



PATIENT

Cassie Chavez

SPECIES

Canine

BREED

Labrador

SEX

Female Spayed

AGE

7 years

WEIGHT

82.6lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Dana Alterman,
RDCS, LVT

HOSPITAL NAME

Eubank Animal Clinic

REFERRING VET

Dr. Smith

INVOICE

24457

DATE

5/27/22

PRESENTING CLINICAL SIGNS

History: Recheck echo.

-Current medications: Enalapril, Vetmedin, Sildenafil, Atenolol, Gabapentin.

-Pertinent previous echo findings (6/2020 KB): TVD with small left heart dimensions. Mild to moderate RA/RVE. Moderate TR: 3.5m/s, moderate PAH.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 50mm/s, 20mm/mV. The average heart rate is 130bpm with a largely regular rhythm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P and QRS morphologies are positive. No ectopic beats, pauses or other dysrhythmias observed.

ECG diagnosis: Normal sinus rhythm with respiratory variation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Elongated, thickened TV leaflets with tethered septal leaflet. Apical displacement. Moderate tricuspid regurgitation with moderate right atrial dilation. TR velocity consistent with mild to moderate pulmonary hypertension. Moderate to severe RV enlargement with mild hypertrophy. LV diameter is normal with adequate myocardial function. LA is normal. Mitral valve is normal with no obvious regurgitation. Normal pulmonic and aortic outflow velocities. The pulmonary artery is prominent. The aortic valve appears normal. Mild pulmonic and no aortic insufficiency. The No pleural or pericardial effusion. No obvious cardiac 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)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	NA	3.3	NM	1.2	50	92	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	NM	1.0	1.1	37.5	2.8	3.6	1.8
*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



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Tricuspid valve dysplasia persists with findings similar to the previous study. This is moderate tricuspid regurgitation and secondary right heart dilation. Compared to what is available from the prior study these findings are similar with unchanged mild to moderate pulmonary hypertension. The ECG is unremarkable with a normal sinus rhythm.

Surgical reconstruction/repair is available as an option, though it requires use of cardiopulmonary bypass, and such procedures are only offered at select universities. Continued medical management is reasonable, particularly given no reported clinical signs at 7yo. The current medications appear appropriate; however, Atenolol is being utilized without explanation (not noted on KB report). This is atypical for tricuspid valve disease and further historical information is necessary. Spironolactone would be a reasonable addition for long-term antifibrotic benefit. No additional medications are warranted.

The long-term prognosis is guarded; however, outcome varies widely among TVD patients.

Anesthetic risk is considered mildly elevated, pending a normal atropine response. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload.

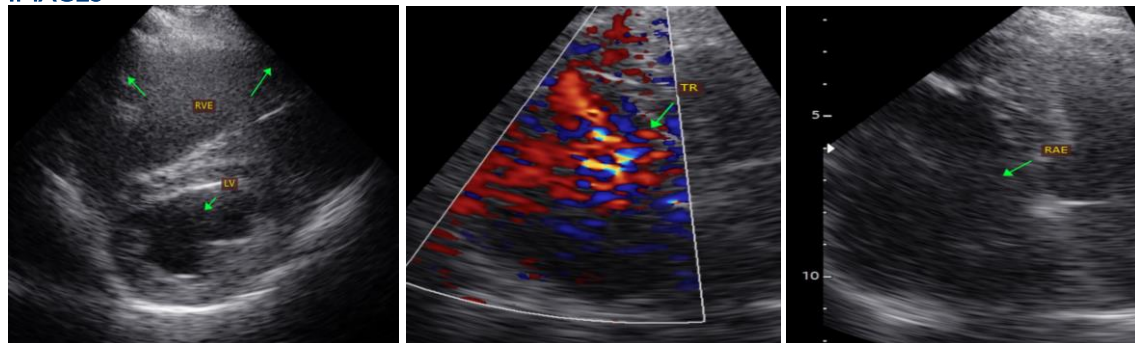
Monitor closely at home for development of any associated clinical signs, including abdominal distention, labored breathing, and/or collapse episodes or lethargy. Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Activity restriction is advised lifelong.

PLAN

Continue Pimobendan 0.3mg/kg PO q12h. Continue Sildenafil 1-2mg/kg PO q8-12h. Continue Enalapril 0.5mg/kg PO q12h, pending BP assessment >130mmHg. No obvious indication for Atenolol based upon what is seen here; however, further historical information is necessary. Institute Spironolactone 1-2mg/kg PO q12h.

A recheck echocardiogram is recommended in 6-12 months to screen for progressive dilation, sooner if any clinical signs arise.

IMAGES





PATIENT

Cassie Chavez

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.

SPECIES

Canine

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.

BREED

Labrador

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

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