PATIENT
Stewie Ventura

SPECIES
Canine

BREED
Pomeranian Mix

SEX
Male Neutered

AGE
11 years

WEIGHT
10.6lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Kelly Reschny, RVT

HOSPITAL NAME
The Collegeway Animal Hospital

REFERRING VET
Dr. Hanna

INVOICE
45881

DATE
11/21/25

PRESENTING CLINICAL SIGNS

History: Recheck echo. Progressive cough; especially at night. Grade 4/6 heart murmur.
-Current medications: Furosemide 20mg-1/2-tab BID, Enalapril 5mg-1/2-tab BID, Spironolactone 25mg-1/4 SID, Vetmedin 1.25 1 cap-BID.
-Pertinent pervious echo findings (2024 MD): CVD stage B2/C. Full cardiac support recommended.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The mitral valve is diffusely thickened with prolapse into the left atrial lumen. There is marked eccentric mitral regurgitation present. The MR velocity is normal. There is marked left atrial enlargement. There is marked left ventricular dilation. Left ventricular systolic function is depressed. Increased sphericity. Mild right atrial and ventricular dilation (subjective). Mild thickening of the tricuspid valve with mild TR. The aortic valve appears trileaflet with normal mobility. No significant AI. There is normal systolic flow velocity across the aortic valve. The main pulmonary artery is normal in diameter. The pulmonic valve is normal in appearance. Flow through the RVOT/PV is normal in velocity. Trace PI. No pericardial/pleural effusion or cardiac masses are seen. Irregular bradycardia throughout.

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	>4.0	NM	NM	2.8	32	60	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	176	1.2	0.9	4.8	3.2	4.5	3.1
*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)
**Note: All measurements based upon multi-modal images and methods. An average value is reported.*				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

Chronic degenerative valve disease persists with evidence of progression. The degree of disease is now marked, with significant volume overload of the left heart. This is resulting in depressed myocardial function. Some degree of pulmonary hypertension is suspected, which is likely secondary to chronic LA pressure elevation and active congestion. Finally, **the HR is relatively low with an irregular rhythm, which is unexpected in cases of straight forward CHF. An ECG should be obtained**. No additional issues are identified.

Given these findings, continued workup and treatment for recurrent/refractory CHF is recommended. CXR should be obtained when able, with injectable Lasix until stable. Oral

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medications are recommended as below. Monitoring of sleeping respiratory rates will be paramount to screen for congestive heart failure at home. Cough suppression to improve QOL can also be considered (hydrocodone, 0.2-0.4mg/kg up to q4-6h PRN) for any residual mechanical cough in the face of normal sleeping respiratory rates. If able to be stabilized, the average survival time of canine patients with active pulmonary edema is <6 months on medications; however, most are able to maintain a good quality of life for that period on medications. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

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

Elective anesthesia is not advised.

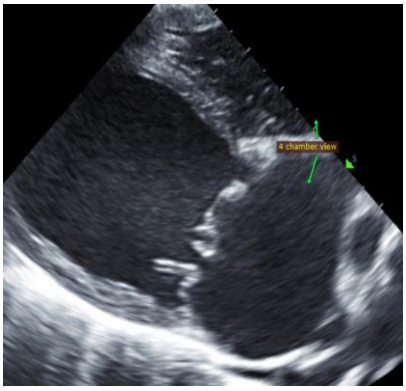
PLAN

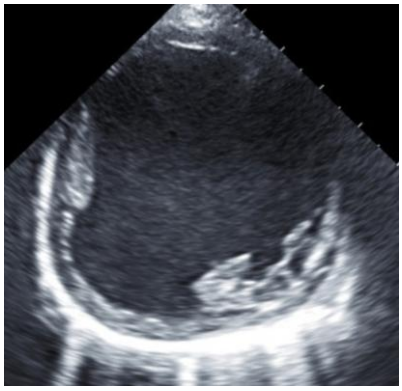
Hospitalization for injectable treatment until stable; temporarily discontinue the ACE-I. Obtain CXR, ECG and BP when able. Once stable, discharge on Lasix 2mg/kg PO q8h, increase Pimobendan to 0.3mg/kg PO q8h, increase Spironolactone to 1-2mg/kg PO q12h.

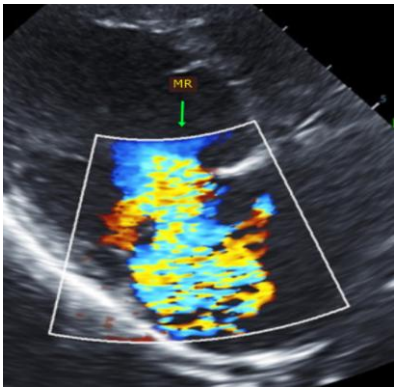
Monitor renal values and BP in 10-14 days, then every 3-4 months while on diuretics to ensure tolerance of medications. If doing well at home, renal values are reasonable and BP >130mmHg, reinstitute ACEI 0.5mg/kg PO q12h. Consider hydrocodone if needed for QOL.

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.

Maggie Machen Lamy, DVM
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