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VIRAL DNA FOUND ON PETS OF MPOX PATIENTS

12% of samples taken from the fur, mouth, and anorectal area of pets living with Mpox-infected patients tested positive for Mpox **viral DNA**, although blood samples showed no signs of infection.

Researchers from the Centers for Disease Control and Prevention (CDC) collaborated with public health officials in Minnesota, Tennessee, Virginia, and Washington, DC, to collect samples from 34 pets in 21 households, each containing at least one infectious Mpox patient, between July 2022 and March 2023.

Swabs were taken from the pets within 21 days of direct contact with the patient, and again 3 to 4 months later. Samples were collected from the fur, oral cavity, anorectal region, and any visible lesions from 24 dogs, 9 cats, and 1 rabbit.

The team also gathered samples from the pets' cages, toys, and dishes. They tested and cultured blood samples from the animals and evaluated for the presence of **orthopoxvirus antibodies**. Mpox patients were interviewed regarding their pets, households, and any contact with their or other animals.

Before the outbreak that began in spring 2022, Mpox transmission was primarily zoonotic (from animals to humans), with limited human-to-human spread.

Since 2022, a variant of Mpox, Clade 2, has spread through direct human contact, primarily sexual contact, outside of endemic regions.

By July 2024, no cases of Mpox infection or disease had been confirmed in common domestic animals such as dogs or cats.

In total, 22 out of 191 (12%) animal swabs and 14 out of 56 (25%) environmental samples from four households tested positive for Mpox DNA, but blood samples from the four dogs and one cat revealed no **viable antibodies** for Mpox or orthopoxvirus, indicating no prior infection.

Given the high likelihood of exposure among most of these animals, the absence of evidence of infection may suggest resistance to infection.

Of the Mpox-positive swabs, 82% from pets and 93% from the environment suggested contamination with DNA from infected humans.

Mpox patients should avoid contact with animals until their lesions have fully healed, and public health officials should adopt a One Health approach when investigating potential human-to-animal transmission.

Adapted after Mary Van Beusekom 15 August 2024

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