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Infections with Avian Influenza A(H5N1) virus in cats in Poland

OFFLU is closely monitoring information from Poland regarding unusual deaths in domestic cats in multiple households throughout the country. These cases have been reported widely in the press during the past week.

Felidae, both wild and domestic, are known to be susceptible to Influenza A(H5N1) viruses with most cases appearing to be the result of ingestion of infected carcasses of wild birds (Chen *et al* 2016, Frymus *et al* 2021).

A [report from the Polish Chief Veterinary Officer](#) issued on 26 June indicated that nine of 11 affected cats subjected to testing were found to be infected with Influenza A(H5N1) virus. The severe and rapid course of the infection is also consistent with reports of this disease in Felidae. Felidae infected with Influenza A(H5N1) viruses can show a range of clinical signs including listlessness, loss of appetite, severe depression, fever, neurological disease, respiratory and enteric signs, jaundice, and death. Clinical signs would be expected to develop within a few days of exposure to the virus. Other fatal cases of infection in cats with Influenza A(H5N1) have been reported from Europe and North America during the current clade 2.3.4.4b panzootic including a fatal case of Influenza A(H5N1) reported from a cat in France with dyspnea and nervous signs (Briand *et al* 2023). Exposure to infected wild birds or poultry were considered the most likely modes of infection.

It has been shown that Influenza A(H5N1) viruses in the goose/Guangdong/1/96-lineage can invade the body via the intestine in experimentally infected cats and cause extensive damage to endothelial cells lining blood vessels throughout the body. This resulted in damage to multiple organs including the intestine, liver, lung, kidney and brain with multifocal necrosis detected in some organs (Reperent *et al* 2012).

Investigations are required to better understand this cluster of cases to assess links between suspected cases and possible routes of exposure, additional testing of sick and dead cats to establish that the virus is present in other cats and the cause of the disease being seen, and rapid genotypic and phenotypic characterisation of detected viruses for evidence of changes likely to indicate capacity to spread between mammals. Investigations are being undertaken at present by Polish authorities.

Early reports indicated that not all suspect cases had outdoor access suggesting that a direct role from infected wild birds is unlikely as a common source. The wide geographical distribution of suspected cases suggests that the primary mode of spread in these cases is not cat-to-cat transmission. It is likely that infected cats would shed virus via the gut and respiratory tract so any suspected cases should be isolated from other pets, and those handling them should wear appropriate personal protective equipment (PPE). Earlier scientific advice from Europe on preventing influenza A(H5N1) in cats should be considered (Thiry *et al* 2009).

OFFLU will continue to monitor this outbreak and provide updated information when available.

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