



Treatment of Feline Panleukopenia Virus Disease at Miracle Animal Clinic, Surabaya

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Abstract

Feline Panleukopenia Virus (FPV) is a viral disease caused by the Parvoviridae family. FPV can attack cats, especially young felidae. FPV has high morbidity and mortality. The aim of this study was to find a treatment of Feline Panleukopenia Virus at Mircale Animal Clinic Surabaya. The research was conducted in February 2022. The results showed that there were 8 cats with positive FPV test kit result. All of cats had sama clinical sign include vomiting, diarrhea and anorexia Treatment of Feline Panleukopenia Virus at Mircale Animal Clinic Surabaya through administration of fluid therapy, antacids, anti-inflammatories, B complex vitamins and antibiotics. Prevention of FPV through vaccination, sanitation, and environmental hygiene.

Keywords: Feline Panleukopenia Virus, Treatment, Miracle Animal Clinic Surabaya

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Introduction

Feline panleukopenia is a viral disease with the main agent being a virus of the Parvoviridae family which is highly contagious and attacks mainly young Felidae which are clinically characterized by leukopenia, vomiting, diarrhea, depression and dehydration. Parvovirus itself can be transmitted to cats through direct contact with cats with Feline panleukopenia and also through equipment (beds, places to eat and drink), flies, humans can also act as mechanical vectors. The virus is excreted with feces, vomit, urine and saliva. So that the hygiene factor of the cat and also the environment is an important factor to keep clean so that the virus is not infected with other cats (Mahendra et al, 2020).

Clinical symptoms range from subclinical infection to acute acute death. Infected cats die from complications from secondary bacterial infection, sepsis, dehydration, and disseminated intravascular coagulopathy (DIC). Morbidity and mortality rates are quite high, especially in young cats under 12 weeks. Acute feline panleukopenia has a mortality rate of 25-90% and reaches 100% in acute infections (Hartmann, 2017). There is currently no causative therapy for Feline panleukopenia, so disease prevention is prioritized for disease

control. A good disease prevention program requires knowledge of risk factors for disease. Feline parvovirus (FPV) is a vaccine-preventable disease because it is mostly seen in unvaccinated cats and kittens. Kittens are the most vulnerable and most affected by viruses. FPV can infect all Felidae species as well as raccoons, badgers and minks. Viruses do not infect humans. Feline parvovirus infects and kills cells associated with the replication and cytopathic effects of rapid growth and division, such as in bone marrow, lymphoid cells, intestine, and the developing fetus resulting in congenital abnormalities in late gestation (Pandey, 2022).

Based on this, this study to find the treatment of Feline Panleukopenia Virus disease in cat at Miracle Animal Clinic, Surabaya.

Materials and Methods

This study was carried out in February 2022 at Miracle Animal Clinic Surabaya. This study examined cats affected by FPV with general clinical signs of vomiting, diarrhea and anorexia and has positive FPV test kit result. Cats with FPV were recorded and their handling was recorded including physical examination, therapy and medication.

Results and Discussion

During February 2022 there were 8 cats affected by FPV. All of cats have positive FPV test kit result. Cats with FPV are less than 8 months old and unvaccinated. According Barlough et al. (1997), cases of FPV incidence in kittens reach 50% to 90% of the total incidence of FPV at all ages with a vulnerable age at 4 to 8 months of age. It happens because the hereditary immunity from the parent works until it is vulnerable for 4 to 8 months. Therefore, to protect young felidae from FPV it is necessary to administer vaccines at age intervals of 10-12 months and 16-20 month.



Fig. 1 Cat with FPV (left), and Positive FPV test kit result (right)

All of cats have same clinical sign. The clinical signs include vomiting, diarrhea and anorexia. Vomiting unrelated to feeding happens frequently, and cats less frequently experience watery to hemorrhagic diarrhea later in the course of the illness. Some cats exhibit excessive dehydration, which when coupled with anorexia, vomiting, and diarrhea, can result in deteriorating health and despair. The intestinal mucosa's quickly reproducing cells in the crypts are also damaged by FPV, while the non-dividing absorptive cells at the tips of the villi are untouched. In clinically impacted cases, the damage to the intestinal villi brought on by the loss of the crypt cells finally culminates in diarrhea brought on by malabsorption and increased permeability. Since viral DNA can survive for a very long time after the infectious virus is gone, the presence of DNA does not always indicate an infection that is still active (Stuetzer and Hartmann, 2014).

The therapy given in the treatment of FPV is by administering L/R fluids, and medication is by administering antacids, anti-inflammatories, B complex vitamins and antibiotics. Antibiotics are given as a supportive therapy. In FPV-infected cats, the gastrointestinal barrier is frequently damaged, allowing intestinal bacteria to enter the bloodstream and cause sepsis in immunocompromised animals with bacteremia and neutropenia. Sepsis must therefore always be prevented, and a broad-spectrum antibiotic with demonstrated activity against Gram-negative and anaerobic bacteria is advised (Stuetzer and Hartmann, 2014).

When administered correctly, the FPV vaccine can prevent FPV in cats and give them a high level of protection. There are several modified multivalent live vaccines on the market, including attenuated FPV. However, antibodies derived from the mother may prevent the proper development of adaptive immune responses. A primary vaccination involves giving a dose at or after the age of 16 weeks and a booster shot at 6 months. As an alternative, pre-vaccination serology can be used to assess whether the proper response has arisen and whether additional vaccinations are required (Sykes, 2014).

Successful FPV control depends on environmental hygiene and management. Use the best cleaning products to disinfect contaminated surfaces, food bowls, dirt, and other fomites. This is because the virus can survive for up to a year on surfaces. Therefore, it is not advised to bring kittens unvaccinated to contaminated areas. It was discovered that quaternary ammonium compounds had no effect on FPV. It is advised to use a diluted bleach solution of sodium hypochlorite (1 part bleach to 32 parts water) to kill the panleukopenia virus. Food bowls, bins, cages, and other surfaces can all be cleaned with this solution (Pandey, 2022).

Conclusion

Treatment of Feline Panleukopenia Virus disease at Miracle Animal Clinic Surabaya is therapy of fluid, antacids, anti-inflammatories, B complex vitamins and antibiotics. Prevention of FPV through vaccination, sanitation, and environmental hygiene.

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