

CANINE DISTEMPER VIRUS (CDV)

OVERVIEW

Canine Distemper Virus (CDV) is a highly contagious, incurable and often deadly disease. The virus occurs worldwide and is a leading cause of death in unvaccinated puppies and dogs. Besides domestic dogs, this viral disease infects other wild carnivores such as fox, wolves, coyotes, coati, raccoons, skunks, badger, bear, and ferrets. Recently (2007), a University of Leeds' study linked CDV to the death of African lions, emphasizing the deadly threat of this disease to a wide variety of carnivore animal species.

The CDV can infect dogs of any age but puppies between 3 and 6 months of age are most likely to become ill and die. Older dogs which have never been vaccinated are also very susceptible to infection and pregnant mothers can pass the infection to her unborn pups.

SYMPTOMS

Early symptoms during the incubation period (3 to 6 days after infection) include fever, loss of appetite, and mild eye inflammation. These early symptoms are usually not noticed, but as the disease progresses the symptoms increase in severity. The symptoms of this disease are also variable depending on the body system most affected, making diagnosis of this disease a very difficult task. Respiratory and gastrointestinal symptoms include runny eyes and nose (usually a thick green discharge), diarrhea, coughing, labored breathing, and vomiting. Respiratory and gastrointestinal symptoms are exacerbated by secondary bacterial infections which is the reason some ill dogs appear to improve temporarily when placed on antibiotics. Once the nervous system (brain and spinal cord) of puppies and dogs is infected, the animal usually dies. Neurological symptoms include depression, increased sensitivity to light, touch, and sound, uncoordinated movement progressing to muscle twitching or spasm, paralysis, blindness, and seizures to include the "chewing gum fit" with foaming at the mouth. Occasionally, skin lesions to include hardening of the foot pads and nose may be seen. The terminal stage of this disease usually occurs 2 to 4 weeks after infection but may be delayed several months in older dogs that have a more developed immune system.

Infection through the pregnant mother dog to her unborn pups can lead to spontaneous abortion, persistent infection in newborn pups, or the birth of normal looking puppies that rapidly develop symptoms and die within 4 to 6 weeks.

TRANSMISSION (HOW THE DISEASE SPREADS FROM ANIMAL TO ANIMAL)

Infected dogs shed the virus through all body secretions and excretions. The main methods of disease transmission is by the dog breathing in airborne viral particles emitted by barking, sneezing, and coughing or by licking contaminated surfaces. A dog recovering from distemper can shed the virus (can spread disease) for 60 to 90 days after all symptoms have disappeared. Routine cleaning and disinfection using quaternary ammonium compounds or 10% bleach is effective in killing the virus in the environment.

DIAGNOSIS AND TREATMENT

Diagnosis of this disease is challenging but is usually done based on the dog's vaccination history, clinical symptoms and results of various laboratory tests to support a probable diagnosis. Unfortunately, laboratory tests frequently provide false results. At present there is no specific drug or treatment to kill the distemper virus. Ill dogs must be separated from other dogs with strict sanitation in place to prevent spread of this disease by the caregiver's clothing, hands and feet. Infected animals may survive with supportive care that is medically intensive and prolonged. Dogs which survive CDV never regain full health. Survivors may have teeth with enamel dysplasia, abnormal body walking gaits, decreased eyesight, and hardening of the foot pads and nose.

PREVENTION

Vaccinations and avoiding contact with infected animals or contaminated environments are the best strategies for disease prevention. Following vaccination protocols based on the age of the dog is essential for adequate protection against infection. Vaccination schedules can start at about 6 weeks of age and continue until 12 or 16 weeks of age, with a 3 to 4 week interval between shots. Until the vaccination series is completed, the pup or dog is at risk to contract this deadly disease. Avoid taking a pup or unvaccinated dog to places where dogs congregate (parks, obedience classes, pet daycare, grooming). If absolutely necessary, visit only reputable establishments and training places which require proof of vaccinations and practice appropriate sanitation procedures.

Ill animals presented to Pima Animal Care Center are immediately isolated for medical assessment. Once this disease is suspected, the pup or dog is euthanized to stop further suffering of the pup or dog and prevent the spread of this highly contagious deadly disease to susceptible animals both in the Shelter and in the community.