

Canine Parvovirus Outpatient Treatment Research Summaries

Canine parvovirus is a highly contagious gastrointestinal virus with a significant risk of outbreaks in shelters. Hospitalization for the treatment of parvovirus can be very expensive, putting shelters and owners in the difficult position of deciding between treatment and euthanasia. However, studies have shown that outpatient treatment protocols can be implemented for some patients as a humane and less expensive alternative.

Evaluation of an outpatient protocol in the treatment of canine parvoviral enteritis

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Study Design

The study compared outcomes for 40 client-owned dogs with parvovirus at the Colorado State University Veterinary Teaching Hospital. Dogs of all levels of clinical severity without comorbidities at the time of presentation were eligible for study inclusion. The dogs were randomized into two groups: 20 dogs received “inpatient” treatment, and 20 dogs received “outpatient” treatment. However, to create a more controlled setting for comparison of the protocols, dogs were actually all treated in the hospital for both the inpatient and outpatient protocols.

At admission, all dogs were stabilized with intravenous fluids, as well as dextrose and heat support as needed. They were then sorted into treatment groups. Treatment mainly involved fluids, antibiotics, and anti-nausea medication. The inpatient group received treatments intravenously while the outpatient group received them subcutaneously every six hours. Additional treatment was provided as needed, including electrolyte supplementation, glucose supplementation, pain control, and syringe feeding.

All of the dogs received continuous care and monitoring from trained veterinary personnel. Dogs were monitored for multiple factors, including weight, clinical severity, appetite, fluids and medications administered, hydration status, and bloodwork parameters. Dogs were discharged when vomiting had resolved, they were drinking and hydrated, they were voluntarily eating, and their white blood cell count improved.

Study Results

Survival rates between the inpatient and outpatient groups were not significantly different: 90% (18 of 20) of the dogs treated with the inpatient protocol survived to discharge; 80% (16 of 20) of the outpatient group survived. Three of the outpatient protocol dogs died or were euthanized, and 1 dog developed severe clinical signs, which was considered a failure of the outpatient protocol. The mean duration of hospitalization and the quality of clinical recovery was not significantly different between the groups. Among the dogs not successfully treated, most weighed less than or equal to 4 kilograms and were less than or equal to 4 months of age. The authors of the study noted some signs indicated the inpatient group may have been more severely affected by parvovirus than the outpatient group, which may have skewed the outcomes of the outpatient group to be more favorable.

Study Takeaways

For cases where resources are limited, an outpatient protocol can be used as an alternative to intensive inpatient hospitalization or euthanasia. The outpatient protocol can be applied in a shelter, in owner or foster homes, or even in a hospital setting, and can achieve good survival rates. Even though an outpatient protocol may not be appropriate for all dogs, especially those with more severe clinical signs, a spectrum of care approach matched to the needs of the individual patient and the resources available is a reasonable option. Diligent, supportive care and monitoring are still vital to achieving good outcomes.

Retrospective evaluation of outpatient canine parvovirus treatment in shelter-based low-cost urban clinic

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Study Design

This retrospective study reviewed the medical records of 95 dogs who presented to the Pennsylvania Society for the Prevention of Cruelty to Animals (PSPCA) Parvovirus Outpatient Clinic and were determined to be suitable for outpatient treatment. The records were reviewed to determine the survival rate and associated risk factors for an outpatient treatment protocol in a shelter-based low-cost clinic setting.

Treatment was based on the Colorado State University Outpatient Treatment Protocol for Parvoviral Enteritis but was adapted to a twice-daily regimen to be more feasible for owners caring for their dog at home. Treatment included subcutaneous fluids, antibiotics, dewormer, and anti-nausea medications. Additional supplementation and medications were provided as needed. Owners were instructed to return to the clinic twice a day for treatment, spacing the treatments out as far as possible. When owners were not able to bring in dogs for a treatment, subcutaneous fluids, maropitant, and famotidine were supplied to the owner to give at home. Data was collected on various parameters, including physical exam findings, duration of clinical signs, bloodwork, and owner compliance.

Study Results

The survival rate for the dogs treated with the outpatient protocol was 83% (79 of 95). Ten dogs were euthanized or died, five were lost to follow-up, and one received more advanced care.

There was some variation in owner compliance: 66% of owners showed up for all treatments, and only 12.4% showed up for less than 80% of treatments. However, there was no significant difference in survival for different proportions of missed appointments or for the proportion of treatments received at home instead of in the clinic. Dogs received an average of 3.8 days of subcutaneous fluid therapy; however, the number of days requiring fluids was not associated with survival. Dogs that had low blood sugar requiring supplementation did not have significantly different survival rates.

Surprisingly, a longer duration of clinical signs prior to treatment was associated with increased survival, possibly due to these dogs better compensating for their disease. Weight gain during treatment was also significantly associated with increased survival. Dogs that required intravenous fluids for stabilization on initial presentation to the clinic were 5 times less likely to survive than those that did not require intravenous fluids. Dogs with hypothermia on initial presentation were significantly less likely to survive.

Study Takeaways

Outpatient treatment for canine parvovirus has high survival rates with significantly lower cost than hospitalization. With proper training and guidance, outpatient protocols can be applied in shelters, foster homes, and low-cost clinics. This study screened dogs based on the severity of signs at presentation and determined them to be suitable for outpatient treatment; not all dogs may be appropriate candidates. As this study suggests, dogs hypothermic on presentation may have a poorer prognosis. Further research is needed to identify additional prognostic indicators for outpatient protocols.