Int.J.Curr.Microbiol.App.Sci (2020) *9*(2): 2993-2996

International Journal of Current Microbiology and Applied Sciences
ISSN: 2319-7706 **Volume 9 Number 2 (2020)**
Journal homepage: http://www.ijcmas.com

Case Study

https://doi.org/10.20546/ijcmas.2020.902.342

Canine Parvovirus Infection: A Case Report

Vaishali[1*] and Tushar Jain[2]

[1]Department of Veterinary Public Health and Epidemiology, LUVAS, Hisar, Haryana-125001
[2]Vet Lab, New Delhi- 110016, India

**Corresponding author*

Keywords

Canine, Parvovirus infection, immunocomb, S2 positive

Article Info

Accepted:
20 January 2020
Available Online:
10 February 2020

A B S T R A C T

Two dogs of 2 and 3 month old were presented with history of lethargy, vomition and foul smelling diarrhea. The dogs were febrile, dehydrated, mucous membrane were pale and pinkish. Both the dogs were sent for haematological examination and revealed microcytic and hypochromic anemia. Both the dogs were tested for canine parvo virus through ELISA. Serum sample of one dog was sent for modified Elisa (immunocomb) test and it tested S2 positive. Faeces of the other dog were sent for immune chromatographic qualitative test and showed reaction.

Introduction

Canine parvovirus infection is one of the most important enteric pathogen of dogs. The disease has a rapid clinical course and death that can occur in 2–3 days after onset of signs (Miranda and Thompson, 2016). Canine parvovirus is one of the most dangerous and contagious viruses with high morbidity (100%) and frequent mortality up to 10% has been reported (Appel *et al*., 1978). Puppies between the time of weaning and 6 months of age are most susceptible. Canine parvovirus infection is characterized by two clinical forms(i) Enteritis form affecting dogs of all ages, (ii) Myocarditis form in which pups of less than 3 months of age are susceptible(Woods *et al*., 1980). Dogs with enteritis show symptoms of depression, loss of appetite, vomiting, high fever and severe diarrhea in early stage (Kramer *et al*., 1980).The route of transmission of canine parvovirus infection is through oral contact with infected faeces or contaminated surfaces (Black *et al*., 1979). Vaccination is the best method to control canine parvo virus infection (Zhao *et al*., 2016).

History

Case 1

A 2 month old puppy was presented with history of lethargy, vomition and foul smelling

diarrhea. On clinical examination, animal was febrile (102.3°F), dehydrated with pale mucous membrane.

Case 2

A 3 month old German shepherd pupnot vaccinated for canine parvo virus was presented with acute onset of anorexia, recurring vomition and blackish diarrhea. Mucous membrane were slightly pinkish and temperature was 101.4 °F),

Treatment and Discussion

Case 1: i/v ringer lactate, metrogyl, broad spectrum ampicillin od

Eldervet, pantop bid
Emset bid for 7 days.

Oral feeding was restricted for first 4 days. After oral rehydration solution and haematinics were given

Case 2: i/v ringer lactate, metrogyl, broad spectrum cefotaxim sodium od

Eldervet, pantop bid
Emset bid for 7 days.

Oral feeding was restricted for first 4 days. After oral rehydration solution and haematinics were given

Some of the studies have reveled canine parvovirus infection in suspected dogs to be 40.85% (Behera *et al*., 2015).

Fluid therapy, preferably i/v KCl or dextrose or colloidal support (hetastarch or albumin) if needed can be given. Broad spectrum bactericidal (ampicillin, cephalosporin, Unasyn®) antibiotics, Anti-nausea therapy (metoclopramide, ondansetron, maropitant), Empirical deworming and nutritional support (trickle enteral feeding when vomiting controlled and parenteral nutrition if enteral feeding not tolerated) are some of the prophylactic measures for Canine parvo infection.

Fig.1 Puppy with diarrhea

Table.1 Blood examination

Parameter	Normal value	Case 1	Case2
Haemoglobin (g/dl)	12-18	**ANEMIA (7.2)**	**ANEMIA (10.8)**
TLC (thou/mm3)	6-17	**LEUKOPENIA (5)**	NORMAL (12)
DLC – Neutrophils (%)	60-76	**NEUTROPHILIA (78)**	NORMAL (70)
DLC – Lymphocytes (%)	12-30	NORMAL (16)	NORMAL(24)
DLC – Eosinophils (%)	2-10	NORMAL(3)	NORMAL (3)
DLC – Monocyte (%)	3-10	NORMAL (3)	NORMAL (3)
DLC – Basophils (%)	0-1	NORMAL (0)	NORMAL (0)
RBC (mill/mm^3)	5.5-8.5	**ANEMIA (4.750**	NORMAL (6.34)
PCV (%)	37-55	**ANEMIA (23.7)**	**ANEMIA (32.2)**
MCV (fL)	60-77	**MICROCYTIC (50.1)**	**MICROCYTIC (50.9)**
MCH (pg)	19.5-24.5	**HYPOCHROMIC (15.1)**	**HYPOCHROMIC (17)**
Platelet count (thou/mm^3)	211-621	NORMAL (290)	NORMAL (387)
RDW-CV	0.115-0.159	NORMAL (0.133)	NORMAL (0.148)

Table.2 Case 1

Serological tests	
Investigation	Canine Parvovirus (ELISA)
Specimen	Serum
Method	Modified ELISA (Immunocomb)
Result	S2 positive reaction for the presence of parvovirus.

Table.3 Case 2

Serological tests	
Investigation	Canine Parvovirus (ELISA)
Specimen	FAECES.
Method	Immuno Chromatographic Qualitative.
Result	Reactive.

References

Appel MJG, Cooper BJ, Greisen H and Carmichael LE (1978) Status report: canine viral enteritis. *J Am Vet Med A*. 173: 1516–1518.

Behera M, Panda SK, Sahoo PK, Acharya AP, Patra RC, Das S and Pati S (2015) Epidemiological study of canine parvovirus infection in and around Bhubaneswar, Odisha, India. *Vet World*. 8(1): 33.

Black JW, Holscher MA, Powell HS, Byerly CS. (1979) Parvoviral enteritis and panleucopenia in dogs. *J Med SmAnimClin*.74:47–50.

Kramer JM, Meunter PC and Pollock RVH (1980) Canine parvovirus: update. *Vet Med Sm Anim Clin*. 175:1541–1555.

Miranda C and Thompson G. (2016) Canine parvovirus: the worldwide occurrence of antigenic variants. *J Gen Virol*. 97(9): 2043-2057.

Woods CB, Pollock RVH and Carmichael LE. (1980) Canine parvoviral enteritis. *J Am AnimHosp A*. 16:171–179.

Zhao Z, Liu H, DingK, Peng C, Xue Q, Yu Z and Xue Y (2016) Occurrence of canine parvovirus in dogs from Henan province of China in 2009–2014. *BMC Vet Res*. 12(1): 138.

How to cite this article:

Vaishali and Tushar Jain. 2020. Canine Parvovirus Infection: A Case Report. *Int.J.Curr.Microbiol.App.Sci*. 9(02): 2993-2996. doi: https://doi.org/10.20546/ijcmas.2020.902.342