Netherlands, mink, animal & public health, research 20200902.7740793
COVID-19 update (374): animal, ferret, research, epidemiology 20200825.7715862
COVID-19 update (345): animal, cat, research, experimental infection 20200805.7648370

COVID-19 update (330): China (Hong Kong) animal, cat, OIE 20200724.7609215
COVID-19 update (280): animal, pangolin, research 20200623.7502805
COVID-19 update (267): animal, domestic, wild, cat, research 20200617.7480013
COVID-19 update (227): animal, cat, dog, research, experimental infection 20200601.7416648
COVID-19 update (189): Netherlands (NB) animal, farmed mink, research, cat, dog 20200517.7344274
COVID-19 update (183): Japan/USA, animal, research, cat, experimental infection 20200514.7337185
COVID-19 update (166): China (Hong Kong) animal, cat, OIE, resolved 20200508.7314521
COVID-19 update (154): Netherlands (NB) animal, farmed mink, research 20200503.7294846
COVID-19 update (88): Germany, animal, research, pig, chicken, bat, ferret 20200407.7196506
COVID-19 update (75): China (Hong Kong) animal cat, OIE 20200403.7179945
COVID-19 update (70): China (Hong Kong) animal, cat, pets & stock 20200402.7173286
COVID-19 update (57): animal China (Hong Kong) dog, OIE 20210210.8182259
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