Research Note: Flu Season for Horses, Dogs, & Cats

Equine influenza A(H3N8) virus (EIV), a major respiratory pathogen in horses, has proven capable of infecting dogs. Arising first in racing greyhounds in the United States before 2004, it has since established itself and spread to pet dogs. This study investigated whether cats can harbor and spread EIV as well. Specific pathogen-free cats aged 9–12 weeks were studied. Cats were inoculated intranasally with an equine influenza A(H3N8) isolate. The next day, a cohort group of uninfected cats was introduced into the same cages with the infected cats. Additional uninfected cats were housed as controls in a separate room. Nasal swabs were collected daily on all cats for virus isolation. EIV titers were measured in serum for 2 weeks. Two cats from each group were euthanized, tracheal and lung sections were examined, and EIV-specific immunocytochemistry was performed. Results showed that cats were susceptible to EIV infection, with inoculated and cohort cats showing clinical signs, positive titers, virus shedding, and characteristic histologic changes in the trachea and lung. Clinical signs were milder in the cohort group and lagged behind those of the inoculated group. The authors conclude that horizontal transmission of A(H3N8) in cats is possible, and that EIV could establish itself and circulate among pet cats.

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