

**PATIENT**

Chewi Zappala

SPECIES

Canine

BREED

Miniature Schnauzer

SEX

MN

AGE

2011

WEIGHT

17.3lbs

PRESENTING CLINICAL SIGNS

History: Recheck annual echocardiogram.

Current medications: 5/21 Pimobendan 2.5mg BID. 7/21 Furosemide 12.5mg ½ BID.

Sedation used: Not required to complete full diagnostic ultrasound.

Pertinent previous ultrasound results: 5/14/21.

STAT: Not requested

Imaging performed by: Andi Parkinson, RDMS.

Pertinent previous echo findings (MML 5/2021): mod MR, mod LAE, mild LVE, trace TR, LA 2.5, LV 4.1

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. Severe eccentric mitral regurgitation with severe left atrial dilation. Normal MR velocity. Increased LV diameter with increased sphericity. Hyperdynamic myocardial function. The tricuspid valve appears mildly thickened with trace tricuspid regurgitation. No obvious pulmonary hypertension. Normal right atrial and ventricular diameter and morphology. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. Mild aortic insufficiency. No obvious pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

CARDIAC CHART**INTERPRETED BY**Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)**HOSPITAL NAME**

Perty Hall AH

REFERRING VET

Dr. Baer

INVOICE

24132

DATE

5/10/22

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	5.0	NM	NM	2.4	44	76	76NM
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	7.99	3.4	3.9	2.2
*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							

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

CVD persists, with evidence of progression. MR has increased, and most importantly there is progression in LA dilation. AI is unchanged, and lifelong BP monitoring remains recommended. No additional issues are identified.

Continued lifelong cardiac support recommended as below. No historical reason for addition of low dose Lasix is provided; however, given progression it is **recommended that it be continued**. Additionally, spironolactone and an ACEI are recommended for long term benefit and for more balanced diuresis. Monitoring of sleeping respiratory rates will be paramount to screen for congestive heart failure at home. The average survival time of canine patients with active pulmonary edema is 8-9 months on medications, however they generally are able to maintain a good quality of life for that period. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear and/or sudden death going forward.

Elective anesthesia is not advised, as there is high risk for complication. Risk:benefit ratio should be considered. Consider consultation with and/or referral to a facility with an anesthesiologist. Should you elect to proceed, cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, iso or sevoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction and recover in O2 cage. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Moderate IV fluid restriction is recommended to avoid fluid overload, while considering comorbidities, hydration status, BP, etc. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

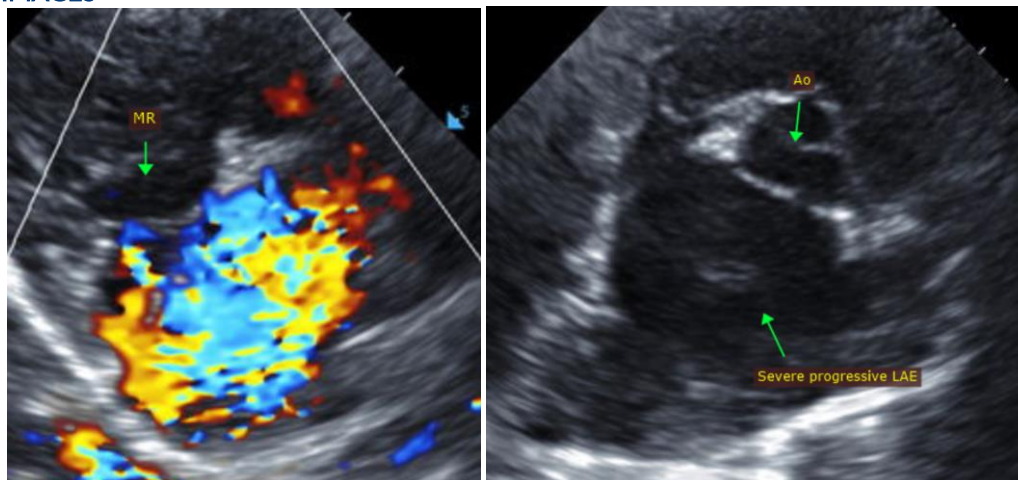
Omega fatty acid supplementation and mild salt restriction remain recommended for long term benefit. Monitor for acute progression of the cough, labored breathing, exercise intolerance or collapse episodes in the future.

PLAN

Continue Lasix and Pimobendan as prescribed. Institute Spironolactone 1-2mg /kg PO q12h. Institute ACEI 0.5mg/kg PO q12h. Monitor BP every 6 months lifelong.

Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of associated clinical signs occurs in the interim.

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. 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.

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