



**PATIENT**

Norm Bizzaro

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Male Neutered

**AGE**

6 years

**WEIGHT**

15lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Jessica Miller, RDMS

**HOSPITAL NAME**

The Gentle Vet

**REFERRING VET**

Dr. Dulude

**INVOICE**

32314

**DATE**

8/11/23

**PRESENTING CLINICAL SIGNS**

History: Recheck echo.

-Current medications: Enalapril 5mg SID, Clopidogrel 75 1/4 SID.

-Pertinent previous echo findings (2/2023 MML): Mild to moderate LVH (0.70/0.75cm). Small LV, mild MR, moderate LAE: 1.7, mild RAE, mild TR.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall thickness is increased overall with moderate hypertrophy. Adequate systolic function. There is a diffusely hyperechoic endocardium consistent with fibrosis. The papillary muscles are remodeled and mildly hypertrophied. The mitral valve is normal with mild eccentric MR. Systolic anterior motion is seen on color flow and 2D imaging. The left atrium is mildly dilated. No obvious smoke. The right atrium is mildly enlarged. Tricuspid valve is normal with mild TR. The right ventricle appears mildly affected as well. Blood flow through the LVOT and RVOT are normal in velocity; however, this is thought to be an underestimation. Trace aortic insufficiency. No pericardial effusion seen. No pleural effusion. No obvious cardiac tumors.

**CARDIAC CHART**

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LWVd (cm) (Moise, Pipers)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	6.8	250	0.74	1.2	0.79	72	97
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Swe) (Abbott)	LA 2D short axis Base view (cm) (Abbott)		LVOT VEL (m/s)	RVOT VEL (m/s)	E max (m/s)
NORMAL	<1.5	<1.3	<1.2		<1.6	<1.3	<0.9
PATIENT	1.2	1.5	1.45		1.1	1.0	NM

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

Adapted from June Boon, Veterinary Echocardiography, 1998

Abbott J & MacLean H JVIM 2006;20: 111-119, Moise et al. Am J Vet Res 47:1476, 1986. Pipers et al. Am J Vet Res 40:882, 1979.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Compared to the prior study, there is evidence of mild progression in LV wall thickness. Moderate LV hypertrophy is present, although the LA dimension is slightly improved. What is unique is that an LVOT obstruction is not apparent, which was not noted on the prior study. This would suggest an obstructive component to the disease. No obvious additional issues are identified.

Given these findings, recommend continue Enalapril and Plavix as prescribed. Additionally given progressive hypertrophy and marked tachycardia, Atenolol is also recommended as below, if able to be medicated.

Anesthetic risk is considered mild, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically



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necessary (glycopyrrolate, atropine). Avoid vasodilators as this may worsen the obstruction. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, and isoflurane maintenance. Risk for complication with steroid use typically follows LA dilation, which in this case is mildly elevated. If needed, monitoring of RR/RE is advised particularly in the initiation phase.

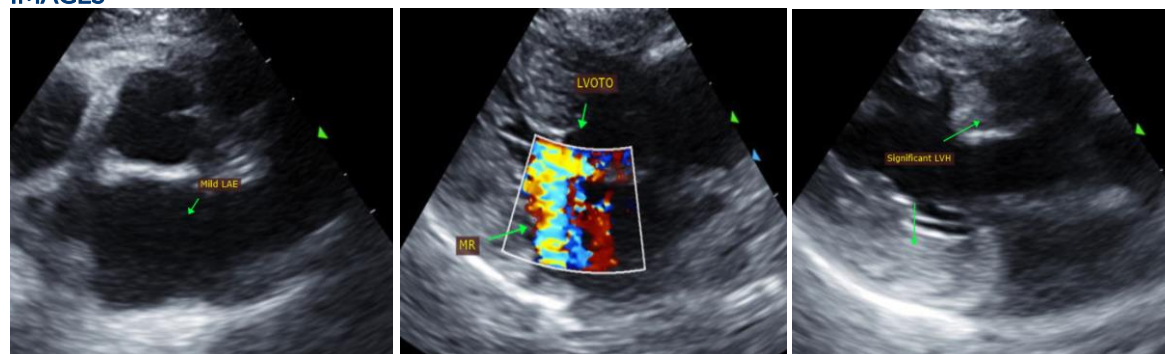
Monitor at home for any respiratory signs or blood clot events (neurologic change, paralysis, etc.) in the future.

**PLAN**

Screening BP/T4. Continue Plavix and Enalapril as prescribed. Administer titrating dose of atenolol: 25mg tablets; Give ¼ tab once daily. Recheck heart rate in 1-2 weeks with target stressed rate of 140-160bpm 12-24 hours post-administration. Increase as needed until target reached.

Recommend recheck echocardiogram in 6 months to assess for progression, sooner if clinical issues arise.

**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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