



What is dilated cardiomyopathy?

Dilated cardiomyopathy (DCM) is a common heart disease generally seen in large or giant breed dogs. The disease is characterised by a reduction in the strength of contraction of the heart muscle and this loss of pump function results in inadequate flow of blood around the body. Abnormal heart rhythms can also affect the weakened heart muscle. Treatment is directed at alleviating signs associated with impaired blood flow.

What causes this disease?

Primary DCM in dogs is a genetic disease more common in certain breeds and families. Breeds commonly affected include Dobermans, Irish Wolfhound, Newfoundlands, Great Danes, Dogue de Bordeaux however the disease is also seen in some medium size breeds such as Cocker spaniels. Dogs are not born with this disease but develop it often as they reach middle age.

Inflammation of the heart muscle, prolonged high heart rates and some forms of chemotherapy can induce changes in the heart that mimic those seen with dilated cardiomyopathy and therefore, in some individuals, other tests may be required to establish diagnosis.

What are the signs of this disease?

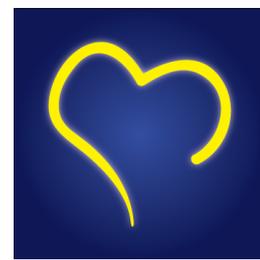
Dogs may show signs of reduced heart output such as lethargy and reduced ability to exercise. Some dogs will show signs of congestive heart failure with fluid retention – for example if this fluid gathers in the lungs this may elicit signs such as breathlessness, difficulty sleeping or restlessness. In cases with abnormal heart rhythms, ability to exercise may be impaired or dogs may show signs such as weakness or fainting. Sadly, in some dogs, the only sign of DCM may be sudden death.

How is the DCM diagnosed?

In some dogs this first indication may be the finding of a newly acquired audible heart murmur in an adult dog. However these murmurs can also be due other diseases and therefore further tests are required to establish diagnosis.

Echocardiography (ultrasound of the heart) is a safe and painless test that can be performed without any anaesthetic or sedation. In our centre you can stay with your pet to reduce their anxiety whilst this test is performed. Ultrasound allows us to assess heart size and function as changes in these parameters are the hallmarks of this disease.

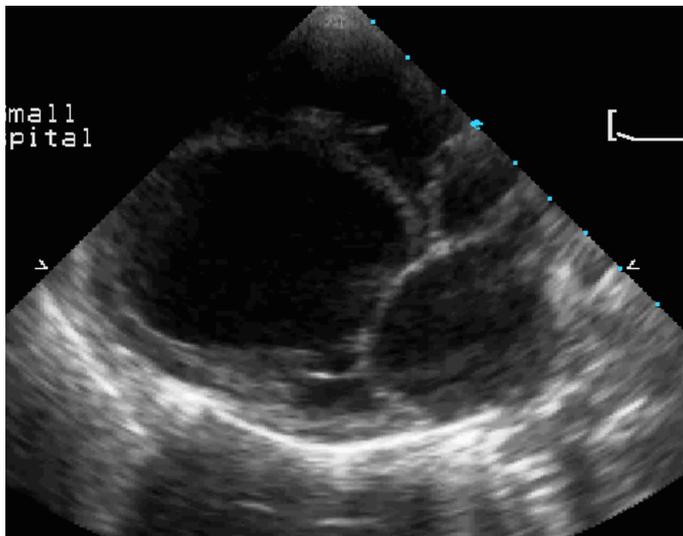
In some dogs abnormal heart rhythms are associated with this condition and this can have implications for treatment. As some abnormal heart rhythms are intermittent, we often place heart monitors (also known as Holter monitors or ambulatory ECGs) onto dogs that they wear at home for 24 hours whilst performing normal activities. At our centre, these recordings are analysed by veterinary cardiologists rather than technicians trained to analyse recordings from human patients.



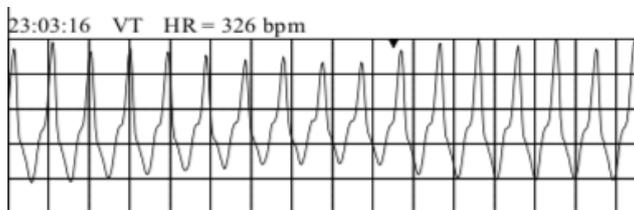
Screening of breeding dogs

We advise pre-breeding screening in breeds such as Dobermans where the disease is common. Pre-breeding screening involves both echocardiography (ultrasound of the heart) and also a 24h ambulatory ECG (Holter) recording. As this disease can manifest at any age, we advise that screening is repeated annually.

Ultrasound image of a DCM heart – the chambers are enlarged and rounded:



Abnormal heart rhythm with a rapid rate of >300 beats per minute:



How is DCM treated?

A number of medications are available that can help to control signs associated with this disease:

1. Diuretics such as furosemide help to minimise fluid retention,
2. Pimobendan (“Vetmedin” or “Cardisure”) increases the strength of the heart muscle contraction and, if given in the early stages of disease, can slow heart enlargement,
3. Benazepril / spironolactone (“Cardalis”) helps diuretics to work more efficiently and also slows heart enlargement,
4. Medications to treat abnormal heart rhythms.

Role of taurine

The role of taurine in DCM is not fully understood. Some American Cocker spaniels with DCM showed complete reversal of their disease after taurine supplementation but the results in other breeds have been less spectacular. The statement that grain free diets cause heart disease is likely to be an oversimplification but in dogs receiving a boutique company diet, a diet containing exotic ingredients or a grain free we may recommend taking blood to check taurine levels and sometimes supplementation.

Key points

- Dilated cardiomyopathy is a heart disease mainly affecting large and giant breed dogs,
- The disease results in heart enlargement, a weak heart muscle contraction and / or abnormal heart rhythms