Commentary
Volume 12:S8, 2021

Journal of Veterinary Science and Technology

ISSN: 2157-7579 Open Access

A Note on the Effect of Infectious Virus on Dogs

Alec Wade*

Department of Veterinary Science, Addis Ababa University, Bishoftu, Ethiopia

About the Study

Canine parvovirus (CPV, CPV2, or parvo) is an infectious virus that primarily affects dogs. CPV is very contagious and is transmitted from dog to dog by direct or indirect contact with excrement. Vaccines can help prevent this infection, but untreated cases can have a death rate of up to 91%. Veterinary hospitalization is frequently required for treatment. Other species, such as foxes, wolves, cats, and skunks, are frequently infected with canine parvovirus. Panleukopenia, a separate form of parvovirus, can also affect cats. Infected dogs show symptoms three to ten days after contracting the disease. Lethargy, vomiting, fever, and diarrhoea are some of the symptoms (usually bloody). Lethargy is usually the initial symptom of CPV.

Loss of appetite and weight, as well as diarrhoea followed by vomiting, are secondary symptoms. Diarrhea and vomiting cause dehydration, which disrupts the electrolyte balance and can be fatal to the dog. As a result of the compromised immune system, secondary infections develop. Blood and protein leak into the intestines, producing anaemia and protein loss, and endotoxins escape into the bloodstream, resulting in endotoxemia.

In the later stages of the infection, dogs have a unique odour. The dog's white blood cell count drops, making him even weaker. Shock and death can result from any or all of these circumstances. Younger animals have a lower chance of surviving. The presence of CPV2 in the faeces can be detected using an ELISA or a hem agglutination test, or by using electron microscopy. PCR can now be used to diagnose CPV2 and can be utilized later in the disease when there is perhaps less virus being shed in the faeces and ELISA may not be able to detect it. In certain cases, the intestinal form of the infection is mistaken for coronavirus or other types of enteritis. However, parvoviruses are more deadly, a low white blood cell count, and necrosis of the intestinal lining all hint to parvovirus, particularly in an uninfected dog. Because the symptoms are distinct, the cardiac variant is usually easier to diagnose. The rate of survival is determined on how quickly CPV is detected, the age of the dog, and how aggressively the treatment is administered. Because of severe dehydration and probable damage to the intestines and bone marrow, the current standard of care is supportive care, which includes extended hospitalization.

If CPV is suspected, a CPV test should be performed as soon as feasible to allow for early treatment and a higher survival chance if the disease is confirmed. Antinausea injections (antiemetics) such as maropitant, metoclopramide, dolasetron, ondansetron, and prochlorperazine, and broad-spectrum antibiotic injections such as cefazolin/enrofloxacin, ampicillin/enrofloxacin, metronidazole, timentin, or enrofloxacin are all recommended as part of supportive care. Antinausea and antibiotic injections are given subcutaneously, intramuscularly, or intravenously, as well as IV fluids.

A sterile, balanced electrolyte solution with an adequate amount of B-complex vitamins, dextrose, and potassium chloride is usually used in the fluids. Analgesic drugs can be used to relieve the abdominal pain caused by repeated bouts of diarrhoea; however, opioid analgesics can cause secondary ileus and reduced motility. In addition to the fluids given to achieve appropriate rehydration, an equivalent amount of fluid is given intravenously each time the puppy vomits or has diarrhoea in a large amount. The animal's fluid requirements are calculated by its body weight, weight variations over time, degree of dehydration at presentation, and surface area.

A blood plasma transfusion from a dog who has already survived CPV is sometimes given to a sick dog to provide passive immunity. Some vets keep these dogs on their premises or keep frozen serum on hand. There have been no randomised controlled trials on this treatment. Fresh frozen plasma and human albumin infusions can also help to replenish the large amounts of protein lost in severe cases and ensure proper tissue repair. However, with the development of safer colloids like Hetastarch, this is debatable, as it will also enhance colloid osmotic pressure without the negative effect of predisposing that canine patient to future transfusion reactions. The IV fluids are progressively removed, and extremely bland food is gradually introduced until the dog can keep fluids down.

Oral antibiotics are given for a specific number of days, based on the patient's white blood cell level and ability to fight secondary infection. If IV fluids are started as soon as symptoms are discovered and the CPV test confirms the diagnosis, a puppy with minor symptoms can recover in two or three days. If the condition is more serious, puppies can be sick for up to two weeks, depending on the therapy they receive. Even if the dog is admitted to the hospital, there is no guarantee that it will be healed and survive.

How to cite this article: Wade, Alec. "A Note on the Effect of Infectious Virus on Dogs." *J Vet Sci Techno* 12 (2021)S8: 012.

***Address for Correspondence:** Dr. Alec Wade, Department of Veterinary Science, Addis Ababa University, Bishoftu, Ethiopia; Tel: 9657493661; E-mail: wadealec77@gmail.com*

Received: October 07, 2021; **Accepted**: October 21, 2021; **Published**: October 28, 2021