Christine Clodfelter, DVM

Dr. Christine Clodfelter graduated with a BS from the SUNY College of Environmental Science and Forestry, an MBA from Colorado State University, and a DVM from Cornell University. She has enjoyed caring for patients at Northwood Animal Hospital since 2013.

Canine Influenza - The Doggy Flu: *the old, the new, and maybe kitties too!*

Canine Influenza Virus (CIV) has actually been around since 2004, but this past May, outbreaks originating at dog shows in Perry, GA and DeLand, FL spread the latest strain of canine flu through the Southeast into North Carolina. Social media sites were ablaze and panicked calls from conscientious owners poured into veterinary offices across our state.

What is it?

CIV is caused by two strains of Type A influenza viruses known as H3N8 and H3N2. We distinguish different strains of influenza A viruses based on two features found on the outer surface of the virus. This is kind of like telling one car from another based on their headlights or door styles. One of these features is a protein called a hemagglutinin, the H. This protein is very important because it determines how the virus attaches to the cells in a dog's respiratory tract to start the infection. Antibodies made by the dog's immune system can bind to this site and help stop the virus from getting into the dog's cells. The other feature is a neuraminidase, the N, which is an enzyme that the virus uses to get out of the dog's respiratory cell so it can spread.

Where did it come from?

The older H3N8 virus was first detected in Florida's racing greyhounds in 2004. Mutations in an influenza virus found in horses allowed it to be transmitted to dogs, and most importantly, from dog to dog. It has now spread to almost every state in the country.

The newer H3N2 strain of canine influenza originated in birds before mutating to be able to infect dogs. In March of 2015, it made its U.S. debut in a dramatic outbreak of canine respiratory disease in the Chicago area. It took only five months for the H3N2 virus to spread to 23 states. This is the strain responsible for the Spring 2017 outbreak, and was also identified as the cause of respiratory disease in a group of Indiana shelter cats in 2016.

Key Features

In both strains, the most common symptom is a cough that lasts 10-21 days even with antibiotics and cough suppressants. Other signs may include a runny, snotty nose, runny eyes, sneezing, fever, lethargy, and a lack of appetite.

CIV is transmitted during coughing, sneezing, or barking that disperse droplets into the environment. This disease is extremely contagious, with almost all exposed dogs becoming infected. About 80% of infected dogs will show signs of the disease. The other 20%, that do not appear ill, still shed the virus and can infect other dogs unbeknownst to their owners.

The incubation period can vary from one to eight days after infection depending on the strain. Unfortunately, dogs are most contagious during this time.

As with human influenza, most dogs recover within two-three weeks with only supportive care and TLC. However, in weak or otherwise compromised dogs, the damage done by the influenza virus can allow a secondary bacterial infection to take hold, resulting in a life threatening pneumonia.

Prevention

Since this disease is so contagious, suspected patients may be asked to wait in their cars to be evaluated so as not to expose the entire hospital. Any dog suspected of being infected should be isolated for four weeks. The virus can typically live in the environment for two days, but it can easily be killed with most common disinfectants which should be used regularly to clean any facility where dogs are kept. Both strains of CIV presently circulating are in the H3 hemagglutinin family. While they are actually 85% similar, key differences mean that older vaccines targeting only the H3N8 strain are not effective enough to offer good protection against the newer H3N2 strain. Luckily, there is a bivalent vaccine that gives protection against both strains. It is important for owners to be aware that vaccination will decrease, but not eliminate, the risk that their dog will contract the virus if exposed. While vaccination can not completely eliminate the chance of infection, it can lessen the severity and length of the illness.

Dogs considered at risk for CIV are social dogs who frequently mingle with others and would benefit from the vaccine. Pets who stay in their own well fenced yards and never contact other dogs, are considered low risk.

Speak with your veterinarian to access your dog's risk and make a prevention plan that best suits your dog's lifestyle.

see ad on page 15