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Case report of a cat infected with EBLV-1 in the Netherlands

Content

In October 2024 an infection of European bat lyssavirus type 1 (EBLV-1, lyssavirus Hamburg) was confirmed in a domestic cat in the Netherlands. The cat started to show abnormal behavior on October 22nd. Several weeks before, the animal owners had found a dead bat in their home, which was thought to be caught by the cat. At October 25th the cat was euthanized and sent to the national reference laboratory for veterinary rabies of the Netherlands, Wageningen Bioveterinary Research. Brain material of the cat tested positive in the fluorescent antibody test. Subsequently, the genotype specific Realtime-PCR (RT-PCR)test for EBLV-1 tested positive. Additionally, salivatory gland material and swab material from the mouth of the cat tested positive for EBLV-1 in the RT-PCR, indicating potential infectiousness of the cat. Histopathology of formalin-fixed and paraffin-embedded sections of the brain showed a viral encephalitis with positive immunohistochemical staining against rabies nucleocapsid protein. Using Oxford nanopore technology, the entire genomic sequence could be determined.

Persons exposed to the cat received post-exposure prophylaxis and domestic animals from the same household were quarantined. Pet owners in the same (rural) municipality were informed and were requested to report behavioral changes of pets immediately to a veterinarian. This case stresses the need for vigilance of rabies infections of pets in countries where lyssavirus infections in bats are endemic.

Keywords

rabies, European Bat Lyssavirus, cat, bat, EBLV-1, zoonosis

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Mocht deze info nodig zijn, de correcte volgorde van de auteurs is: P. Eblé, A. Dekker, S. van den End, V. Visser, M. Engelsma, F. Harders, L. van Keulen, E. van Weezep, M. Holwerda