

Cholangitis Complex of Cats

ABOUT THE DIAGNOSIS

In cats, as in people, cholangiohepatitis is an inflammation of the liver and the bile ducts within the liver. Unlike in people, however, cats do not often have gallstones, nor do they get liver disease from hepatitis virus. Rather, cats develop cholangiohepatitis either as a result of bacteria traveling to the liver from the intestine, or if the cat's immune system mistakenly identifies the liver tissue as foreign and begins to attack it.

Cholangiohepatitis is the second most common liver disorder in cats in the United States, after hepatic lipidosis. Two major forms of cholangiohepatitis are recognized: suppurative and lymphocytic. A liver biopsy and microscopic examination of the biopsied liver tissue are required in all cases to distinguish between the two forms. The distinction is an important one because treatments (medications) and prognosis (outlook) are different for each one.

Microscopically, suppurative cholangitis/cholangiohepatitis is characterized by the presence of neutrophils, a type of white blood cell. Bacteria can usually be cultured from the bile of affected cats, and the bacterial infection is believed to originate from the intestinal tract by migrating up the bile duct. Inflammatory bowel disease and pancreatitis are often coexisting diseases. Suppurative cholangitis/cholangiohepatitis occurs most frequently in middle-aged and older cats.

In lymphocytic cholangiohepatitis, a different type of white blood cell, called a lymphocyte, is most prominent on the microscopic analysis of the biopsied liver tissue. This suggests an immune-mediated mechanism, meaning that the body tries to destroy parts of the liver using the immune system. This is believed to occur because the immune system mistakenly identifies the liver tissue as foreign. Inflammation and fibrosis (scarring) also are found in the bile ducts, but bacterial infection is not present. Lymphocytic cholangiohepatitis is most often diagnosed in young cats, and Persian cats are at higher risk of developing lymphocytic cholangiohepatitis.

SYMPTOMS: A predominant sign in both forms of cholangiohepatitis is icterus (jaundice). With icterus, the gums, whites of the eyes, and even the visible skin in front of the ears take on a yellow to pale orange color. Cats with suppurative cholangiohepatitis in particular tend to feel quite ill, often having a fever and refusing to eat. Cats with lymphocytic cholangiohepatitis, conversely, frequently do not seem ill, but have icterus and may have an enlarged belly due to increased liver size and accumulation of fluid in the abdomen. They often continue to eat, although some will show unintended weight loss over time.

DIAGNOSIS: Symptoms and laboratory blood tests will establish a diagnosis of liver disease. X-rays and ultrasound examination of the abdomen are then used for assessing the size of the liver, the texture of the liver tissue, the appearance of the bile ducts, and so on. Determination of the exact nature of the liver disorder, which is essential for the reasons mentioned above, requires a liver biopsy. Since liver disease can cause problems with blood clotting, coagulation tests are necessary before the biopsy is taken, and treatment with medications or blood plasma to normalize blood clotting ability may be required if the blood clotting tests show abnormal results. A liver biopsy is done with the cat under general anesthesia, either with a biopsy needle inserted through the skin under ultrasound guidance (minimally invasive) or surgically through

an operation into the abdomen. Although the surgical option is a more invasive procedure, there are several advantages since the lesser invasive approach may be inadequate in some cases. A third, newer approach is laparoscopic biopsy, a sort of intermediate between ultrasound-guided and open surgical biopsy. Laparoscopy involves using a camera inserted into the abdomen during anesthesia to obtain a larger sample than the ultrasound-guided needle biopsy, but without the invasiveness of an open surgical operation. Deciding which method to use will depend upon the stability and condition of the individual cat, availability of resources and equipment, and your veterinarian's experience. Ultrasound-guided and laparoscopic procedures may be best performed by internal medicine specialists, and you may want to talk to your veterinarian about seeing one of these specialists for a second opinion, the biopsy procedure, or both (www.acvim.org in North America, www.ecvim-ca.org in Europe).

LIVING WITH THE DIAGNOSIS

The outlook for cats with suppurative cholangiohepatitis is reasonably good. The disease reoccurs in some cats, and an extended period of treatment with antibiotics may reduce the chances of reoccurrence. Success often depends on the ability to identify and control any underlying inciting factors. If inflammatory bowel disease and pancreatitis are also present, for example, diagnosis and treatment of these conditions must be done simultaneously. Most cats with lymphocytic cholangiohepatitis respond well to treatment, but the condition often can be life-long. Therefore, treatment may need to continue indefinitely, and depending on how well the treatment controls symptoms, periodic rechecks are usually necessary.

TREATMENT

Suppurative cholangiohepatitis is treated with antibiotics, which can be given by mouth if tolerated (and if there is no vomiting) or by injection in the hospital initially if necessary. Bacterial cultures should be submitted when the liver biopsy is taken to determine the best antibiotics to use. Treatment must continue for at least 4 to 6 weeks to minimize the risk of reoccurrence.

Since lymphocytic cholangiohepatitis is thought to be an immune-mediated disease, treatment involves the administration of immunosuppressive doses of cortisone-like medications (corticosteroids), usually prednisolone. Other immunosuppressive medications are sometimes used. Treatment should continue for 6 to 12 weeks with gradual tapering of the dose. Most cats respond well to treatment, but a few will need repeated treatments or long-term low dose treatment with prednisolone to prevent relapses. If a large amount of fluid is present in the abdomen, diuretics may be used initially to reduce the fluid accumulation. Colchicine may also be prescribed to limit fibrosis in the liver.

In both suppurative and lymphocytic forms of the disease, additional medications such as ursodeoxycholic acid (ursodiol) may be given to promote bile flow. If clotting problems are present, vitamin K may be supplemented. The nutraceutical s-adenosylmethionine (SAME) may be beneficial in the treatment of liver disease. Ultimately, there are often several medications to be given in cases of cholangiohepatitis, and the exact combination will need to be tailored depending on the particulars of your cat's case.

In the most severe cases, cholangiohepatitis of either type may be severe enough to compromise a cat's life span. Some

indication of severity can be had from the liver biopsy result because the presence of excessive scar tissue (fibrosis) is a negative sign, for example. Likewise, the manner in which the disease responds to medications is always variable from one cat to the next. A positive response with reduction in symptoms and improvement in all liver values on blood work is an important indicator of success and a better outlook.

DOs

- Give all medications exactly as directed.
- Realize that if the appetite is poor, medications on an empty stomach can trigger nausea. Therefore, if your cat stops eating altogether for 24 hours, you should contact your veterinarian to discuss treatment alternatives (injections, hospitalization for intravenous treatments, etc.).
- Watch for improvement, or return, of icterus (yellow coloration) as a sensor of the severity of liver compromise.
- Realize that cholangiohepatitis can be a severe problem. With proper treatment and persistence, most cats improve, and many return to a normal quality of life.

DON'Ts

- Do not discontinue medications before your veterinarian advises you to do so. If you have difficulty giving medication to your cat, consult your veterinarian for other dosing options. Usually formulations can be prepared that will be tolerated by even the most finicky cat.

WHEN TO CALL YOUR VETERINARIAN

- If your cat is lethargic or not eating.
- If you have difficulty administering medications.

ROUTINE FOLLOW-UP

- Your veterinarian will periodically examine your cat and submit blood for analysis of liver values to monitor the progress of treatment. The interval between such rechecks needs to be tailored to your cat and will vary depending on the severity of the disease and your cat's response to treatment.

Practice Stamp or Name & Address