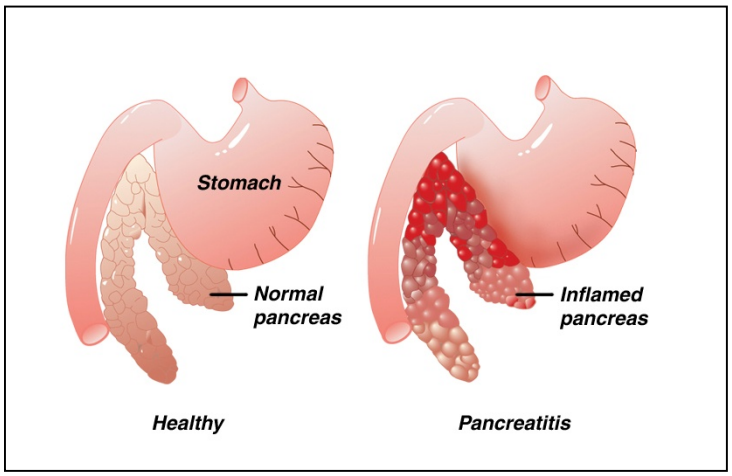
Feline Pancreatitis



Pancreatitis can occur in cats of all ages. It can affect cats of both sexes and all breeds, but one study found a relatively higher incidence of pancreatitis in Siamese and Himalayan cats.

The pancreas is a small organ that sits in the abdominal cavity adjacent to the stomach and the small intestine. It has two main functions. As an endocrine gland, the pancreas produces insulin, a vital hormone. The pancreas is also an exocrine gland that produces digestive enzymes.

Under normal conditions, the digestive enzymes produced by the pancreas are activated when they reach the small intestine. In pancreatitis, the enzymes are activated prematurely in the pancreas instead of in the small intestine. This results in digestion of the pancreas itself and, thus, the symptoms begin.

There are two main forms of *acute pancreatitis* or sudden onset pancreatitis: 1) the mild, *edematous form* and, 2) the more severe, *hemorrhagic form*. The inflammation associated with pancreatitis allows digestive enzymes to spill into the abdominal cavity; this may result in secondary damage to surrounding organs, such as the liver, bile ducts, gall bladder, and intestines. A few cats that recover from an acute episode of pancreatitis may continue to have recurrent bouts of pancreatitis. This is termed *chronic pancreatitis*.

Symptoms:

Cats with pancreatitis can show any of a number of symptoms, but none of them are specific to the condition. Commonly seen symptoms include decreased activity, depression, reduced appetite, abdominal pain and dehydration. Vomiting and diarrhea occur in less than half of cats suffering from pancreatitis. Cats with pancreatitis are more likely to have an abnormally low body temperature than fever. Jaundice may be seen if secondary changes in the liver are severe, or if bile duct obstruction secondary to inflammation in the pancreas occurs. Cats with severe pancreatitis can develop respiratory difficulty, abdominal fluid accumulation and, in some cases, shock-like states, or even death.

Causes:

Fatty meals can be a cause of pancreatitis in dogs, but this is not the case with cats. Infections with parasites, viruses, or toxoplasmosis have been suggested as possible causes in some cats. Bile reflux from the small intestine into the pancreatic tissue often caused by vomiting may also trigger pancreatitis in cats. A connection may also exist between kidney disease and the development of pancreatitis in cats.

The specific cause of pancreatitis in most cats is never determined. However, all cases of clinically significant pancreatitis involve inappropriate activation of digestive enzymes within the pancreas. This results in their release into pancreatic tissue and triggers a profound inflammatory response that is responsible for the signs and complications that occur with pancreatitis. Pancreatitis in cats may be classified as acute, chronic and relapsing in nature.

Diagnosis:

Because the symptoms are not specific, pancreatitis is seldom diagnosed unless it is suspected to be present, and can be difficult to diagnose. Bloodwork test results may range from normal to profoundly abnormal. On the complete blood count, possible abnormalities include an elevated white blood cell count, low red blood cell count, and reduced platelet count. Biochemistry profile abnormalities may include unusually high or unusually low blood glucose levels, elevated liver enzymes, elevated kidney values, and abnormal sodium, potassium, chloride, and calcium concentrations. The two most commonly measured pancreatic enzymes, amylase and lipase, which are helpful in diagnosing pancreatitis in the dog, have been shown to be of minimal value in diagnosing the disease in cats. Relatively newer blood tests called trypsin-like immunoreactivity (TLI) and pancreatic lipase immunoreactivity (PLI) may be more sensitive for diagnosing feline pancreatitis. Furthermore, obtaining TLI/PLI results requires several days; therefore this test can seldom be useful in the initial evaluation of a cat with possible pancreatitis. Additionally, serum TLI/PLI can be abnormally elevated in conditions other than clinically significant pancreatitis.

Abdominal x-rays and ultrasound may help to rule out other causes for symptoms in cats with pancreatitis. Ultimately, biopsy of the pancreas during surgery is the most definitive way to diagnose pancreatitis in cats. The second best test is ultrasound. However, many cats are so ill that surgical biopsy is too high-risk for diagnostic purposes alone. If other tests suggest the presence of abnormalities that are best addressed surgically, the diagnosis can be confirmed during exploratory abdominal surgery. Surgery may also allow for feeding tube placement into the small intestine for nutritional support in cats with severe pancreatitis.

Treatment:

There is no established, uniform way to treat pancreatitis, even when tissue biopsy confirmation of the diagnosis is available. Treatment is generally supportive, with

attention focused on meeting fluid needs, preventing infection, providing nutritional support, and treating symptoms while waiting for the signs to resolve. Intravenous fluids are used first to correct shock or dehydration, and then to meet the maintenance fluid needs of cats with pancreatitis. Plasma transfusion may help to support good blood flow to the pancreas.

If abdominal pain appears to be present, pain medications are often given. Pain medications can have side effects that complicate the management of seriously ill cats, and should be used cautiously and with close supervision for unexpected changes. If vomiting is a problem, cats with suspected pancreatitis may be treated with anti-vomiting medications administered by injections under the skin or in the intravenous fluids. Antacid medications are also frequently used in vomiting patients.

Since many cats with pancreatitis refuse to eat on their own, nutritional support may be provided through a feeding tube placed into the esophagus or directly into the stomach. Feeding by tube can be lifesaving, as it can prevent and treat a potentially life threatening condition called fatty liver syndrome. In the past, part of the treatment for pancreatitis was to withhold food in an attempt to “turn of” the self-digesting pancreas. We have learned in the past 20 years that this is absolutely the wrong thing to do for cats with pancreatitis – they recover faster and more reliably when they are fed as soon as vomiting can be controlled.

Surgery is usually not a primary treatment for pancreatitis. However, abscess formation, bile duct obstruction, and other complications may require surgery. Surgery also enables biopsy confirmation of pancreatitis. In cats with persistent vomiting, feeding tubes may be placed into the small intestine at the time of surgery to allow for nutritional support.

Prognosis:

The outlook for cats with pancreatitis depends on the severity of the affected animal’s disease. Cats with mild clinical signs recover well with supportive care. Severely affected cats may require prolonged and intensive hospitalization if they are to recover. Hepatic lipidosis, or fatty liver syndrome, is a common complication of severe pancreatitis, so nutritional support is critical to a good outcome. Even with aggressive diagnostics and supportive care, some cats with pancreatitis are either too ill to survive, or they develop life-threatening complications from their illness.

Repeated bouts of pancreatitis are possible. Cats with severe signs like shock, low body temperature, low blood glucose concentrations, or other serious complicating factors like kidney failure may not survive the initial attack of pancreatitis. Cats with enough damage from a single bout of pancreatitis, or with multiple recurrent bouts of pancreatitis, may eventually develop diabetes mellitus if the endocrine portion of the pancreas is affected by chronic inflammation. These cats will need to eat a special high protein diet and may need insulin shots temporarily, or permanently.

References:

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