Panleukopenia (Feline Distemper) in Cats & Kittens

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Panleukopenia is a severe, highly contagious viral disease of cats, kittens, raccoons, and mink. The panleukopenia virus tends to invade cells which are rapidly growing such as those of the digestive system, bone marrow (which makes blood cells), lymph tissue, and developing nervous system. This explains the common symptoms of diarrhea, vomiting, low white blood cell count, and seizures. A vaccine is available to protect against the disease.

What are the characteristics of the feline panleukopenia virus (FPV)?

Panleukopenia (feline distemper) is caused by a virus very similar to the one that causes parvovirus disease in dogs. It is very stable in the environment and can survive years at room temperature. It survives well in lower temperatures as well, and is not killed by many of the common disinfectants. Contact with a bleach solution of one part bleach to 32 parts water (1/2 cup of bleach to a gallon of water) for 10 minutes will inactivate the virus.

How common is panleukopenia?

The feline panleukopenia virus is widespread in nature, so virtually all cats are exposed to it within their first year of life.

How is the panleukopenia virus transmitted?

FPV is most commonly transmitted when a susceptible cat has contact with the feces or urine of infected cats. Infected cats shed the virus in their feces and urine up to 6 weeks after they recover. FPV can also be spread by contact with urine- or feces-contaminated items such as food bowls, water dishes, clothing, shoes, hands, bedding, and litter boxes.

The panleukopenia virus is also transmitted from the mother to the developing kittens within her uterus. It can also be spread by fleas.

What are the symptoms of feline distemper?

The symptoms of panleukopenia can be similar to those seen in dogs with parvo or canine distemper (fever, vomiting, diarrhea, and seizures), which is why the disease is sometimes called 'feline distemper.' Panleukopenia in young unvaccinated kittens is usually fatal.

Young Cats: Many older cats who are exposed to feline panleukopenia virus do not show symptoms. However, young (3-5 months old) unvaccinated cats can become seriously ill. The incubation period (time from exposure to the virus to the development of symptoms) is 4-5 days. The onset of symptoms is sudden and cats will start out with fevers of 104-107°F, depression, and will not eat. These symptoms appear so suddenly, some owners think their pet has been poisoned. Three to four days later they will start vomiting and can become severely dehydrated. Severely dehydrated cats may hang their heads over the water bowl, but not drink. Diarrhea can also occur and may be bloody.

A cat who becomes severely dehydrated may develop a lower than normal body temperature hypothermia, become weak and even comatose. Such a cat is very susceptible to developing a bacterial infection in addition to the viral infection.

Cats who survive the symptoms for longer than five days will usually survive, but complete recovery (regaining of weight) may take several weeks.

Pregnant Cats and Their Litters: Pregnant cats who become infected with panleukopenia may abort or have stillborn kittens. In some cases, some of the kittens in the litter may be born incoordinated and have tremors, especially of the head. These nervous system changes are caused by the panleukopenia virus affecting the cerebellum, the part of the brain responsible for coordinating muscle movement. The condition is called "cerebellar hypoplasia". Mentally, these cats appear normal. As the kittens grow, they may be able to compensate and lead relatively normal lives.

Kittens may also have abnormalities of the retina of the eye (the back of the eye which receives the light and sends signals to the brain).

How is panleukopenia diagnosed?

The veterinarian will take into account the medical history, symptoms, physical exam, and laboratory testing to make a diagnosis of panleukopenia. Panleukopenia must be differentiated from feline leukemia virus (FeLV) infection, salmonellosis, and perforation of the intestine, as can be seen with a linear foreign body.

On a physical exam, the veterinarian would find fever, dehydration, depression, and when palpating (feeling) the abdomen, find that the intestines were thickened and the lymph nodes in the abdomen are enlarged. The abdomen is often painful.

Cats with panleukopenia (which actually means a decrease in all types of white blood cells) will have a low white blood cell count, although this can be seen in diseases other than panleukopenia. Some cats will also show a decrease in the number of platelets (the components of the blood which help it to clot).

Test kits are available to detect the virus in the feces. Recent vaccination against panleukopenia may cause the test to appear positive. Blood tests to look for antibodies (proteins produced by the body to destroy foreign invaders such as bacteria and

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viruses) to the virus can be performed, but these tests are more commonly used for research rather than diagnosis. The virus can also be isolated from the feces or urine, but again, this is a time-consuming and expensive test which is usually performed in research situations.

How is panleukopenia treated?

The treatment for panleukopenia is basically supportive care. Fluids are given intravenously or subcutaneously to correct the dehydration. Blood transfusions may be given to severely affected cats. Medications would be given to stop the vomiting. Antibiotics may be given to protect the sick cat from developing a bacterial infection. Injections of B vitamins may also be given. Once the vomiting has stopped, the cat can be placed on a bland diet with small portions given frequently. For young kittens who did not receive colostrum, injections of antiserum can be helpful.

How is panleukopenia prevented and controlled?

Vaccination of kittens at regular intervals is the most important way to protect cats from acquiring a panleukopenia virus infection. Killed virus vaccines may be administered to pregnant cats or kittens less than 4 weeks of age if exposure to the panleukopenia virus is likely (e.g., in a animal shelter). The disadvantage to these vaccines is that the cat is not really protected until 3 to 7 days after the second vaccination. Modified live vaccines produce more rapid and effective immunity, but a series of at least two vaccinations 2-4 weeks apart should still be given. Pregnant cats and kittens who are younger than 4 weeks of age should NOT be given a modified live vaccine since it could cause abortion or damage to the cerebellum of the kitten.

The environment of cats with panleukopenia should be considered contaminated with the virus. A 1:32 dilution of household bleach should be used to disinfect floors, dishes, litter boxes, cages, and other items. Remember that this virus can last for years in the environment. A kitten should not be introduced into a cattery or household unless he has received his series of vaccinations.

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