

Walker Valley Veterinary Hospital

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LIVER DISEASE IN CATS

The liver is a vital organ, having a wide-ranging role in digestion, biosynthesis, metabolism, elimination of waste and immune regulation. There is a direct blood supply from the gut to the liver. Partly because of this, the liver is very vulnerable to injury as any toxins or poisons that are eaten will rapidly reach the liver. The liver can also be affected by a variety of primary disorders, and disorders of other body systems (ie, diabetes mellitus) will sometimes cause secondary damage to the liver. The liver has an enormous reserve capacity which means that, by the time the cat starts showing signs of liver failure, more than 2/3 rd 's of it is usually affected. The liver also regenerates well, which means that recovery is often plausible, even after severe liver disease.

Diagnosis of liver disease

The first tests that are performed in trying to diagnose liver disease consist of some basic blood and urine tests. Bilirubin levels in the blood may be elevated if the liver disease is causing any obstruction to the flow of bile, which helps to tell us a little bit about what type of liver disease may be present. Liver enzymes (ALP, ALT, AST, GGT) can be measured within the blood, which gives any idea of whether any liver damage has occurred. The enzymes can, however, also be elevated with a number of other diseases such as diabetes mellitus and hyperthyroidism, and do not give an indication of the severity of liver damage, or how well the liver is functioning. If the blood tests are suggestive of liver disease, X-rays may be taken and ultrasound performed in order to try and further identify the problem. A biopsy (taking a small sample of the liver) may be needed to try and find out exactly what type of liver disease is present, in order for appropriate treatment to be started.

Diseases affecting the liver include:

Cholangitis/cholangiohepatitis

Cholangitis is inflammation or infection of the bile ducts. This is sometimes the first stage of cholangiohepatitis, which is inflammation of the bile ducts and liver tissue. Suppurative cholangiohepatitis is inflammation with infection. It can be acute or chronic. Cats with this condition tend to have unexplained weight loss, intermittent fevers, decreased appetite, intermittent vomiting and sometimes just a "not doing right" appearance. Antibiotics and medications to stimulate bile flow may be helpful. Surgery can sometimes aid in the treatment of this disease, to increase bile flow. Another form of this condition is nonsuppurative cholangiohepatitis. This may be the chronic form of the infective condition or it may occur without evidence that infection ever occurred. Cats with this condition often are losing weight but have normal attitudes. They may have occasional vomiting or may not. These cats may be

defined as having chronic-active-hepatitis which means there is a chronic liver condition that flares up occasionally with an active infection/inflammation process. This can often lead to cirrhosis, which is permanent scarring and damage to the liver.

Hepatic lipidosis

This is a condition where fats infiltrate the liver, causing widespread damage and dysfunction. It occurs when, for some reason a cat stops eating. This results in a change in the cats metabolism and release of fats from stored fatty tissue into the bloodstream. Overweight cats are most at risk of developing this if they stop eating, and often there may be another 'stress factor' that initiates the disease, for example a concurrent disease, or a change in the cats' environment.

The disease may be suspected if an overweight cat has stopped eating and then become ill. It can be confirmed on a fine needle aspirate (inserting a small needle into the liver and extracting just a few cells) of the liver which will show lots of fat cells within the liver. A larger biopsy of the liver will also be required to look for underlying liver disease, since fatty infiltration can also occur secondarily to other diseases within the liver.

Hepatic lipidosis is a very severe disease and many cats will die if treatment is not initiated promptly. The most important treatment for the disease is provision of adequate nutrition. This needs to be provided by a feeding tube. Most commonly a gastrotomy tube (a tube inserted through the body wall directly into the stomach) is used as these are well tolerated by cats, owners can use them at home, and they can be left in for a long period of time. This is important as, although many cats do recover with aggressive therapy, recovery usually takes months. A special diet will be recommended to feed down the tube, and often other nutritional supplements and vitamins are also recommended.

Damage by drugs or toxins

Cats are very susceptible to liver damage caused by a wide range of common drugs that may be quite safe in other species. It is therefore essential that you always consult with a veterinarian before giving your cat anything. It is important that you to be able to inform them of any drugs or toxins your cats may have been given or had access to.

Tumors/Cancer

Many different tumors may occur within the liver, and may be a primary liver tumor arising in from the liver, or may be secondary spread from a tumor elsewhere in the body. Unfortunately most liver tumors carry a poor prognosis. With some type of liver tumors (lymphoma), chemotherapy may provide palliative treatment. With others (carcinomas), if they are confined to one liver lobe, surgical resection can sometimes be performed. X-rays and ultrasound of the liver can help to diagnose liver tumors, but a biopsy of the area is required for definitive diagnosis.

Amyloidosis

Amyloidosis is a disease where a specific protein (amyloid) is deposited within the liver, causing disruption and dysfunction of the liver. This can predispose the liver to rupture, which results in hemorrhage from the liver. Amyloidosis is a genetic disease in Siamese and Oriental breeds, but potentially could occur in any cat.

Treatment of Liver Disease:

The treatment of liver disease depends very much on its cause. Often though, getting a definitive diagnosis is difficult without taking a biopsy of the liver. Liver biopsy is invasive and can cause complications, so often times liver disease is treated without knowing for 100% which type of process is occurring. All forms of liver disease are treated with intravenous fluid administration to keep the cat hydrated and maintain electrolyte balance. Antibiotics, anti-inflammatories, and anti-emetics are given depending on the case. If the cat is not eating, further nutritional support may be required by placing a special feeding tube. Depending on the type of liver disease, a special diet may be required, which will be prescribed by your veterinarian.

The prognosis varies depending on which type of liver disease is present and the severity of the disease.