

# Cardiomyopathy and Congestive Heart Failure in Cats

## What is cardiomyopathy?

Cardiomyopathy is a term used to describe diseases of the heart muscle. In cats, three classes of cardiomyopathy have been described. In all cases, the heart disease may result in clinical signs of heart failure. Cardiomyopathy may be seen as a primary condition or secondary to other diseases.

## What are the clinical signs seen with cardiomyopathy?

In the early stages of disease, the cat may be able to cope and hence show no signs of disease. This situation is referred to as compensated heart disease. Often the cats will alter their activity levels to those that they can cope with which makes it difficult to diagnose cardiomyopathy until it is quite advanced. The major long term concerns with all types of cardiomyopathy are:-

- ❖ Development of congestive heart failure Breathlessness and lethargy are the most frequently noticed signs of congestive heart failure. These result from a failure of the heart to efficiently pump blood resulting in a buildup of fluid in the lungs and sometimes the abdomen. This generally causes reluctance to eat and discomfort.
- ❖ Thromboembolic disease: Altered flow of blood in enlarged heart chambers predisposes to the formation of a blood clot (thrombus) within the chambers of the heart. If parts of the thrombus become dislodged they can travel in the bloodstream and become lodged in smaller blood vessels. These particles are called emboli and the most common place for them to lodge is at the bottom of the aorta which is the biggest artery in the body. This results in obstruction of the blood supply to the back legs which is usually very painful and the back legs become paralysed and cold to the touch. Although some cats may recover completely with appropriate treatment, this is a potentially fatal complication of any cardiomyopathy. In some cats, a partial recovery which may take a long time, is seen.

## How is cardiomyopathy diagnosed?

Diagnosis of heart disease can be suspected on the basis of clinical signs, such as those of congestive heart failure but in order to accurately diagnose and treat congestive heart failure, we will often need to take radiographs (xrays) of your cat and perform an ultrasound scan. These radiographs provide invaluable information about the size and shape of the heart, as well as indicating if there are any secondary problems in the lungs or abdomen such as fluid retention. It can also help assess the severity of the disease. Without radiographs there is a possibility that the treatment given to your cat may not be the best for its specific condition.

Performing an ultrasound scan of the heart allows us to look at the different chambers and valves inside it and can help us assess its function - as well as establishing the prognosis.

For the radiographs and an ultrasound scan to be taken, we need your cat to lie very still on its side and then on its chest for up to 30 minutes. Some cats will tolerate this but in others we may need to use light sedation, as if the cat moves whilst the picture is being taken it can affect the image and complicate the diagnosis.

### **What causes cardiomyopathy?**

There are many causes of cardiomyopathy, however, in older cats thyroid disease (hyperthyroidism) commonly causes cardiomyopathy. Other causes include high blood pressure (hypertension) and kidney failure. A rare cause is dietary deficiency of taurine, an essential nutrient. This is not seen in cats fed a commercial cat food. Often, no cause of the cardiomyopathy is found.

### **How is cardiomyopathy treated?**

In cases where an underlying cause of the heart disease is found, then treatment of this may result in improvement or reversal of the heart disease. Hyperthyroidism is the most treatable cause of cardiomyopathy since complete resolution of the heart disease is possible if treated early. In cases where no cause is identified, (referred to as idiopathic cardiomyopathy), and in cases where disease remains following treatment for an underlying cause then medication may be needed.

Treatment varies according to each case but is usually in the form of tablets required on an ongoing basis which aim to help control congestive heart failure and help the heart muscle relax - hence help more effective filling of the heart.

Low dose aspirin may be used for its effects at reducing the risk of thrombus formation and hence thrombo-embolic disease. Dosing of aspirin should always be as advised by a veterinary surgeon since aspirin may be toxic to cats.

The long term outlook for a cat with cardiomyopathy is extremely variable depending on the cause of this disease. Cats with idiopathic cardiomyopathy may remain stable for several years.

### **Does a cat with cardiomyopathy need a special diet?**

Other than in cases of taurine deficiency, no specific diet is recommended although excessively salty foods should be avoided since these will predispose to fluid retention. This may increase the risk of congestive heart failure and hypertension developing. Proprietary cat foods are usually adequate although special low salt diets are available and may be recommended by your veterinary surgeon in specific cases. Cat treats are often quite salty and probably should be avoided.

Please feel free to contact the surgery should you have any further questions about your dog's condition.