

SOUTH EAST COUNTRY VETS

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CANINE PARVO VIRUS INFECTION

WHAT IS CANINE PARVOVIRUS?

Canine parvovirus (CPV) infection is a relatively new disease, appearing first in 1978. It is highly contagious and characterized by the development of severe vomiting and bloody diarrhoea. The prevalence of parvovirus in our local area is relatively high. Although all dogs are at risk of developing CPV, younger dogs under six months of age are most susceptible.

HOW DOES A DOG BECOME INFECTED?

The cause of CPV is a virus and the main source of the infection is from virus shed in the faeces of infected dogs. Susceptible animals become infected by contact with the virus from a contaminated environment. Unlike most other viruses, CPV is stable in the environment and can potentially survive for a number of years under the right conditions. Common areas the virus is picked up from include directly from infected dogs or from areas where infected dogs have been such as town parks, footpaths or dog parks. Parvovirus is a particularly tough virus and it can easily be carried on your shoes or your car tyres from an infected area to your home. Handling of an unprotected puppy by people with contaminated hands and clothing is also a source of infection. The normal incubation period (time from exposure to the virus to the time when signs of disease appear) is 4-14 days.

WHAT DOGS ARE AT RISK?

Any dog which has not been fully vaccinated is at risk of developing parvovirus. CPV may affect dogs of all ages, but the majority of cases of disease are seen in dogs less than 6-12 months of age

CLINICAL SIGNS OF PARVO VIRUS

The most common form of the disease is the intestinal form known as enteritis. Parvovirus enteritis can be seen in dogs of any breed, sex, or age. The disease progresses very rapidly and death can occur as early as two days after the onset of the disease. Parvovirus infection can also affect the heart resulting in a myocarditis (inflammation of the heart muscle) resulting in heart and respiratory failure.

If your dog is showing any of the following signs it is important to contact your local veterinarian immediately.

- lethargic, loss of appetite
- vomiting
- diarrhoea (with or without blood)
- dehydration
- fever



HOW IS IT DIAGNOSED?

Not all cases of bloody diarrhoea (with or without vomiting) are caused by parvovirus. The most common way to detect parvovirus is using a faecal test which can be performed in the clinic and a result obtained within 10 minutes. This test is highly sensitive and specific for parvovirus. Blood tests may be performed to assess the severity of disease (particularly for secondary effects on liver and kidney function) and to further guide treatment (correction of glucose and electrolyte imbalances, protein and red blood cell levels).

Occasionally, if a puppy has been vaccinated with a live vaccine in the 10 days preceding testing, a false positive may result – this is interpreted in light of any other dogs in the household being affected by CPV. Very occasionally a dog with parvovirus can test negative (this is usually due to very severe bloody diarrhoea influencing the test results).

CAN IT BE TREATED SUCCESSFULLY?

Parvovirus destroys the lining of the intestinal tract which not only causes severe fluid losses, dehydration and electrolyte imbalances but also allows bacteria to be absorbed into the blood. The treatment of parvovirus ultimately involves controlling or preventing these problems.

The first step in treatment is to correct dehydration and electrolyte imbalances. This requires administration of intravenous fluids containing appropriate electrolytes and glucose. Antibiotics are given to prevent or control septicaemia. Pain relief is given as needed to control abdominal discomfort and anti-emetics to control nausea and vomiting. In severe cases, plasma and blood transfusions may be required. Despite aggressive treatment, parvovirus infection may still have a fatal outcome in some cases. Without veterinary treatment the chance of recovery in a severely affected animal is very small.

WHAT IS THE SURVIVAL RATE?

Most dogs with parvovirus infection recover if aggressive treatment is provided and if therapy is started early in the course of the disease. Very young dogs and some breeds (for reasons not fully understood), have a much higher fatality rate than other breeds.

CAN IT BE PREVENTED?

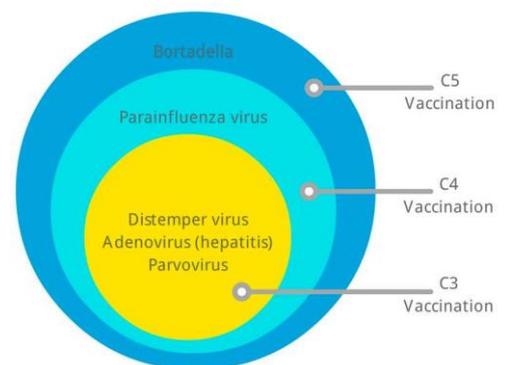
The best method of protecting your dog against parvovirus is vaccination. Puppies require a course of three vaccinations received at 6-8, 10-12 and 14-16 weeks of age. After the initial series of puppy vaccinations, all dogs require a booster at least once a year. Breeding bitches should be up to date with vaccinations or given a booster vaccination before mating or immediately before whelping in order to transfer protective antibodies to the puppies.

It is important to realise that a puppy or any older previously unvaccinated dog is not completely protected until two weeks after their final vaccination. Until this time the animal should NOT be walked outside their own yard nor be socialised in an unsafe environment. If your yard has ever been home to a parvovirus infected dog it also remains a source of infection for future unprotected puppies introduced into it.

IMMUNITY & VACCINATION

Maternal antibodies are the antibodies present in the mother's milk that is suckled during the first 24 hours after the puppy's birth. Puppies receive a certain amount of protection against parvovirus from their mother's colostrum so long as she is vaccinated up to date. It is important that puppies receive their first vaccination at six weeks of age as the mother's antibodies can begin to reduce in number by this age. Two follow up vaccinations are required at ten and fourteen weeks of age.

If a puppy recovers from parvovirus infection, they are immune temporarily, however vaccination following recovery is strongly recommended.



IS THERE A WAY TO KILL THE VIRUS IN THE ENVIRONMENT?

The stability of the canine parvovirus in the environment makes it important to properly disinfect contaminated areas. Parvovirus is resistant to the effects of heat, many detergents, and alcohol. Environmental decontamination can be accomplished by cleaning hard surfaces, food bowls, water bowls, and other contaminated items with an appropriate antiviral disinfectant such as F10, Trigene or Virkon (at the appropriate dilution – available from your local veterinarian) or with a solution of 250ml of chlorine bleach in 5 litres of water. Each of these products can be impaired by organic matter (such as faeces and vomit) and needs to have adequate exposure time and proper concentrations to work effectively.

DOES PARVOVIRUS POSE A HEALTH RISK TO ME OR MY CATS?

At the present time, there is no evidence to indicate that canine parvovirus is transmissible to cats or humans.

IN SUMMARY....

Parvovirus is a very common problem that is a huge killer of puppies. Due to its ability to be transmitted through hands, clothes, rodents and insects, it is virtually impossible for a dog not to be exposed to the disease at some stage in its lifetime. Modified live vaccines are safe and effective, but despite the best vaccination protocol, all puppies will have a window of susceptibility before they are protected. Prompt treatment by a veterinarian will increase survivability in infected puppies and working with your veterinarian on a vaccination program and taking appropriate precautions prior to obtaining this immunity is important.

This information sheet is not intended as a substitute for a veterinary consultation.

It is recommended that a consultation be arranged with a veterinary practitioner if you have any concerns with your pet's health.