

IT'S YOUR CASE

Species: Canine Breed: Dobermann Sex: Male Neutered Age: 3.5 years

Clinical History:

Restlessness and coughing. He is progressively weaker and has a II/VI heart murmur.

Anatomic regions: Thorax

Details of study and technical comments: A radiographic study of the thorax is presented for evaluation. The study consists of right and left lateral views as well as 2 ventrodorsal views.

Diagnostic interpretation:

THORAX:

The cardiac silhouette is enlarged: Left atrial dilation as indicated by straightening of the caudal cardiac waist (blue arrows). Left ventricular enlargement is indicated by dorsal displacement of the terminal trachea (green arrow). Right atrial enlargement is indicated by rounding of the right cranial cardiac silhouette on the ventrodorsal view (red arrows).

The pulmonary vasculature is minimally asymmetric with dilation of the vein relative to the corresponding artery (orange arrows). Mild interstitial pulmonary changes are noted as slightly increased opacity of the caudo doral lung fields and reduced conspicuity of the pulmonary blood vessels (yellow arrows).

The mediastinum and pleural space are within normal limits. The trachea and caudal mainstem bronchi are patent. The left first rib is hypoplastic. The right first and second ribs are enlarged with a pseudarthrosis. Spondylosis deformans is moderate at the thoracolumbar junction.



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This report is based on the available history and radiographic interpretation only and not on a physical examination of the patient. It has been prepared specifically for interpretation by the currently licensed and registered veterinary surgeon responsible for the care of this patient.



Conclusions:

Left sided cardiomegaly is consistent with previously diagnosed dilated cardiomyopathy.

Interstitial changes within the caudal lung lobes and mild asymmetry of the pulmonary venous system is consistent with early <u>left-sided heart failure</u>.

Incidental anomalous ribs, spondylosis deformans.

Additional comments:

There is left sided and suspected right sided cardiac enlargement. Doberman Pinschers are overrepresented for Dilated Cardiomyopathy (DCM), however mitral valve disease can also occur in these patients. This necessitates further assessment with echocardiogram for diagnosis and to direct medical management. These subtle changes in the caudal lung fields and mild asymmetry of the vessels is most consistent with left-sided heart failure. The interstitial changes in the caudal lung fields will typically be underrepresented in tall deep chested dogs on lateral views; the ventrodorsal view will provide greater insight.

Trick of the Trade:

Determining the range of normal for cardiac size for dogs can be challenging . . . until you consider the conformation of the patient. In the average thorax (mesaticephalic dogs), the heart should occupy 2/3 of the thoracic height and ~50 % of the thoracic width. The tracheal path in these patients is roughly 20 degrees divergent from the vertebral column on the lateral views. In the deep chested patient, the proportion is different. The cardiac silhouette has a more upright posture and there is greater divergence of the trachea from the vertebral column. On the lateral view, this means that the cardiac silhouette is less than 2/3 thoracic height and the trachea is typically closer to 30 degrees from the path of the vertebral column (excluding vertebral anomalies). On the ventrodorsal view, the cardiac silhouette is rounded and occupies more than 50% of the thoracic width.



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