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CHRONIC FELINE PANCREATITIS: CATS ARE NOT SMALL DOGS

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Chronic pancreatitis (CP) is often difficult to diagnose in cats, although the situation is changing as awareness increases and understanding of the relationship with concurrent diseases improves. Cats appear to suffer from 2 forms of pancreatitis: acute necrotizing pancreatitis (similar to acute pancreatitis in dogs) and lymphocytic pancreatitis (which may be acute or chronic, and is the most common form in cats). In most cases of CP, the disease is considered idiopathic. However, specific underlying causes are occasionally identified (e.g. viral infection, fluke infection, toxoplasmosis, trauma, organophosphate poisoning). There are no specific age, breed or sex predispositions for CP in cats. Unlike the canine, no association has been made with a high fat diet or obesity. The true prevalence of pancreatitis in cats is unknown.

Clinical signs of feline CP are different from those in dogs. Unfortunately, in the cat, clinical signs are vague and non-specific (lethargy, anorexia, vomiting, weight loss). Physical examination findings may include dehydration, icterus, pallor, signs of abdominal pain, and fever or hypothermia. It is probable that many cases go undiagnosed. In one necropsy study, 45% of apparently healthy cats had some histopathologic evidence of pancreatitis. Vomiting (35% of cases) and cranial abdominal pain (25% of cases), are less common in cats with CP than in dogs with acute pancreatitis. However, it must be noted that assessment of chronic pain in general and cranial abdominal pain in particular is not always easy in cats. Several concurrent diseases are found in cats with CP (inflammatory bowel disease [IBD], inflammatory liver disease, hepatic lipidosis, diabetes mellitus, etc.), causing variable clinical signs. In particular, elevations of liver enzymes are common, thereby misleading the clinician into a diagnosis of liver disease. Pancreatitis, IBD and cholangitis appear to co-exist in many cats, leading to the term triaditis. Evaluation of cats suspected to have CP should include a detailed medical history, a thorough physical examination, routine laboratory testing (CBC, serum chemistry panel, urinalysis), abdominal imaging, and assessment of pancreatic function (feline trypsin-like immunoreactivity [fTLI], feline pancreatic lipase immunoreactivity [fPLI]). Although findings of routine laboratory tests are typically non-specific or even normal, these tests are used to diagnose or exclude other diseases and to help confirm the diagnosis of CP. As well, specific abnormalities requiring correction may be discovered (e.g., electrolyte imbalances). Abnormal
findings on CBC include nonregenerative anemia, leukocytosis, and mild thrombocytopenia. Changes on serum chemistries include elevated ALT and ALP, hyperbilirubinemia, hyperglycemia, azotemia, hypokalemia, hypoalbuminemia and hypercholesterolemia. Hypocalcemia is not common, but when present, may be a poor prognostic sign. Serum lipase and amylase concentrations are of no value for diagnosis of either acute or chronic pancreatitis in the cat.

Increases in fTLI are specific for pancreatic enzyme leakage, but the test is not sensitive for diagnosis of CP (28-40%). Elevations in fTLI may also be seen in cats with IBD or gastrointestinal lymphoma. However, over time, cats with CP may develop exocrine pancreatic insufficiency and fTLI is useful for detection of this complication. The most sensitive and specific assay for CP is fPLI. It is most useful in cats with severe disease; cats with mild CP may not have abnormal fPLI values.

Imaging studies are best suited for diagnosis of acute pancreatitis, but even then, findings are not consistent and are subject to operator skill and interpretation. The sensitivity and specificity of radiography for diagnosis of pancreatitis is particularly low, but it is inexpensive and useful to rule out other diseases. In some cases, loss of peritoneal detail is noted in the cranial abdomen. Mild pancreatitis is difficult to diagnose with ultrasound so that a normal ultrasound examination cannot exclude the diagnosis. Findings in moderate to severe cases may include abdominal effusion, hypoechogenicity of the pancreas, a hyperechoic peripancreatic mesentery (due to fat necrosis), pancreatic and biliary duct dilatation, and other pancreatic changes (e.g., enlargement, calcification, cavitation).

The best method for definitive diagnosis of pancreatitis is biopsy and histopathology. It is the only way to differentiate acute from chronic disease. However, biopsy cannot be used in all cases (e.g., due to cost, risk of surgery and anesthesia in a sick patient) and may miss focal lesions. If biopsy of the pancreas is performed, it appears reasonable to biopsy the liver and intestinal tract at the same time. Conversely, the pancreas should be evaluated in cats known or suspected to have IBD or cholangitis.

Treatment of cats with CP is controversial as there are no evidence-based studies available to guide therapeutic choices. Dehydration should be treated with fluid therapy (e.g., lactated Ringer’s solution or 0.9% saline) and any electrolyte imbalances (e.g., hypokalemia) should be corrected. Vomiting can be controlled with anti-emetics such as maropitant or dolasetron. Antibiotics are generally not indicated. Anti-inflammatory therapy with corticosteroids (prednisolone, 1-2 mg/kg, q 12-24h) would seem reasonable when lymphocytic inflammation is present (although this can only be determined with biopsy). In cats with end-stage disease, inflammation is absent and fibrosis and degeneration are prominent; therefore, corticosteroid treatment would not be appropriate. CP may produce low grade or focal pain, which can be challenging to detect in cats. Clinical signs may include lethargy, hiding and inappetence. A trial treatment with an opioid such as buprenorphine is reasonable. Periods of inappetence may also be managed with appetite stimulants such as mirtazapine.

‘Resting the pancreas’ by withholding food and water has been a common strategy, but benefits remain unproven. In fact, evidence in humans and dogs suggests that early nutritional support is important. Daily nutritional requirements should be calculated and the amount of food eaten should be monitored closely to ensure the cat’s nutritional needs are being met. The diet chosen should be highly digestible and palatable. There is no need to choose a low fat diet for cats with CP (as is common in affected dogs). Force-feeding should be avoided to prevent food aversion. If assisted feeding is necessary, such as in cats that have been anorectic for 2 or more days, esophagostomy tubes are effective and easy to place.
**Recommended reading**


Steiner JM. Diagnosis of pancreatitis. The Veterinary clinics of North America Small animal practice 2003;33:1181-1195.

