Heart Disease: Dilated Cardiomyopathy

By Dr. Karen Becker

Hi, this is Dr. Karen Becker. Today we’re going to discuss dilated cardiomyopathy in dogs. Dilated cardiomyopathy, also called DCM, describes a diseased heart muscle in dogs that doesn’t contract or pump efficiently. As the disease progresses, the heart chambers become enlarged, heart valves may leak, and congestive heart failure can develop.

The cause of DCM is unknown. Unlike heart muscle dysfunction in humans, when it happens in dogs and cats, it’s very rarely the result of chronic coronary artery disease. Nutritional deficiencies of taurine or carnitine have been linked in DCM to certain breeds. Male dogs are apt to develop this disease more commonly than female dogs. Certain breeds, primarily large breeds, are more prone to DCM, including the doberman pinscher, boxers, Scottish deerhound, Irish wolfhound, Great Dane, Saint Bernard, Afghan hound, and the cocker spaniel.

Once in a while, DCM-like heart muscle deficiency develops secondary to an identifiable cause like exposure to a toxin or a heart infection.

Signs and Symptoms

Early in the disease process there may be no obvious symptoms. Some dogs may have a reduction in exercise tolerance. Sometimes a slight heart murmur or other abnormal heart sounds or rhythms can be detected by the veterinarian during a physical exam.

As the heart disease progresses, the heart’s ability to pump declines, so blood pressure in the veins behind the heart can increase. Congestion of the lungs and fluid accumulation are common. Fluid can also build up in the abdomen and around the lungs, if the right side of the heart is also involved. Congestion and fluid buildup indicate heart failure. Dogs with DCM induced heart failure often have left sided congestive heart failure.

Symptoms include decreased ability to exercise, tiring quickly, increased respiration, and excessive panting and coughing. There may be recurrences of sudden episodes of weakness or fainting. Some dogs with DCM have enlarged abdomens and heavy breathing due to fluid accumulation.

Sudden death can also occur from heart rhythm disturbances, even though there aren’t really external signs of any heart disease going on. Advance signs of heart failure include labored breathing, reluctance to lay down, and the inability to get comfortable. A
worsening cough, reduced activity level, or loss of appetite, as well as collapse, can all be symptoms.

Oftentimes, owners of dogs with DCM feel as though their pets developed heart failure very quickly. But the underlying disease and damage to the heart muscle probably has been going on for months or even years.

**Diagnosis**

In addition to a physical examination, your vet will need to run additional medical tests to confirm a diagnosis of DCM and determine the severity of the disease. Remember, your vet can’t hear with a stethoscope the size of the heart. Sometimes a heart can sound pretty normal on auscultation, which is what vets do when they listen to with a stethoscope, but there can actually be really significant changes going on inside of the heart.

The proBNP test is a simple blood test with a fast turnaround time that can detect a problem very early in the disease process by measuring the amount of peptide hormone in your pet’s blood. This hormone is only released when the heart is pushed beyond its capacity. If your vet doesn’t suggest a BNP blood test, I recommend you ask for it.

X-rays may also show enlargement of the heart chambers, and it can also demonstrate if there’s fluid in the lungs. An EKG can reveal atrial fibrillation and tachycardia, which means a rapid heart rate. A heart ultrasound called an echocardiogram is also necessary for a definitive diagnosis of this disease. This test looks at the size of the heart and its ability to contract. If DCM is present, the heart chambers are enlarged and there’s compromised contraction of the heart. The echocardiogram can actually also be used to detect signs of early DCM in breeds that are at higher risk for this particular disease.

**Treatment**

Treatment of dilated cardiomyopathy focuses on improving heart function and treating symptoms of congestive heart failure.

Conventional treatment involves the use of a variety of medications. ACE inhibitors are often prescribed to slow down the progressive changes to the heart, which can lead to heart failure. As the disease progresses, different drugs can be used to help the heart contract. Drugs can be administered to slow down a rapid heart rate, to manage accumulation of fluid in the lungs, or to dilate blood vessels. There are actually some drugs that can help the heart beat and pump more efficiently as well.

All of these drugs require careful monitoring of the dog for side effects. And side effects are rampant and can include electrolyte imbalances, reduced appetite, diarrhea and
vomiting, depression, a drop in blood pressure, as well as kidney disease. Veterinary cardiologists often combine medications, which makes careful monitoring of the patient that much more important.

**Therapy**

Therapy for DCM is individualized for the patient’s specific symptoms. In recent years, a small number of dogs have had defibrillators surgically implanted to manage life-threatening arrhythmias. Unfortunately, because the disease is irreversible and heart failure is typically progressive, the drugs and dosages required to manage DCM usually increase over time.

Alternative therapies that can support a healthy heart include adding herbs such as hawthorn berry and cayenne. Supplements are also very beneficial, and those include acetyl L-carnitine, the amino acid taurine, arginine, D-ribose, omega-3 fatty acids, and ubiquinol. They can all really be beneficial for dogs suffering from this condition.

Of course, feeding a fresh food diet that is rich in naturally occurring amino acids will be the very best food therapy for this condition and can also help nourish breeds predisposed to this medical problem.