

Deadly Parvovirus Can Be Controlled with Proper Vaccination

Published: Jul. 25, 2005

Source: Dr. Marcella Ridgway

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Canine parvovirus, known as "parvo," can cause serious illness and sometimes death in puppies. Fortunately, proper vaccination can prevent or decrease the severity of parvoviral infections, and, even if a puppy is infected, there is a good chance of survival with adequate treatment.

According to Dr. Marcella Ridgway, veterinary internal medicine specialist at the University of Illinois Teaching Hospital in Urbana, parvo attacks rapidly dividing cells, especially those of the small intestine and immune system tissues, such as lymph nodes. Damage to the intestinal lining decreases the ability to absorb water and nutrients, leading to dehydration and malnourishment, and increases the chance for invasion of bacteria from the gut through the injured intestinal wall. Damage to lymph tissue, which produces white blood cells, weakens the immune response and makes animals susceptible to secondary infections by other disease agents.

Signs in the puppy appear as lethargy, refusal to eat (anorexia), vomiting, and usually bloody diarrhea, resulting in severe dehydration that can lead to death if not treated promptly. Illness caused by parvovirus is more commonly seen in very young dogs, since they have "naive" immune systems. Older dogs are less prone to serious infection since they likely have developed natural immunity either through vaccination or exposure through the environment. If infected, older dogs usually have milder problems or no problems at all.

Diagnosis of parvo is based on signs, physical examination, and, often, results of a complete blood cell count and a highly sensitive assay that detects parvovirus in a fecal sample. The treatment and prognosis of parvo disease depends on the severity of the infection, which depends on such factors as the age of the dog, its overall health, and the amount of and virulence of the strain of virus to which it was exposed.

Puppies with parvoviral enteritis need intensive fluid therapy around the clock to replace lost fluids and nutrients. Medication that prevents vomiting is used to decrease fluid loss from vomiting and to decrease the risk of pneumonia secondary to inhaling vomitus. Diarrhea is allowed to persist to flush the virus out of the gastrointestinal system. Infected puppies also need antibiotics to ward off threats to their weakened immune systems.

A white blood cell count can indicate how well the immune system is recovering. Most puppies do well with timely treatment. After recovery, dogs actually have a strengthened immunity to the virus for at least a year. "A good thing about parvo is, once dogs get it, they don't usually get it again," explains Dr. Ridgway.

Parvo is highly contagious, and Dr. Ridgway recommends immediate "booster" vaccination for any dogs that have been in contact with an infected dog. "Since it takes time for the virus to multiply and spread through the body, a vaccination shortly after exposure is effective in boosting the immunity of dogs that have been previously vaccinated, preventing or reducing the severity of the disease," she says.

Parvovirus is ubiquitous in the environment, and may be more concentrated in areas where infected dogs have been. Thousands of viral particles can be shed through bodily fluids such as saliva, vomitus, and feces of infected dogs. The virus is very hardy and survives especially well in the environment when encased in organic matter, such as vomitus or feces.

Dr. Ridgway explains "It's very likely a dog will be exposed to the virus sometime in its life, so the important thing is providing protection through vaccination."

For more information about parvovirus, contact your local veterinarian.

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