

Canine Dilated Cardiomyopathy (DCM) Asymptomatic

Cardiology Service



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General Information

Dilated cardiomyopathy (DCM) is an adult-onset heart disease seen most often in large to giant breed dogs, particularly in breeds such as the Doberman, but can also be seen in medium size dogs, such as the Cocker Spaniel. DCM is characterized by dilated heart chambers, a thin heart muscle, and decreased contractility (decreased ability of the heart muscle to contract), which results in decreased ability of the heart to pump blood throughout the body (systolic dysfunction).

Systolic dysfunction, with clinical presentation similar to DCM can also develop secondary to a taurine deficiency or myocarditis (inflammation or infection of the heart muscle), among many other possible cause which we cannot definitively test for (i.e. viruses).

Early, or occult, dilated cardiomyopathy represents the earliest diagnosable stage of DCM. In general we expect occult DCM to progress slowly. Despite recommended medication these patients will go on to develop signs of heart failure in 1-2 years. The progression of DCM can potentially be delayed by initiation of appropriate medication (see below).

Diagnosis

Dilated cardiomyopathy often causes only subtle, if any, changes to your pet's physical examination. Heart murmurs are caused by turbulent blood flow as blood leaks backwards across the affected valve, and if present, are often quiet. Other abnormal heart sounds, such as a gallop sound, or an arrhythmia (abnormal heart rhythm) may be identified. Thoracic radiographs often do not show significant enlargement of the heart in the early stages of DCM. The best way to diagnose DCM is by referral to a cardiologist for an echocardiogram (ultrasound of the heart) to evaluate for specific heart chamber enlargement and to evaluate heart function. A holter monitor (24 hour ECG) is also recommended to evaluate arrhythmias which can be associated with DCM. Other diagnostics, such as a blood pressure or blood work may be recommended to further evaluate for other concurrent diseases or factors which may complicate management of DCM. If systolic dysfunction is present in an atypical breed for DCM, tests such as taurine levels, thyroid levels, and infectious disease screening may be recommended.

Complications and Sequelae

In the asymptomatic stages, the best way to monitor DCM is with periodic echocardiograms and/or thoracic radiographs. Periodic holter monitors may also be recommended if arrhythmias are present, as severe arrhythmias can increase the risk for sudden death.

Over time (which is often months to years), signs of heart failure may develop. These signs include cough, difficulty breathing, increased respiratory rate, weakness, lethargy, exercise intolerance, and collapse. Less commonly, abdominal distension from fluid build-up in the abdomen may occur.

Pulmonary hypertension (PH), or high blood pressure in the lungs, may develop secondary to mitral valve disease. PH is best controlled by managing the underlying valvular disease. Medications can be added in if the PH increases in severity resulting in more pronounced clinical signs including exercise intolerance and collapse.

Treatment

In the asymptomatic stages of DCM, treatment with an ACE inhibitor is recommended. These medications help to prevent fluid retention, fibrosis (scarring) of the heart muscle, and help to control some of the hormones which are elevated with heart disease. Anti-arrhythmic medications may be recommended if arrhythmias are severe. Diet changes and exercise restrictions are often not indicated, other than high sodium diets and treats are discouraged.

Prognosis

DCM is a progressive disease. With careful monitoring, appropriate medical therapy can be implemented earlier in hopes of prevent rapid decline into severe heart failure. This way, we can limit visits to the hospital or emergency room, and keep your pet feeling as good as possible for as long as possible. Unfortunately, despite recommended medication, these patients will go on to develop signs of heart failure in one to two years.

If your pet begins to show any signs of cough, breathing difficulty, increased respiratory rate, abdominal distension, exercise intolerance, or collapse, he or she should be evaluated sooner. Please call us if any of the above clinical signs become apparent.

