



PATIENT

Chloe Becher

SPECIES

Canine

BREED

Shih Tzu

SEX

Female Intact

AGE

13 years

WEIGHT

7lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kelly Vazquez, CVT

HOSPITAL NAME

New Bridge
Veterinary Practice

REFERRING VET

Dr. Glennon

PRESENTING CLINICAL SIGNS

History: Recheck echo. Grade 4/6 heart murmur. Presents today for possible syncopal episodes, collapse and cough.

ECG report: NSF. findings:

-Current medications: Enalapril, Pimobendan, and Furosemide.

-Pertinent previous echo findings (12/2022 MD): CVD B1. Mild TR, no PAH. LA:AO: 1.4.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets (anterior>posterior) with mild prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with moderate left atrial dilation. Normal MR velocity. Borderline LV dilation with adequate myocardial function. The tricuspid valve appears subjectively normal, with no tricuspid regurgitation. Normal right atrial and ventricular diameter. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. No aortic or pulmonic 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	5.9	NA	1.7	1.4	43	77	NM
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	110	1.2	0.8	3.2	1.8	2.5	1.0
*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

INVOICE

30644

DATE

5/8/23

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease persists with evidence of progression. Previously mild MR has advanced to moderate, with increasing left heart dimensions. Moderate left atrial enlargement indicates there is relatively low risk for imminent complication, however risk for progression to spontaneous congestive heart failure in the future is elevated.

Given these findings, continue Pimobendan is recommended as below. Additionally, a baseline BP is recommended. Continued assessment of progression is recommended, with a guarded prognosis going forward (stage B2). Patient may be at risk for development of CHF, arrhythmias, and/or sudden death going forward.



PATIENT

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Assuming the syncope is cough related, this is more likely to be due to hypoxia than secondary to CHF. Unless CHF has been documented or suspected, Lasix can be safely discontinued. Use of Enalapril should be based on blood pressure assessment as below. Further evaluation of the cough should be based upon CXR assessment, in this predisposed breed. Controlling the cough should avoid the syncope, and adequate cough suppression is advised.

SPECIES

Canine

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.

BREED

Shih Tzu

Once on the medication for 3-5 days, anesthetic risk remains mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious IV fluid rates are recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

SEX

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PLAN

Continue Pimobendan 0.3mg/kg PO q12h. Unless CHF has been documented, Lasix can be discontinued. Baseline BP recommended every 6 months. If the BP is >150mmHg, reasonable to continue Enalapril 0.5mg/kg PO q12h, otherwise this is unnecessary. Further cough evaluation as discussed with Hydrocodone if indicated. If syncope develops independent of the cough, further evaluation, such as a repeat ECG is strongly recommended.

WEIGHT

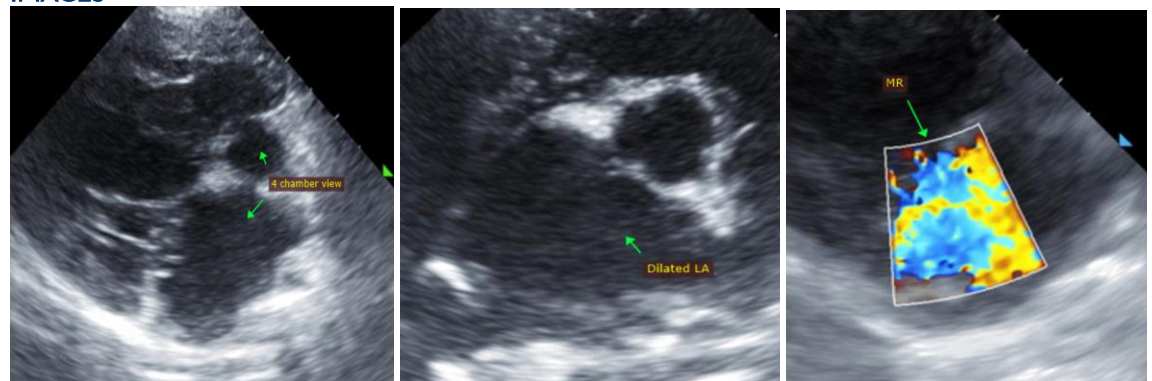
7lbs

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

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Maggie Machen Lamy,
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IMAGES



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Kelly Vazquez, CVT

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.

HOSPITAL NAME

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Veterinary Practice

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.

REFERRING VET

Dr. Glennon

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