

CARDIOMYOPATHY IN IRISH WOLFHOUSES

Robert Brenneman DVM

The most common form of cardiomyopathy in the Irish Wolfhound, (IWH) is the dilated cardiomyopathy form, (DCM) affecting both the right and left sides of the heart. 83.3 % will have concurrent atrial fibrillation. The IWH with DCM has a higher survival rate than DCM seen in breeds such as the Boxer, Doberman and Great Dane. In one study done by AAHA Journal of Veterinary Medicine in 2000, 50% of the IWH diagnosed with cardiomyopathy survived through the end of the study, over 15 months. In this study of 500 IWH conducted by Dr. Vollmar in Germany, 24.2% (122 dogs) had DCM,(diagnosed by echocardiography). Males have a significantly higher incidence than females, suggesting a sex link predisposition and it seems to follow family lines with DCM diagnosed in closely related dogs in every generation. In this study of 121 IWH with DCM, 119 had at least one parent that had been diagnosed with DCM, suggesting an autosomal dominant gene. Onset of the disease is usually between 3-7 years of age.

Clinical signs of DCM in the IWH are most commonly the result of pleural effusion: accumulation of fluid in the chest cavity. This is a by-product to right sided heart failure. Pleural effusion signs are a result of mechanical restriction of respiration. Early diagnosis is difficult, because of the vagueness or absence of clinical signs. As the amount of fluid accumulates to significant quantities to physically restrict the amount of available lung capacity clinical signs will become more apparent. There will be an increase in the respiratory rate, which will first be noticed during periods of exercise and then later also at rest, as the quantities of fluids continue to build up. As the effusions further increase, the increased respirations will progress to labored, distressed breathing. The dog will resist laying on their side, preferring to rest in a sternal position. Some will opt to either stand or sit with their elbows abducted to provide for added expansion of the chest. They will often extend their head and necks in an attempt to make breathing easier. The dog may appear restless, especially in warm weather, and many may become anorexic. Coughing is often not a clinical sign of DCM. In young dogs affected with DCM, 1-2 years of age, acute death many times will be the only clinical sign.

As a breed the Irish Wolfhound with DCM has a higher survivability than many other breeds, only rarely does their left ventricular function become as compromised as in the other breeds. Also, the IWH seems to respond better to treatments than the other breeds. Diagnosis of DCM in a IWH is not necessarily a death sentence as many can live to old age. Early detection with early initiation of an ACE inhibitor such as enalapril, and when indicated, digoxin and other antiarrhythmic drugs, will increase survivability in the IWH. Prevention of a disease is always the most prudent route to go and in the case of DCM in the IWH careful breeding protocols by not breeding to known carriers will go a long way in eliminating this disease in the breed. Below are echocardiographic parameters published by Dr. Andrea

C. Vollmar, a clinician with the Small Animal Veterinary Hospital ofWissen, Germany. Her values differ from the standards for other breeds in determining whether a IWH has DCM or not. Here are her cut offs for the IWH and DCM: LVIDs >41mm, LVIDd >61.2mm, FS <25%, EP SS >10.0mm, ESVI >41ml/m², RVIDd >36.8mm. Values that may diagnose a Golden Retriever with DCM may be normal for an IWH. Dr. Vollmars' research is quite extensive, as she has tested many hundreds of hounds. Hopefully, in the near future, we will have genetic markers to help identify carriers of DCM.