

**PATIENT**

Sharpie Piasecki

SPECIES

Canine

BREED

Silky Terrier

SEX

Male Neutered

AGE

12 years

WEIGHT

14lbs

INTERPRETED BYMaggie Machen Lamy,
DVM, DACVIM
(Cardiology)**IMAGING PERFORMED BY**

Sarah Pender, CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. Hartmann

INVOICE

26108

DATE

8/30/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. PU/PD, weight loss. Multiple episodes of collapse

-Current medications: Pimobendan 2.5mg 1 in the am, 1/2 in pm Lasix 12.5mg 2 BID, Fluoxetine 10mg 1 daily, Spironolactone 25mg 1/4 BID.

-Abnormal PE/Chem/CBC/UA Results: CBC unremarkable, CREA 1.9, BUN 33-rest of Chemistry panel unremarkable.

-Pertinent previous echo findings (9/2021 MML): Severe MR, severe LA/LVE, moderate TR: 3.0m/s, mild RHE. LA: 3.5, LV: 3.5.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.
Marked cardiomegaly without obvious CHF.**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 140bpm (range 94-200bpm). Dramatic baseline/motion artifact impedes careful evaluation. A sinus origin is suspected; however, the PR interval is inconsistent. Isolated supraventricular arrhythmias are also suspected, although this cannot be confirmed without a six-lead tracing. No ventricular premature beats, pauses or other dysrhythmias observed.

ECG diagnosis: Suspect underlying sinus rhythm with isolated APCs; however, atrial fibrillation or other intermittent supraventricular tachycardia cannot be ruled out.

ECHOCARDIOGRAM FINDINGS

2D, m-mode and Doppler imaging are available. Marked thickening of mitral valve leaflets (anterior > posterior) with prolapse into the left atrial lumen. Lack of coaptation in systole. Marked eccentric mitral regurgitation with marked left atrial dilation. Significant LV dilation with hyperdynamic myocardial function. The tricuspid valve appears thickened with septal prolapse and moderate tricuspid regurgitation. Mild right atrial and ventricular dilation consistent with early pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. Trace pulmonic insufficiency. No aortic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

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	4.7	NM	3.0	3.0	62	91	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	140	0.83	0.7	6.4	4.5	4.3	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)
				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)

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**Note: All measurements based upon multi-modal images and methods. An average value is reported.*

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

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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease persists with evidence of progression. Previously significant disease has advanced to marked and is considered end-stage at this juncture. The degree of left atrial enlargement is profound, and this patient is at exceedingly high risk for decompensation, left atrial tear and/or sudden death going forward. The right heart and TR are similar to previous without significant pulmonary hypertension. No additional issues are identified.

The ECG does show suspicion for supraventricular arrhythmias; however, careful evaluation is difficult due to baseline artifact. Rule outs for these findings include frequent APCs versus atrial fibrillation. The former is suspected as the overall heart rate is reasonable and no treatment is warranted. That being said, a six-lead ECG is strongly recommended with referral if necessary.

Multiple collapse episodes are noted in the history without further information. These are suspected to be due to insufficient cardiac output, given marked disease seen here. This is difficult to treat, and the best approach is avoidance if they are exertional in origin. Recommend dose adjustments as below due to degree of disease seen here. If syncope persists despite changes and quality of life suffers, humane euthanasia should be considered.

Prognosis is poor to grave; however, our goal is to try to maintain quality of life for the short-term.

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.

PLAN

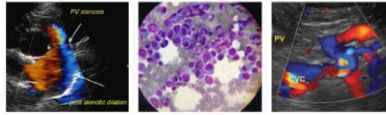
Increase Pimobendan to 2.5mg PO q8h. Continue Lasix as prescribed. Increase Spironolactone to 12.5mg PO q12h. Highly recommend a six-lead ECG as able. Baseline BP recommended. If syncope persists, consider humane euthanasia.

A renal panel and BP are recommended every 3-4 months lifelong.

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

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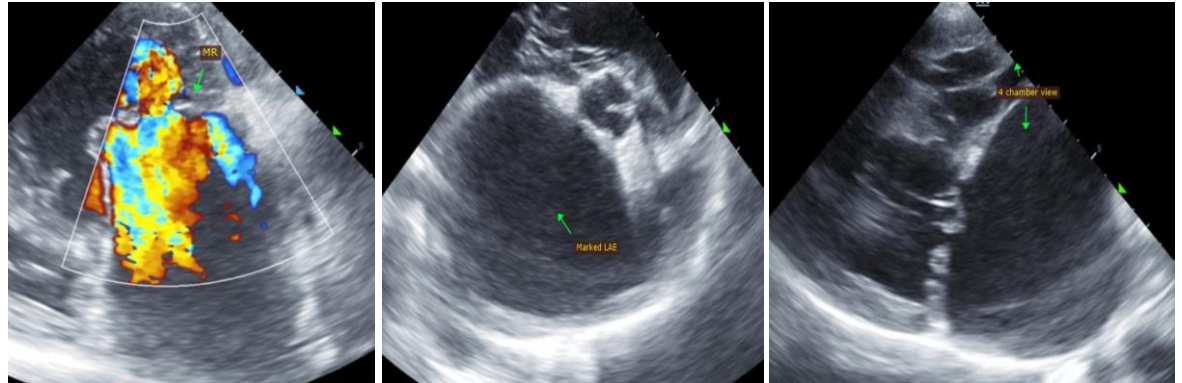
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IMAGES



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.

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.

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