

## CARDIAC OR RESPIRATORY DISEASE?

As many of you know, in February 2009 we lost Hennessy. Luckily, he had been used at stud and we were fortunate enough to be able to have a puppy from the resulting litter. In September, the puppy (Hennessy Junior) presented with very similar symptoms to his father's last illness i.e. a throaty cough, lethargy and breathing difficulties. After initial examination by our vets, he was referred to Langford Veterinary Hospital where he was immediately diagnosed with acute pneumonia and admitted to the Intensive Care Unit. He remained there for five days on intravenous antibiotics and fluids with one to one nursing in the initial phase. He was a very sick puppy. 'Junior' made a complete recovery from this drama and is now home again with his half brother tearing around the house.

At one of the numerous consultations, we asked the clinician, Christina Maunder, who was handling his case if she would be kind enough to write the following article as we felt it would be of great interest to other Deerhound owners and breeders. Certainly, we have learnt much from the events over the last year.

In 2009 we learned much about canine cardiac & respiratory problems but all too late to save Hennessy. We would like to express our thanks to all the University of Bristol staff and students whose time and expertise saved a very poorly pup.

*Jan and Mark Cheshire (Deeranwith)*

Cardiac disease, in particular dilated cardiomyopathy, is a condition that is well known among breeders. Dilated cardiomyopathy (DCM) primarily affects medium, large and giant breeds of dog and is often diagnosed in young to middle aged patients. In Deerhounds, an abnormal rhythm of the heart (usually atrial fibrillation) may develop due to the degree of dilation and distortion of the normal heart size and shape. This rhythm may not cause obvious clinical symptoms and can remain present for months to years. Eventually congestive heart failure develops and the symptoms are more apparent. Initially they can be vague with weight loss or loss of appetite. A reduced capacity for exercise may be noticed, with even weakness or collapse. Respiratory signs will be present when the heart is in congestive failure as fluid accumulates in the lungs (pulmonary oedema). These signs include shortness of breath, increased effort to breathing and coughing.

A Deerhound presenting to the veterinary surgeon with coughing and shortness of breath is immediately likely to trigger concerns over the function of the heart. However, respiratory disease is another possible cause of coughing, lethargy and exercise intolerance and should not be overlooked.

Coughing can develop due to disease affecting any part of the respiratory tract,, one of the more common causes is laryngeal disease. The larynx has several important roles in the respiratory tract. It acts to protect the lungs and airways from the inhalation of food or debris, it controls the diameter of the airway during breathing and also gives the dog his bark. Laryngeal paralysis is a condition where the cartilage within the larynx (and associated vocal folds) does not open properly. This can affect either one or both sides of the larynx and may result in a permanently narrowed airway. This causes increased resistance to the flow of air and so noisy breathing, or stridor, may be heard. Exercise intolerance is also

a typical feature particularly in warm weather. The bark can be altered, although this is not a constant feature. A cough may be heard particularly on eating or drinking. The symptoms are therefore not dissimilar to those of DCM. The underlying cause of laryngeal paralysis is still unclear in many cases but typically does affect medium to large breeds and some giant breeds.

Dogs with diseases of the lungs themselves (pneumonia) may have symptoms of coughing and increased respiratory effort. If the disease is severe enough they may also have a loss of appetite, be reluctant or unable to exercise and lose weight. Again, these symptoms are very similar to a dog in congestive heart failure with DCM. Pneumonia can be caused by many things: bacteria, parasites (e.g. *Angiostrongylus vasorum*), smoke inhalation, aspiration of fluids or solids, sterile inflammation.

We have recently treated a Deerhound at Langford Veterinary Services who presented with a cough, difficulty breathing and fever. X-rays of his chest revealed he had pneumonia. A special procedure called bronchoscopy was performed. This involves putting a camera into the airways to examine the inside of the lungs and washing the surface to collect cells for examination. This showed a large accumulation of mucopurulent material in the airways and analysis of the washes revealed a large quantity of bacteria present. This allowed us to diagnose bacterial pneumonia. A month of antibiotics was prescribed. X-rays of the chest taken at the end of his course of treatment showed no abnormalities of his heart and that the changes to his lungs had resolved completely. On bronchoscopy, the airways were also clear of discharge. The outcome was highly successful for this Deerhound.

A primary bacterial pneumonia is unusual in dogs. However this case shows that not all cases of cough and exercise intolerance are due to heart disease and therefore the prognosis may not always be poor.



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