



PATIENT

Angus Murray

SPECIES

Canine

BREED

Labrador Retriever

SEX

Male Neutered

AGE

9 years

WEIGHT

111lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Jennifer Todd, DVM

HOSPITAL NAME

Lambs Gap Animal
Hospital

REFERRING VET

Dr. Todd

INVOICE

31639

DATE

6/30/23

PRESENTING CLINICAL SIGNS

History: Recheck echo. Grade I-II/VI right sided heart murmur. Dry honking cough for the past month. It is more common when he gets up in the morning after laying down. BP: 147, 153, 157mmHg, -Current medications: Pimobendan, Spironolactone, Benazepril and Apoquel.
-Radiographs: Showed normal lung fields, but the cardiac silhouette was consistent with right ventriculomegaly.
-Pertinent previous echo findings (2019 MML): TVD with mild TR, moderate RAE/RVE.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 25mm/s, 10mm/mV. The average heart rate is 75bpm (range 60-100bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P morphology is positive. The QRS is inverted. No ectopic beats, pauses or other dysrhythmias observed.

ECG diagnosis: Sinus bradycardia with respiratory variation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Elongated, thickened TV leaflets with tethered septal leaflet. Distorted RV papillary musculature. Mild tricuspid regurgitation with moderate right atrial dilation. Tricuspid regurgitation velocity is unable to be accurately measured. RV is also dilated, no hypertrophy. LV diameter is normal with adequate myocardial function. LA is normal. Mitral valve is normal with no obvious regurgitation. Normal pulmonic and aortic outflow velocities. No obvious valvular or subvalvular stenosis seen; laminar flow. Pulmonic and aortic valves appear normal with no insufficiency. No pleural or pericardial effusion.

CARDIAC CHART

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	<1.6	28-40	40-100	<0.6
PATIENT	NA	3.1	NM	1.2	28	50	0.38
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	BELOW	BELOW	BELOW	BELOW
PATIENT	NM	1.2	0.6	50.3	2.0	4.6	3.3
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
				40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
				50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

Adapted from June Boon, Veterinary Echocardiography, 1998
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435
Hansson et al, Vet Rad and Ultrasound 2002
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Compared to the prior study, findings are similar. TV dysplasia persists without significant progressive right heart enlargement. That being said, the RA and RV are both moderately dilated, as was previously noted. The left heart remains normal with adequate systolic function. No additional issues are noted. The ECG does show bradycardia; however, this is considered likely normal for this patient. Ensure the heart rate stimulates appropriately with activity or stress.

Given these findings, the cough is unlikely to be cardiogenic in origin. Patients with TVD are primarily predisposed to development of effusions, which are not seen in this study. Consider Hydrocodone and/or consideration of primary respiratory causes.

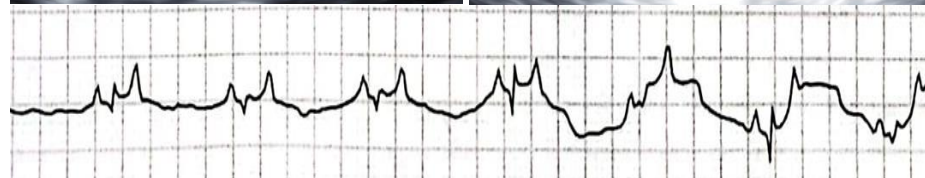
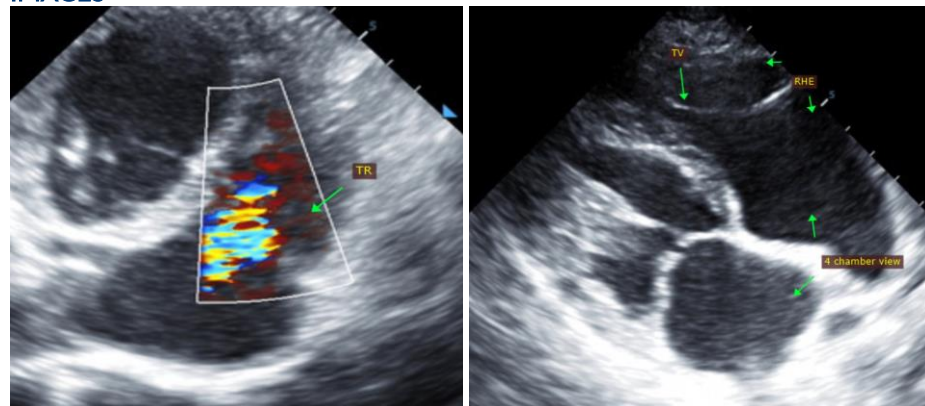
Monitor closely at home for development of any associated clinical signs, including abdominal distention, labored breathing, and/or collapse episodes or lethargy. Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Activity restriction is advised lifelong.

PLAN

Continue Pimobendan, Benazepril and Spironolactone as previously described. Monitor BP every 6 months.

A recheck echocardiogram is recommended in 6-12 months, sooner if any clinical signs arise.

IMAGES





PATIENT

Angus Murray

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

SPECIES

Canine

Thank you for this referral. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

BREED

Labrador Retriever

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

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