

**PATIENT PRESENTING CLINICAL SIGNS**

Bart Hodges History: Arrhythmia, High BP

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: Heart Rate and Respiratory Rates Cardiac arrhythmia Blood Pressure Measurements 241 139 (173) 134, 250 103 (152) 126, 205 111 (136) 147 Current Medications Pimobendan, benazapril

**BREED**

Doberman Pinscher

**SEX**

MI

**AGE**

(yr)

**WEIGHT**

95lb

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT				1.24	13	34.4	0.5
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	NM	1.6	0.93		4.9	4.6	

**INTERPRETED BY**

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal LA/AO ratio yet subjective mild LA enlargement based LA max measurement. The cranial and caudal mitral valve leaflets presented normal linear structure, extension in systole, and union in diastole. Mild centralized MR present on Doppler. No significant dystrophic or vegetative changes were noted. The left ventricle demonstrated excessive volume (LVIDd measurement below). Ventricular function was subnormal expressed by the fractional shortening measurement. Myocardium appeared subjectively thin typical of DCM. The left ventricular outflow tract demonstrated normal laminar flow and subjective structural integrity. The right atrium and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. Tricuspid valvular assessment demonstrated adequate linear morphology. The right ventricle was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Pulmonic tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible pericardial or free pleura fluid was noted. The cranial mediastinum and pericardial regions were free of masses in the visible window.

**IMAGING PERFORMED BY**

Sara Hansen

**HOSPITAL NAME**

Cascade Animal Clinic

**REFERRING VET**

Cascade Animal Clinic

**INVOICE**

11247ag

**DATE**

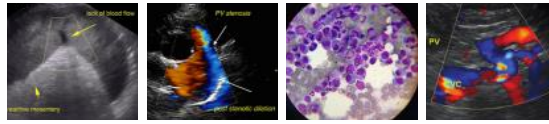
08/01/2022

**ULTRASONOGRAPHIC FINDINGS**

- Mild LV enlargement with LV hypocontractility
- Normal to subjective mild enlarged LA

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The echocardiogram demonstrated subjective mild LA/LV enlargement with LV hypocontractility. This



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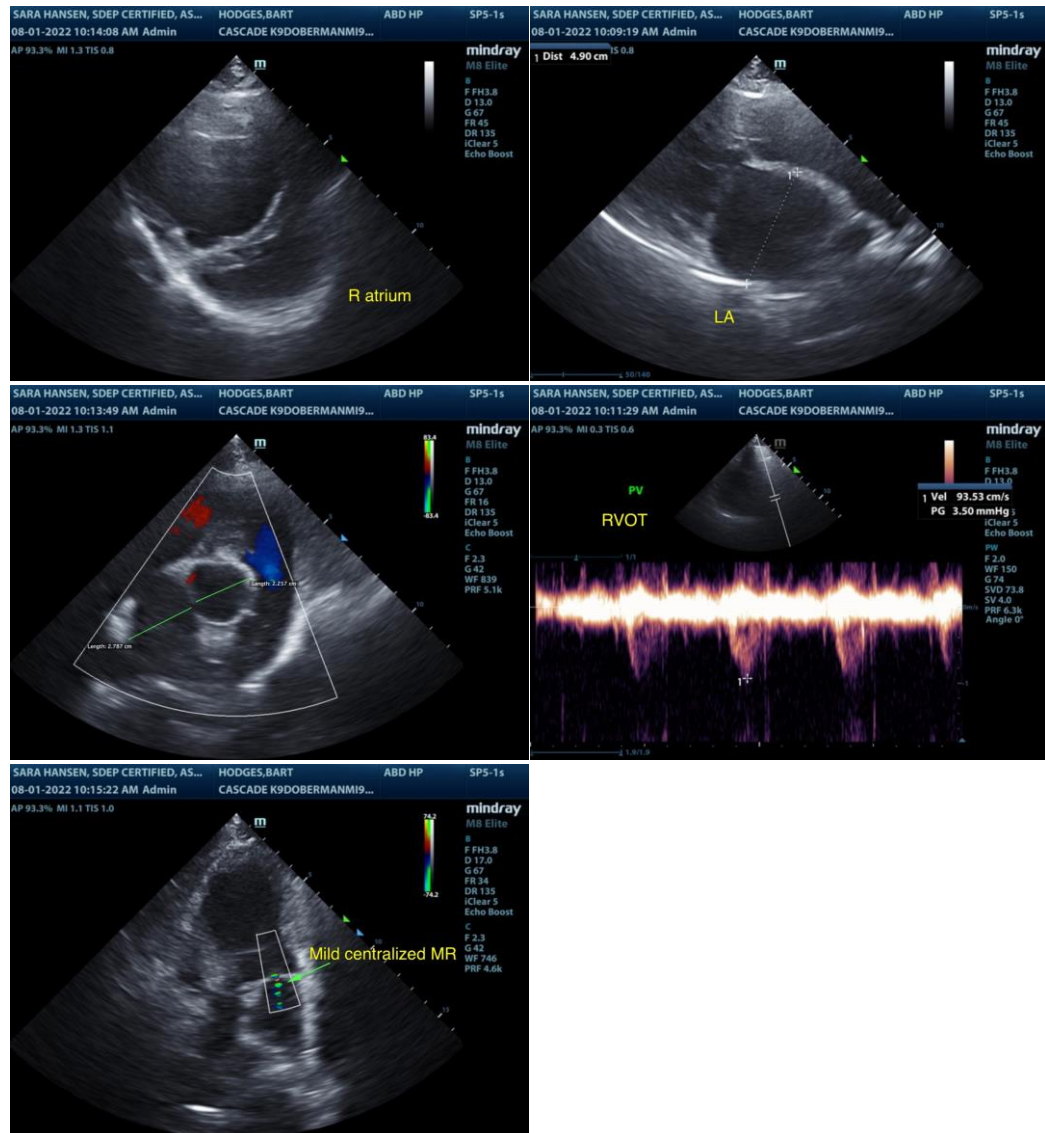
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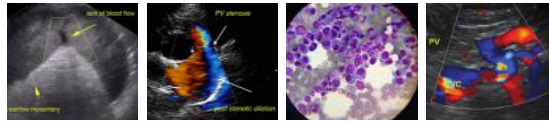
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may be primary in nature (emerging DCM) or secondary to clinical issues such as taurine deficiency, hypothyroidism, systemic disease, myocarditis of less likely infiltrative disease such as lymphoma. In an older Doberman emerging primary DCM is a reasonable diagnosis. Diet history thyroid status +/- troponin levels could be considered if clinically indicated. Given the lack of significant chamber enlargement the heart appears to be compensated although prognosis is highly variable and serial sonographic monitoring is required for further assessment.

Continued Pimobendan 0.3 mg/kg PO BID is warranted, ACE inhibitor medication is recommended of persistent evidence of hypertension (>130).

An ECG with cardiology consult given the reported arrhythmia is recommended for further assessment. This patient may be at increased risk for CHF or malignant arrhythmias. Recheck echocardiogram recommended in 6 months, sooner if clinical signs arise. Abdominal US could be considered to rule out concurrent abdominal pathology. Full CBC Chem UA is suggested if not done to rule out concurrent metabolic disease.





**PATIENT**

Bart Hodges

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

**SPECIES**

Canine

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

**BREED**

Doberman Pinscher

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info@SonoPath.com

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