FIP– Feline Infectious Peritonitis

FIP (feline infectious peritonitis) is perhaps the saddest feline disease a cat parent can ever face. It is the number one killer of kittens and is virtually 100% fatal. It has frustrated scientists and veterinarians for over 30 years in their attempt to find a way to diagnose the disease as well as prevent it and treat it.

FIP is caused by a coronavirus, but there are many different corona viruses and they can be found in various species of animals. The main one found in cats is the feline enteric coronavirus (FECV).

Feline infectious peritonitis affects both pure-bred and mixed-breed cats. However, because the disease usually affects young kittens, it is more closely linked to cats born in catteries, shelters, multiple cat households, or other environments that may be susceptible to overcrowding or poor living conditions.

A relatively new discovery about FIP is that genetic susceptibility is a very important factor in determining the risk of a cat developing FIP. This may be due to the inbreeding that takes place in the development of specific breeds. Catteries, therefore, are more susceptible to the development of FIP in the kittens because all three risk factors are present: birth of kittens, crowded housing, and genetic susceptibility.

Signs of FIP in Cats

The symptoms of FIP in cats can surface weeks or months after the cat is infected. Rarely, older cats, often around 10 years of age, suddenly develop signs of FIP. Initial symptoms can be identical to those of many other diseases and can be quite vague, such as decreased appetite or even complete loss of appetite, weight loss, a poor hair coat, intermittent fever that does not respond to antibiotic treatment, and depression.

As the disease progresses, cats with FIP present with symptoms that vary based on which organs are involved. Symptoms also depend on which of the two forms of the disease the cat has contracted, either wet (effusive) FIP or dry (non-effusive) FIP.

In wet FIP, which is caused by inflammation of the abdominal tissues and occasionally organs in the chest, the more obvious signs of FIP include the abdomen becoming swollen and distended as it becomes filled with a mucus-like yellow-tinged fluid. If organs in the chest have become involved, this fluid can accumulate in the chest cavity and cause difficulty breathing.

In dry FIP, which is considered to be more chronic, the inflammation presents as small masses in the vital organs, such as the kidneys, liver, spleen or bowels.
Masses can also develop in the eyes, the lining of the heart or lungs, or even in the brain or spinal cord. Eyes can become cloudy due to a condition known as uveitis. Cats with inflammation or tumors in the central nervous system can develop neurologic signs that get progressively worse.

When a cat with FIP becomes more terminally ill, his immune system and natural defenses collapse, making him more likely to contract other diseases. Unfortunately, the fact that these later, more obvious symptoms of FIP present at terminal stages of the disease explains why cats with FIP very rarely recover from the disease.

It is a relatively new discovery that transmission from cat to cat of the actual virus that causes FIP is very rare. Even though the FIP virus is shed in the feces of cats who have FIP, transmission from cat to cat is uncommon.

Transmission of FIP

The enteric virus is found in the intestines of cats and, therefore, ends up in the feces of cats. The virus can be found in cat feces for up to a year or more. Therefore, it can be transmitted via litter and litter dust and even on the clothes and bodies of people. Once the virus gets on the hair coat and paws, it is easily ingested when a cat grooms himself.

The greatest problem is that the FECV virus can mutate to the coronavirus that causes FIP. When this happens, some of the cats that are exposed to this mutant virus will come down with FIP. We now know that certain factors such as genetics and health of the immune system (affected by age and stress) largely determine which cats will contract the disease. Kittens are at most risk due to the immaturity of their immune systems. Also, anything that stresses a cat decreases their resistance. There are many things that stress a cat and overcrowding is certainly one of them.

Diagnosis

Diagnosing FIP is one of the biggest challenges veterinarians face. There is no definitive test at present that tests for the specific mutated virus that causes FIP. The test that is called an FIP test is really a test for a coronavirus and as mentioned there are many different corona viruses. Instead, the diagnosis must be based on certain different pieces of evidence that when put together paint a rather positive picture.

- History and genetics
- Symptoms
- High coronavirus test titer
- Fluid analysis of fluid from abdomen or chest (cytology and coronavirus test on fluid) in wet FIP
- Protein electrophoresis
- Rivalta test
- Total protein and albumin/globulin ratio
- Alpha one acid glycoprotein (AGP)
- RT PCR: reverse transcriptase polymerase chain reaction
- IF use of immunocytochemistry for detection of feline coronavirus within macrophages.
Treatment

Present attempts to successfully treat FIP are generally met with complete failure. Diagnosing and preventing FIP are equally difficult. Unfortunately, most cats with FIP will eventually die of the disease.

However, Cornell University researchers at Cornell’s College of Veterinary Medicine, have recently made a very important discovery that may lead to the development of the first truly effective diagnostic test, preventative vaccines, and successful treatments. They have finally found the way to tell the difference between FECV and FIPV. This can have tremendous consequences in terms of diagnosing, preventing and treating FIP.

Until further research and testing is done, however, FIP is currently considered to be incurable. There are some reported cases of cats making a full recovery. However, due to the complexity and lack of tests to confirm the diagnosis, it is suspected that these “recoveries” are cases where cats were misdiagnosed as having FIP in the first place.

That said, there are some treatment protocols available that have put some cats into remission, sometimes for a period of months. This can help keep cats with the condition more comfortable.

Some treatment protocols involve the use of immunosuppressant medications, including prednisolone (a derivative of prednisone) and thalidomide, interferon medications such as feline Virbagen Omega or human interferon alpha, anabolic steroids to help boost appetite and ampicillin or a similar antibiotic.

Vitamin supplements, including vitamins A, B1, B complex, C, and E, have been used as well as nutritional support. Again, unfortunately, while these treatments can sometimes buy some additional time and provide comfort for a cat suffering with FIP, the medications are not curative.

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