



PATIENT

Morgan Young

SPECIES

Canine

BREED

Golden Retriever

SEX

Male Neutered

AGE

12 years

WEIGHT

81.6lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Dave Stasiuk,
RDMS, RDCS

HOSPITAL NAME

CBVS

REFERRING VET

Dr. LeBoldus

INVOICE

20750

DATE

8/25/21

PRESENTING CLINICAL SIGNS

History: Murmur heard. Arrhythmias noted.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild MV thickening with minimal prolapse into the left atrial lumen. Mild eccentric mitral regurgitation. No significant left atrial dilation. Normal LV. Mildly decreased myocardial function. The tricuspid valve appears subjectively normal, with no insufficiency seen. Normal right atrium and ventricle. No overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and mildly increased aortic outflow velocities; laminar flow. No aortic and trace pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac or extra-cardiac tumors identified.

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	NM	NA	1.1	1.2	26	50	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	1.2	0.7	37.0	2.5	4.6	3.4
*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)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				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 causing mild mitral regurgitation is identified, in addition to mild systolic dysfunction. The LA is normal, indicating a low risk for imminent complication. No additional issues such as pulmonary hypertension are identified.

Given the echo findings and the recent evidence of grain free/boutique diets leading to DCM in some (but certainly not all) dogs (and golden retrievers specifically), highly recommend a thorough diet history and ensuring the patient is on a standard formulated diet (see WSAVA



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guidelines). A taurine supplement can also be administered regardless, on the off chance of a malabsorption issue. Additionally, screening for additional causes of dysfunction is recommended including hypothyroidism. No clear indication for Pimobendan at this juncture, however if any progression or clinical signs are noted this will be advised.

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Canine

Arrhythmias are noted in the history and an ECG and/or holter monitor is strongly recommended.

BREED

Golden Retriever

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

SEX

Male Neutered

Anesthetic risk is considered mild from a structural standpoint. 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. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

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PLAN

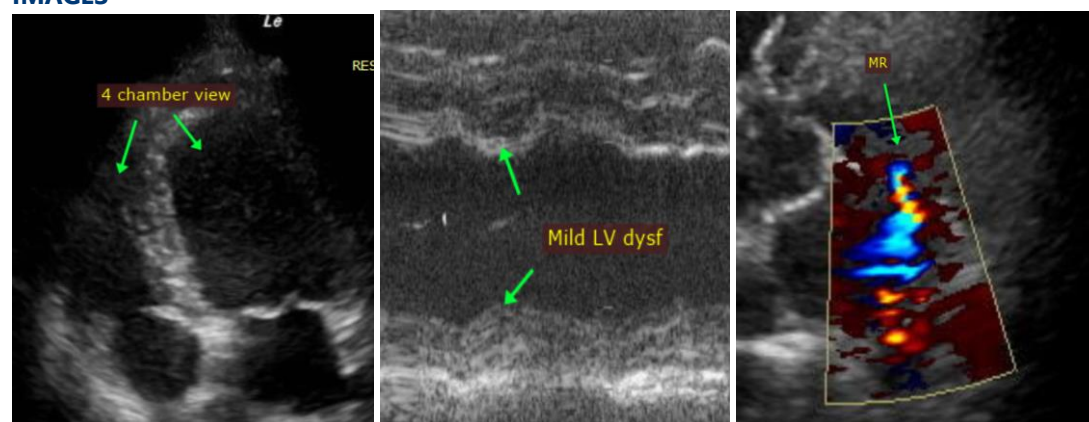
Diet history/thyroid status are recommended. Consider taurine supplement, 1000mg q12h.

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

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(Cardiology)

IMAGES



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Dave Stasiuk,
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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.

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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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Maggie Machen Lamy, DVM

Diplomate of the American College of Veterinary Internal Medicine (Cardiology)

info@sonopath.com

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