



## PATIENT

Aly Rodriguez

## SPECIES

Canine

## BREED

Miniature Schnauzer

## SEX

Female

## AGE

12 years

## WEIGHT

14.5lbs

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGING PERFORMED BY

G. Ferrer, DVM

## HOSPITAL NAME

Paseos Veterinary  
Center

## REFERRING VET

Dr. Biello

## INVOICE

30088

## DATE

4/6/23

## PRESENTING CLINICAL SIGNS

History: Recheck echo. Presented today for fainting and collapse episodes. Recently had about 4 syncopal episodes, and they happened after being agitated. Grade 5/6 heat murmur. BP: 121mmHg. -Current medications: Vetmedin 2.5mg: 1/2 BID, Furosemide 12.5mg: 1 BID, Spironolactone 25mg: 1/2 SID.

**RADIOGRAPHIC FINDINGS** \*NOTE: Images submitted for supplemental cardiac information only. Marked cardiomegaly without evidence of CHF.

## ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse nodular thickening of mitral valve leaflets. Mild prolapse into the left atrial lumen. Severe eccentric mitral regurgitation with marked left atrial enlargement. Normal MR velocity. Significant LV dilation with hyperdynamic myocardial function and evidence of volume overload. The tricuspid valve appears thickened with moderate tricuspid regurgitation. Velocity consistent with early pulmonary hypertension. Mild right heart enlargement. The pulmonic and aortic valves appear normal in appearance and mobility. Normal pulmonic and aortic outflow velocities. No aortic or pulmonic insufficiency noted. No effusions or tumors.

## 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)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
<b>PATIENT</b>	5.3	3.1	NM	2.9	48	80	0.25
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)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
<b>PATIENT</b>	NM	1.1	0.9	6.6	3.9	4.2	2.2
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
<b>BODY WEIGHT DEPENDENT PARAMETERS</b>				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)

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing severe mitral and moderate tricuspid regurgitation. Marked left atrial and ventricular enlargement indicates there is an elevated risk for spontaneous congestive heart failure. Mild pulmonary hypertension is noted which should be monitored going forward. No obvious additional issues are noted.



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Syncope in this patient is most likely cardiogenic in origin. Possible causes include poor forward blood flow leading to hypoxia, early recurrent CHF, significant pulmonary hypertension (not seen), an arrhythmia, vaso-vagal events, and/or blood pressure swings. In light of severity of disease on echocardiogram, early recurrent CHF cannot be ruled out. That being said, if no respiratory signs have developed, other possibilities should be considered in light of clear CXR. Given that the episodes are exertional in nature, a simple lack of cardiac output is suspected. Medication adjustments are suggested as below; however, if the episodes continue, an ECG or holter monitor should be considered. Once in CHF, long term prognosis is guarded to poor, however most dogs are able to maintain a good QOL on medications for an average of 8-12 months. Patient will always be at risk for recurrent CHF, malignant arrhythmias, LA tear and/or sudden death in the future.

Monitoring of sleeping respiratory rates will be paramount to screen for congestive heart failure at home. Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or worsening collapse episodes in the future.

Elective anesthesia is not advised.

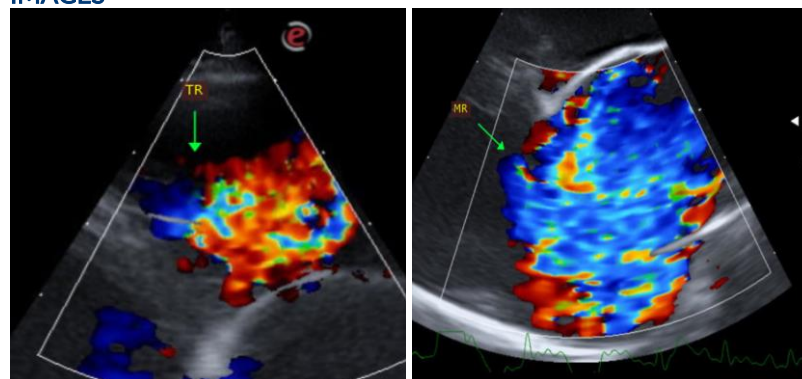
**PLAN**

Continue Lasix as prescribed. Increase Spironolactone to 12.5mg PO q12h. Increase Pimobendan to 2.5mg PO q12h.

Recheck renal values and BP in 1-2 weeks then every 3-4 months while on diuretics. If episodes persists, an ECG is strongly recommended.

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

**IMAGES**





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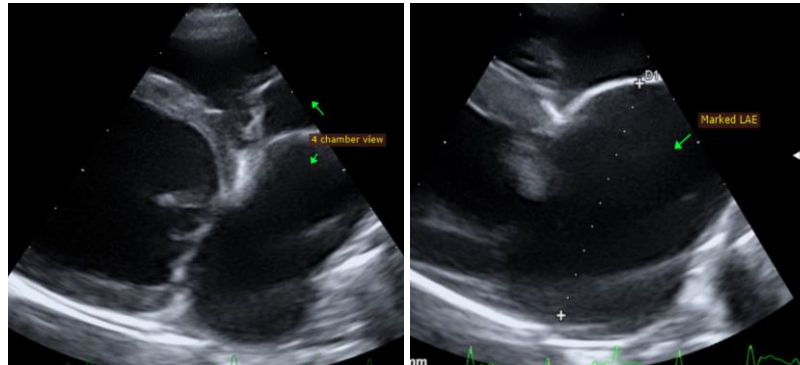
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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