



PATIENT

Sheri Murray

PRESENTING CLINICAL SIGNS

History: Progressive heart murmur. Asymptomatic.

SPECIES

Canine

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.
 Normal cardiac silhouette. No obvious evidence of CHF.

BREED

Papillion

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 bpm (range -bpm).
 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 dysrhythmias observed.
 ECG diagnosis: Normal sinus rhythm with respiratory variation.

SEX

Female Spayed

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. Moderate eccentric mitral
 regurgitation with moderate left atrial dilation. Normal MR velocity. Borderline increased LV
 diameter with hyperdynamic myocardial function. The tricuspid valve appears mildly thickened
 with mild to moderate tricuspid regurgitation. Velocity consistent with mild to moderate
 pulmonary hypertension. Normal right atrial and ventricular diameter. The pulmonic and aortic
 valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. No
 aortic and trace pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors
 observed.

AGE

11 years

WEIGHT

12.9lbs

CARDIAC CHART

INTERPRETED BY

Maggie Machen
 Lamy, DVM, DACVIM
 (Cardiology)

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Santa Clara Animal
 Hospital

REFERRING VET

Dr. Brasted-Maki

INVOICE

234911

DATE

6/21/22

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	6.1	3.5	NM	1.8	41	80	0.24
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	130	1.6	1.4	5.9	2.3	2.7	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)
				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)

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



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Clin North Am 15:1177, 1995	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)

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing moderate mitral and tricuspid regurgitation. Moderate left atrial enlargement indicates there is relatively low risk for imminent complication, however risk for progression to spontaneous congestive heart failure in the future is elevated. The finding of mild to moderate pulmonary hypertension is unexpected in an asymptomatic patient. Simple follow-up is advised. No additional issues are identified.

Given the risk for progression and results of the EPIC trial, Pimobendan is indicated in this patient as below. Assessment of progression in the future will help predict long term outcome; however, prognosis is guarded at this stage (B2).

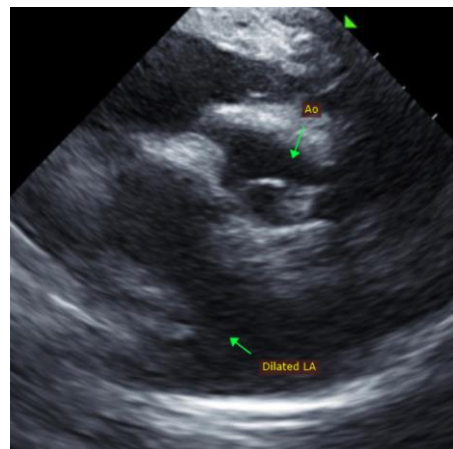
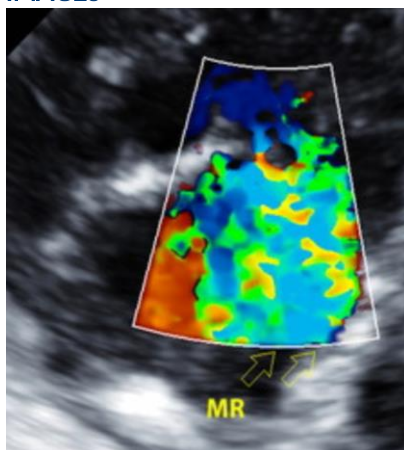
Omega fatty acid supplementation and mild salt restriction may also be of some long term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

Once on the medication for 3-5 days, anesthetic risk is considered mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious IV fluid rates are recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

Plan: Baseline BP recommended. Institute heart muscle support Pimobendan 0.25-0.3mg/kg PO q12h.

Recommend monitor for progression with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

IMAGES





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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.

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

Papillion

Maggie Machen Lamy, DVM
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info@sonopath.com

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