

**PATIENT**

Priscilla Reyes

SPECIES

Canine

BREED

Cavalier

SEX

Female Spayed

AGE

9.15.11

WEIGHT

18.7lbs

INTERPRETED BYMaggie Machen Lamy,
DVM, DACVIM
(Cardiology)**HOSPITAL NAME**Bel Air Veterinary
Hospital**REFERRING VET**

Dr. Stevenson

INVOICE

29574

DATE

3.14.23

PRESENTING CLINICAL SIGNS

History: Recheck echo. Dyspneic with abdominal effort on exam.

-Current medications: Enalapril 5mg- 1 BID, Furosemide 12.5mg 1 BID, Vetmedin 2.5mg 2 AM, 1 PM.

-Sedation used: Not required to complete full diagnostic ultrasound.

-Pertinent previous ultrasound results (11/2021 MML): Moderate MR, mild LAE, no LVE, mild TR, prominent right heart, early PAH: 3.1m/s, pleural effusion on CXR at that time. LA: 1.9, LV: 3.2/1.8. Correlation between heart disease and effusion was unclear at that time, reasonable to continue cardiac medications.

-STAT: Approved.

-Imaging performed by: Stephanie Warga RDCS, RVT.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental information only.

Mild left heart enlargement. No pulmonary edema. The cranial border of the heart is obscured; however, right-sided enlargement is suspected. Suspect right-sided CHF.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with significant prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with moderate left atrial dilation. Normal MR velocity. Mild LV dilation with hyperdynamic myocardial function. The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. Mild right heart enlargement. TR velocity indicative of moderate to severe pulmonary arterial hypertension. No MPA dilation. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. Mild aortic and no pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

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	6.0	4.1	NM	1.7	57	88	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	160	1.2	0.61	8.5	2.6	3.8	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)
*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

Compared to the prior study, there is evidence of progression. Moderate mitral and mild tricuspid regurgitation are actually unchanged; however, the left and right heart dimensions are both progressively dilated. The pulmonary pressures are also increased with moderate to severe pulmonary hypertension suspected. Finally, the aortic leak is mildly increased as well, and a baseline blood pressure is recommended.

The history in this case is confounding as a similar presentation was noted on the prior 2021 study of unknown origin. Consider a Radiologist review of the films, given the chronic and unusual nature of this case; however, based upon what is seen here full cardiac support is certainly recommended. Addition of Sildenafil is recommended as PAH has increased significantly compared to previous and is the cause of right-sided enlargement. If the patient does not respond to medical management as expected, reassessing the lung pattern may be warranted through serial films.

Prognosis is guarded to poor, given the chronicity and severity of the findings. That being said the patient presumably did well for 2 years despite similar findings. Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

Elective anesthesia is not advised.

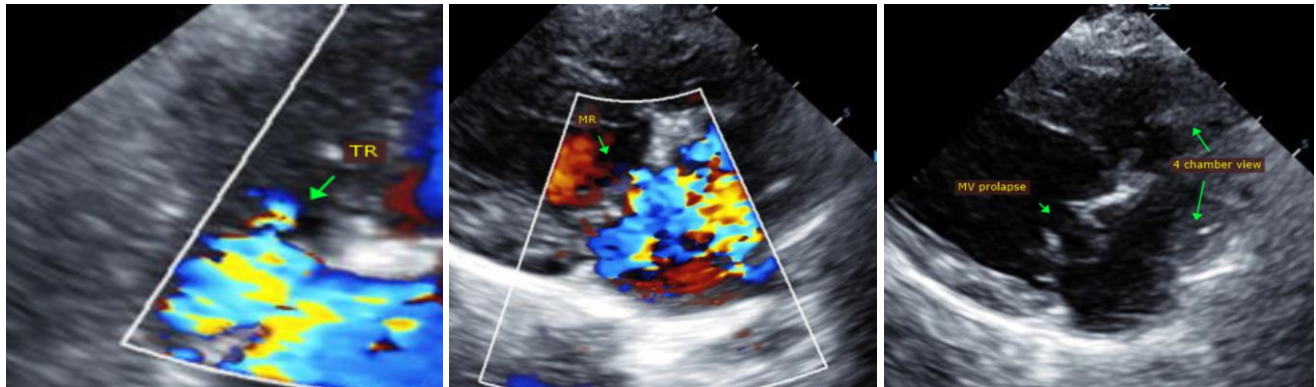
PLAN

Consider a Radiologist review as discussed. If the patient is or becomes unstable, consider hospitalization for supportive care. Oral medications: Increase Lasix to TID: administer 12.5mg PO q8h. Continue Pimobendan and Enalapril as prescribed, pending BP assessment. Institute Spironolactone 1-2mg/kg PO q12h. Institute Sildenafil 1-2mg/kg PO q8h.

Monitor renal values, BP and clinical status in 1-2 weeks, then every 3-4 months lifelong. If respiratory issues persists, repeat CXR are strongly recommended.

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

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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