


PATIENT

Goodwin Stewart

SPECIES

Canine

BREED

Golden Retriever

SEX

Male Neutered

AGE

4 years

WEIGHT

92.6lbs

INTERPRETED BY

 Maggie Machen Lamy,
 DVM DACVIM
 (Cardiology)

IMAGING PERFORMED BY

Kelly Reschny, RVT

PRESENTING CLINICAL SIGNS

History: Recheck echo. Grade 1-2 systolic heart murmur, no other abnormalities noted on physical exam. No exercise intolerance, or other clinical signs noted currently. Cardiac consult initially at Toronto Veterinary Emergency Hospital Aug. 2018, due to exercise intolerance, excessive panting, heart murmur, arrhythmia noted during neuter 2 months earlier. Diagnosed Aug. 2018 with dilated cardiomyopathy (suspected nutritional), subaortic stenosis (mild), and tricuspid valve dysplasia (mild). Treatment: pimobendan 10mg PO q12h, benazepril 15mg PO q12h, taurine 2000mg PO q12h. Food switched from Fromm grain free, to Fromm with grain, to Royal Canin Golden Retriever Adult Cardiac recheck at Mississauga Oakville Referral Hospital April 2019, no echo performed at that time, continued medications as above, as clinically patient was improving in regard to exercise intolerance. Due to life circumstances, no recheck echo has been done since. Patient has been receiving above medications, except benazepril had been switched to enalapril.

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; 25mm/s, 10mm/mV. The average heart rate is 80bpm (range 71-88bpm). 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. The mitral valve is mildly thickened with no prolapse into the left atrial lumen. No obvious mitral regurgitation with a normal left atrial dimension. Normal LV diameter with adequate myocardial function. The tricuspid valve appears mildly thickened with trace tricuspid regurgitation. Normal velocity. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic valve is normal in morphology and mobility. The aortic valve mildly thickened. Normal pulmonic and mildly elevated aortic outflow velocities with laminar flow. No obvious aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

CARDIAC CHART
HOSPITAL NAME

 Graham Animal
 Hospital

REFERRING VET

Dr. Lukacs

INVOICE

21007

DATE

9/14/21

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	2.0	1.1	1.1	40	76	0.4
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	2.0	1.0	42.0	2.3	4.7	2.7
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)



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BODY WEIGHT DEPENDENT PARAMETERS

**Note: All measurements based upon multi-modal images and methods. An average value is reported.*

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

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

Overtly normal cardiac dimensions and function, with no obvious dysfunction or dilation of the left heart. The persistent murmur is due to mildly increased flow velocity through the aortic valve, which is clinically insignificant long-term. Most importantly, there is no evidence of diet-related cardiomyopathy at this time with normal left heart dimensions and adequate systolic function.

Given these findings, this is great news and there is no obvious indication for continued medications at this time. Improvement following the diet change and taurine supplementation would suggest a nutritional origin of the disease which should not require therapy going forward. That being said, follow up is advised to ensure no changes are noted with discontinuation. Reasonable to continue taurine for the short-term; however, this can likely be discontinued in the future as well. The ECG is unremarkable with a normal sinus rhythm.

Monitor lifelong for development of a cough, labored breathing, exercise intolerance or collapse episodes.

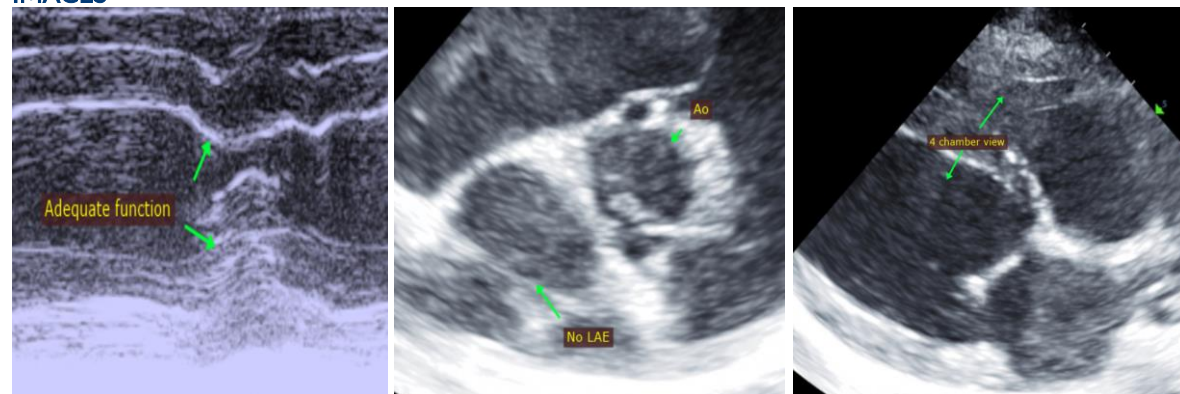
No cardiac contraindication for general anesthesia at this time.

PLAN

Discontinue Enalapril and Pimobendan as discussed. Continue taurine supplementation until follow up exam.

A recheck echocardiogram is recommended in 1 year to screen for any changes and/or development of disease that the preexisting murmur may mask.

IMAGES





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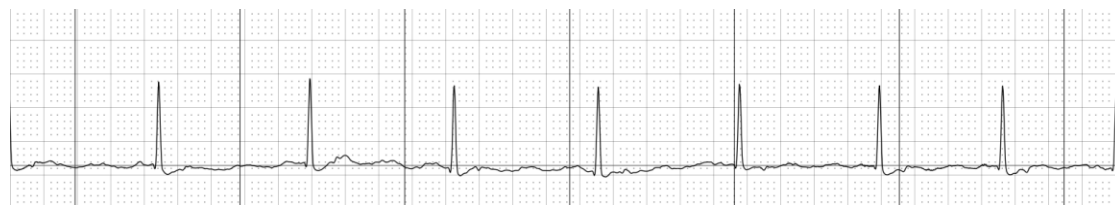
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Maggie Machen Lamy, DVM
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