

## Health and welfare information about your cat from Vetlexicon Felis.



### **Triaditis - pancreas, liver and small intestine inflammation**

Feline triaditis is a term used to describe a condition often recognized in cats where there is inflammation of three important organs at the same time. These organs are the pancreas, the liver and the small intestine. There is more information on the specific diseases of these organs in other factsheets - so ask your veterinarian to share these with you as well.

#### **What is triaditis?**

“Triaditis” describes a combination of conditions recognized for many years in cats. Cats are prone to inflammatory or infectious diseases affecting the gall bladder and bile ducts (cholangitis), liver (hepatitis), the pancreas (pancreatitis) and the intestine (inflammatory bowel disease (IBD)).

The gall bladder within the liver and the pancreas both have small pipes or ducts connecting these organs to the small intestine (duodenum). Bile from the gall bladder flows down the bile duct into the small intestine and pancreatic enzymes from the pancreas flow down the pancreatic duct into the small intestine to aid digestion of proteins and fats in the intestine. In cats, both the bile duct and the pancreatic duct join together to form a common opening before entering into the small intestine. This is in contrast to dogs, where the bile duct and

pancreatic duct each enter the intestine separately.

When a cat vomits, gut contents (and the bacteria contained within it) may be forced up this duct and into the liver and pancreas. This can cause infection in the abdominal organs. The intestine of the cat contains around 100 times more bacteria than that of the dog which may go some way to explain why cats are more likely to develop this type of inflammation compared with dogs.

When infection reaches up into the gall bladder and liver it is known as neutrophilic cholangitis.

There is another form of triaditis which involves an excessive immune response. The over-active immune response starts to damage the cat's own tissues and cause inflammation. When this occurs in the liver it is called lymphocytic cholangitis. Many cats have a combination of the two forms of triaditis.

So in summary triaditis is a term used when a cat has a combination of:

- Inflammatory bowel disease (IBD)
- Pancreatitis and either
- Neutrophilic cholangitis or lymphocytic cholangitis.

Inflammatory bowel disease typically affects middle aged animals but is also seen in cats 2 years of age or less. Certain breeds of cat are predisposed to IBD (eg Siamese) but any cat may be affected.

### **How would I know if my cat has triaditis?**

Cats with any one of the conditions involved in triaditis are likely to vomit so vomiting is an important indicator of triaditis. However vomiting can occur with many other diseases as well. Diarrhea and weight loss are also common and many cats are depressed and have a poor appetite. If the liver is involved, you may notice your cat becoming jaundiced with yellowing of the gums or skin but this can be difficult to spot in cats. Triaditis (secondary to pancreatitis) can cause pain in cats and so their behavior may change - they may want to hide or become more aggressive.

## **How will my veterinarian know if my cat has triaditis?**

When your veterinarian examines your cat they may detect some pain on palpation of the abdomen and enlargement of the liver. Your veterinarian may also see jaundice in your cat's skin and gums. If your cat is persistently unwell with any of the signs of triaditis your veterinarian will want to run some further tests. These may include blood tests and probably ultrasound imaging of your cat's abdomen. Blood tests may show changes to the liver or kidneys and ultrasound can be very useful in identifying which organs are involved (eg identifying changes to the gall bladder, liver, pancreas etc) and how severe involvement is.

To make an accurate diagnosis your veterinarian may need to take biopsies (collecting small samples of tissues from the liver, gall bladder, pancreas and intestine). This may require a surgical operation and the samples will be sent to a laboratory for testing.

## **What is the treatment for triaditis?**

The initial treatment will likely involve antibiotics to control the infection. This may be continued for months. It is useful to let your veterinarian know whether you would find medications easier to administer to your cat in liquid or tablet form.

If your cat is unwell or not eating your veterinarian may need to take them into the hospital and put them on an intravenous drip to maintain their hydration. A feeding tube may have to be placed so that your veterinarian can make sure your cat continues to take in nutrients if they are eating. Nutrition is vitally important as cats that don't eat are at a high risk of developing another liver disease called hepatic lipidosis (fatty liver) which can be fatal if nutrition is not provided.

Drugs may be given to reduce nausea, vomiting and for pain relief. Vitamin K supplementation may be required as severe liver disease can result in decreased clotting factor production (which requires Vitamin K) - these are compounds in the blood which are essential for stopping bleeding.

Depending on the severity of the damage in each of the organs long term treatment may be directed more to management of one of the underlying conditions. There are medications that can be given to help support liver function (eg s-adenosylmethionine or SAME), or to

manage IBD. In some cases prednisolone (a steroid medication) may have to be given for a long time to control the inflammation. A change in diet may also be required to help control signs in the long term and approximately 50% of cats with IBD will respond to a change in diet alone.

### **Will my cat get better?**

Triaditis cannot be cured, but in most cats it can be controlled and managed. It is very difficult to predict how well cats with triaditis will do following treatment. If treatment is started early in the disease a full recovery to normal life is possible. However, in many cases the condition waxes and wanes so cats appear to get better only to relapse again later. Most cats will still have a good quality of life, but may require intermittent or prolonged periods where medications may be required.

If you are worried about any aspect of your cat's health contact your veterinarian for advice.