



PATIENT

Milo Cross

PRESENTING CLINICAL SIGNS

History: Cardiomegaly on CXR.
-Current medications: Vetmedin 2.5mg BID.

SPECIES

Canine

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.
Severe cardiomegaly with LA dilation. No obvious evidence of CHF.

BREED

Cavalier Mix

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 120bpm with a largely regular rhythm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P and QRS morphologies are positive. No ectopic beats, pauses or other dysrhythmias observed.

SEX

Male Neutered

ECG diagnosis: Normal sinus rhythm with respiratory variation.

AGE

7 years

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Severe diffuse nodular thickening of mitral valve leaflets. Marked prolapse of the anterior leaflet into the left atrial lumen. Ruptured chordae tendinae (see below) with a flail leaflet. Marked eccentric mitral regurgitation with marked left atrial enlargement. MR velocity is normal. Significant LV dilation with adequate myocardial function; increased LVIDs and increased sphericity. The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. TR velocity normal with no overt evidence of PAH. The pulmonic and aortic valves appear normal in appearance and mobility. Normal pulmonic and aortic outflow velocities. No aortic and trace pulmonic insufficiency noted. No pericardial or pleural effusion seen. No obvious cardiac tumors.

WEIGHT

33lbs

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	2.5	NM	2.9	44	75	0.6
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	107	1.9	1.5	15.0	4.1	4.7	2.6
*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

Sarah Pender, CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. White

INVOICE

29552

DATE

3/13/23

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing marked mitral and mild tricuspid regurgitation. Marked left atrial and ventricular dilation indicate the risk for spontaneous congestive heart failure is elevated and this patient is at high risk for decompensation. The finding of a ruptured chord and flail leaflet is concerning for acute changes, and long term prognosis is guarded to poor with likely progression to CHF in the future. The ECG is unremarkable with a normal sinus rhythm.

Based upon this risk, full lifelong cardiac support is recommended as below including low dose diuretic therapy even independent of clinical signs (none reported). Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home.

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

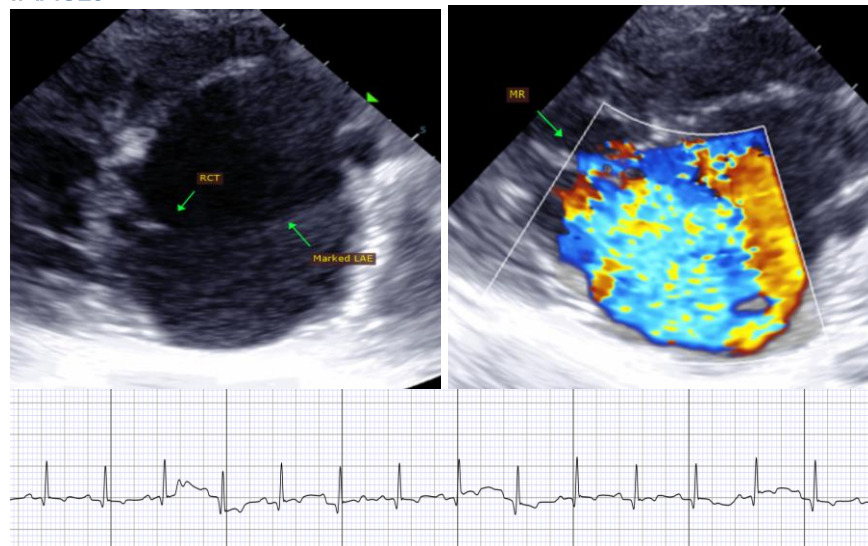
Elective anesthesia is not advised.

PLAN

Screening BP is recommended. Institute Pimobendan 0.3mg/kg PO q12h. Institute ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h. Institute Furosemide 1mg/kg PO q12h. Institute Spironolactone 1-2mg/kg PO q12h.

Monitor renal values in 1-2 weeks, then every 3-4 months lifelong to ensure tolerance of medications.

A recheck echocardiogram is recommended in 6 months to screen for progression, sooner if clinical signs arise.

IMAGES

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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. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

BREED

Cavalier Mix

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Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

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