Distemper in Puppies and Dogs

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Canine distemper is a paramyxovirus, which appears very similar to the paramyxovirus causing human measles. Canine distemper virus in the dog can affect a wide range of organs including the skin, brain, eyes, intestinal and respiratory tracts. The virus is transmitted through the air through coughing by infected animals and also through body secretions such as urine. Dogs of any age can be affected, however, most are puppies less than 6 months of age.

What are the symptoms?

Distemper virus can affect many systems of the body. The most common signs are nasal and eye discharge, coughing, diarrhea, vomiting, fever that may come and go, and seizures. Mildly affected dogs may only cough and be misdiagnosed as having "kennel cough." Others may develop pneumonia. Puppies that recover may have severe tooth enamel damage. The nose and foot pads of the young dog may become thickened, hence the nickname "hardpad disease."

What are the risks?

Distemper is serious and can spread rapidly through a kennel, especially if unvaccinated individuals are present. Not all patients will die, however, a significant number may. Dogs of every age are susceptible, however, the very young and old have the highest death rate. Death rates may be as high as 75%. It is erroneously believed by some that all older dogs have a natural immunity. Although some may have immunity, many do not. Patients that recover from distemper may suffer permanent damage to vision as well as the nervous system. Puppies which recover can have severely mottled teeth due to abnormalities of the developing enamel.

How is canine distemper diagnosed?

There are several methods used to diagnose distemper in dogs and puppies. A polymerase chain reaction test (a laboratory test) can be performed on samples of urine, cerebrospinal fluid, urine, blood, and post mortem tissues. Skin biopsies, including the pads, can be specially examined for the presence of portions of the canine distemper virus. Depending upon the severity and time of infection, blood examined microscopically may show characteristic changes called "canine distemper inclusion bodies". With some diagnostic tests, such as antibody tests, it is difficult, if not impossible, to distinguish between infection and the changes normally seen with canine distemper vaccination.

How is canine distemper treated and prevented?

There is no specific treatment for canine distemper. Therapy is largely supportive. Intravenous fluids are administered to prevent dehydration. Anti-seizure medications can be used if neurologic signs develop.

Excellent vaccines have been developed to prevent canine distemper in dogs. The vaccines have been widely used for many years and have made significant strides in reducing the frequency of this disease. In the past, vaccines comprised of the human measles virus were occasionally utilized as a preventive. Using measles vaccines is a seldom practiced procedure today. Excellent vaccines with minimal side effects are available to give to puppies and dogs of every age. It must be emphasized that many older dogs do not develop a life long immunity to distemper. The vaccinations should be boostered for the life of the animal. Animals disgnosed with or suspected of having canine distemper should be quarantined.

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