



PATIENT

Jake Matthews

PRESENTING CLINICAL SIGNS

History: Stable murmur. Recent collapsing episodes while on a walk. Left-sided cardiomegaly.
-Current medications: Enalapril and rimadyl.

SPECIES

Canine

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at 25mm/s; 10mm/mV. The average heart rate is 145bpm with a largely regular rhythm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. MEA is normal. No ectopic beats, pauses or dysrhythmias observed.

BREED

Terrier Mix

ECG diagnosis: Normal sinus rhythm.

SEX

Male Neutered

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The mitral valve is mildly thickened with mild prolapse into the left atrial lumen. There is moderate eccentric mitral regurgitation present. There is moderate left atrial enlargement. There is mild left ventricular dilation. Left ventricular systolic function is hyperdynamic. There is normal systolic flow velocity across the aortic valve, no insufficiency. The aortic valve appears normal. Mild right atrial/ventricular enlargement. The tricuspid valve is mildly thickened with mild moderate tricuspid regurgitation. The tricuspid regurgitant velocity is consistent with moderate pulmonary hypertension. The pulmonary artery and pulmonic valve are normal. No PI. No pericardial/pleural effusion or cardiac masses are seen.

AGE

14 years

WEIGHT

12.9lbs

CARDIAC CHART

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

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	5.2	3.9	1.8	1.85	52	84	0.2
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	1.1	1.0	5.9	2.4	3.4	1.6
*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)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				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

IMAGING PERFORMED BY

Dana Alterman,
RDCS, LVT

HOSPITAL NAME

Eubank Animal Clinic

REFERRING VET

Dr. Grainger

INVOICE

30652

DATE

5/8/23

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing moderate mitral and tricuspid regurgitation. Moderate left atrial enlargement indicates there may be elevated risk for spontaneous congestive heart failure in the future. Moderate pulmonary hypertension is also identified, with only mild



PATIENT

Jake Matthews

right heart enlargement. Given the combination of findings and unusual presentation however, I would institute Pimobendan and Sildenafil at this time in this patient as below. Pending BP assessment, Enalapril is also reasonable. The ECG is unremarkable with a normal sinus rhythm.

SPECIES

Canine

Exertional syncope in this patient is most likely cardiogenic in origin. If the episodes continue to recur going forward or if any breathing issues are noted in the near future, chest radiographs are highly recommended to screen for early decompensation. No acute changes are noted such as a ruptured chord, however these can be difficult to see on ultrasound. Close monitoring at home is advised.

BREED

Terrier Mix

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

SEX

Male Neutered

PLAN

Institute heart muscle support Pimobendan 0.25-0.3mg/kg PO BID. Institute Sildenafil 1-2mg/kg PO q12h. Pending BP >130mmHg, reasonable to continue ACEI 0.5mg/kg PO q12h.

AGE

14 years

Recommend monitor for progression with a recheck echocardiogram in 4-6 months, sooner if any development of clinical signs.

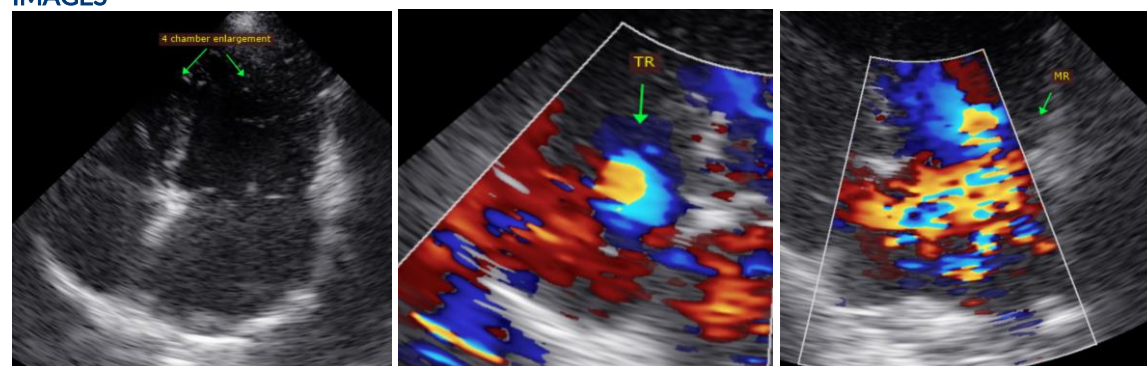
WEIGHT

12.9lbs

IMAGES

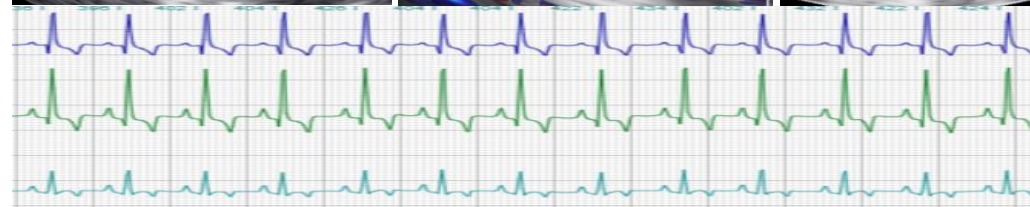
INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)



IMAGING PERFORMED BY

Dana Alterman,
RDCS, LVT



HOSPITAL NAME

Eubank Animal Clinic

REFERRING VET

Dr. Grainger

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.

INVOICE

30652

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.

DATE

5/8/23

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