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Clinical Management of Canine Parvovirus Infection in Dogs: A Field Case Report

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Abstract

Canine Parvovirus Infection is a highly contagious viral disease affecting puppies and young dogs and is characterized by severe vomiting, hemorrhagic diarrhea and dehydration. The present field case report describes the clinical management of fifteen dogs presented with classical clinical signs of parvovirus infection. The affected animals were treated with intravenous fluids, antibiotics, antiemetic and supportive therapy. The treated dogs showed gradual recovery within 4-5 days. The findings suggest that early supportive treatment plays an important role in improving survival in parvovirus infected dogs

Key words: Dog, Parvovirus, Gastroenteritis, Fluid therapy.

Introduction

Canine Parvovirus Infection is one of the most important viral diseases of dogs worldwide and causes severe gastroenteritis particularly in puppies **(Greene, 2012).** The disease primarily affects puppies between 6 weeks to 6 months of age due to immature immune systems **(Goddard and Leisewitz, 2010).** The virus infects rapidly dividing intestinal crypt cells which results in destruction of intestinal epithelium and severe enteritis **(Decaro and Buonavoglia, 2012).**

Clinical signs include vomiting, foul smelling bloody diarrhea, dehydration, depression and anorexia **(Prittie, 2004).** In severe untreated cases, mortality may reach up to 90% especially in young puppies **(Pollock and Carmichael, 1983).** Since no specific antiviral therapy is available, treatment mainly focuses on supportive therapy to maintain hydration, correct electrolyte imbalance and prevent secondary bacterial infections **(Merck Veterinary Manual, 2023).**

Materials and Methods

Fifteen dogs showing clinical signs suggestive of parvovirus infection were presented for treatment under field conditions. Diagnosis was made on the basis of history, clinical

signs and typical symptoms associated with parvoviral enteritis **(Goddard and Leisewitz, 2010).**

Clinical Signs Observed

Clinical Sign	Number of Dogs
Vomiting	15
Bloody diarrhea	15
Dehydration	15
Loss of appetite	12
Lethargy	15

These clinical signs are commonly reported in canine parvovirus infection and are mainly due to severe intestinal damage and dehydration **(Prittie, 2004).**

Treatment

Protocol

Fluid

Therapy

Intravenous fluids were administered to correct dehydration and electrolyte imbalance.

- Normal Saline (NS)
- Dextrose Normal Saline (DNS)
- Ringer Lactate (RL)

Dose: 60–90 ml/kg/day IV depending on dehydration **(Tizard, 2018).**

Antibiotic Therapy

To prevent secondary bacterial infection due to intestinal mucosal damage:

Amoxicillin Sulbactam

Dose: 15 mg/kg IM/IV twice daily **(Greene, 2012).**

Antiemetic Therapy

Ondansetron

Dose: 0.2–0.5 mg/kg IV **(Prittie, 2004).**

Gastric Protectant

Pantoprazole

Dose: 1 mg/kg IV.

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Supportive Therapy

Vitamin B Complex, electrolytes and nutritional support were provided. After vomiting was controlled, dogs were offered easily digestible food such as rice water and chicken soup. Nutritional support plays an important role in recovery from parvovirus infection **(Merck Veterinary Manual, 2023).**

Results

Parameter	Observation
Dogs treated	15
Recovery observed	3-4 days
Survival rate	75-100%

Vomiting was controlled within 2-3 days and diarrhea gradually reduced. All dogs showed improvement with supportive therapy.

Discussion

Supportive therapy remains the cornerstone in the treatment of canine parvovirus infection **(Goddard and Leisewitz, 2010).** Fluid therapy is essential to correct dehydration, electrolyte imbalance and hypovolemia caused by severe vomiting and diarrhea **(Tizard, 2018).**

Administration of broad-spectrum antibiotics helps to prevent secondary bacterial infection resulting from intestinal mucosal damage **(Greene, 2012).** Antiemetics such as ondansetron help control vomiting and allow better fluid and nutritional management **(Prittie, 2004).** Similar observations have been reported in previous studies where early supportive treatment significantly improved survival rates in parvovirus infected dogs **(Decaro and Buonavoglia, 2012).**

Conclusion

Early diagnosis and aggressive supportive therapy significantly improve survival in dogs affected with Canine Parvovirus Infection. Vaccination and proper hygiene are the most effective preventive measures against the disease **(World Organisation for Animal Health, 2021).**

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