



**PATIENT**

Graham Walker

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Male Neutered

**AGE**

7 months

**WEIGHT**

8.81lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Pamela Harrigan,  
RDCS

**HOSPITAL NAME**

Mass Veterinary Services

**REFERRING VET**

Dr. Masloski

**INVOICE**

25802

**DATE**

8/16/22

**PRESENTING CLINICAL SIGNS**

History: Graham referred for a heart murmur noted in April. He is doing well with a good appetite; active and playful. On exam: NSR, grade III/VI parasternal murmur, PSS, lung fields clear, compressible thorax. BP: 150mmHg x 3. \*No sedation for study.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and Doppler imaging is available.

**Left ventricle:** The LV diameter is normal with adequate myocardial function. The LV wall thicknesses are asymmetric with a normal septal dimension and mild free wall thickening. There is a mildly hyperechoic endocardium consistent with mild fibrosis. The papillary muscles appear normal. The endocardium appears mildly remodeled.

**Left atrium:** The left atrium and auricle are normal. No spontaneous contrast or thrombi seen.

**Mitral valve:** The anterior leaflet of the mitral valve is mildly elongated. Abnormal anterior motion is seen with a mildly increased outflow velocity. Mild eccentric mitral regurgitation.

**Aortic valve/Aorta:** The aortic valve is normal in morphology and mobility. Elevated LVOT outflow velocity appreciated with a dynamic profile. No aortic insufficiency.

**Right ventricle:** Normal right ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension.

**Right atrium:** The right atrium is mildly dilated.

**Tricuspid valve:** The tricuspid valve appears normal with no tricuspid regurgitation.

**Pulmonary valve/Pulmonary artery:** The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity; laminar flow.

**Pericardium/other:** No pericardial or pleural effusion noted. No obvious cardiac masses.

**Heart rhythm:** ECG reveals a sinus rhythm with an average HR of 220bpm.

**2-Dimensional Measurements**

Ao diam (cm)	0.9
LA diam (cm)	1.1
LA:Ao (Swe)	1.2
IVS thickness (cm)	0.56
LVID diastole (cm)	1.5
PW thickness (cm)	0.63
LVID systole (cm)	0.70
FS (%)	50

**Doppler Measurements**

PV Vmax (m/s)	1.1
AoV Vmax (m/s)	3.3
MR Vmax (m/s)	NA
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

**INTERPRETATION OF THE FINDINGS**

The diagnosis and cause of the murmur is mitral valve dysplasia leading to an obstructive LVOT flow pattern and mild MR. Likely due to the young age of the patient, there is minimal LV hypertrophy and no LA enlargement appreciated at this time. Regardless, the degree of obstruction would suggest there may be risk for progression to spontaneous CHF and/or a thrombotic event going forward. No additional issues are identified.

With typical mitral valve dysplasia in cats, Atenolol is indicated to decrease the LVOT obstruction and relieve LV pressure overload. This would be of unknown benefit in this case, given a lack of LV hypertrophy; however, if the patient is easily medicated there is likely no harm in instituting this medication. Discussion with the owner is advised. An alternative approach would be to reassess in 6 months and screen for any progressive changes.



**PATIENT**  
Graham Walker

Long term prognosis is guarded given the age of the patient and highly variable nature of subclinical feline heart disease. Many cats will remain asymptomatic until mid-life or beyond, while others develop CHF within the first years. Close monitoring for progression of LA dilation in the future will help determine long term prognosis.

**SPECIES**  
Feline

**RECOMMENDATIONS**

- If elected, 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.
- Anesthetic risk is considered mildly elevated, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid vasodilators as this may worsen the obstruction. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance.
- Monitor for any clinical evidence of cardiac compromise, including respiratory changes and/or signs of a blood clot event (paralysis, neurologic changes, etc.).

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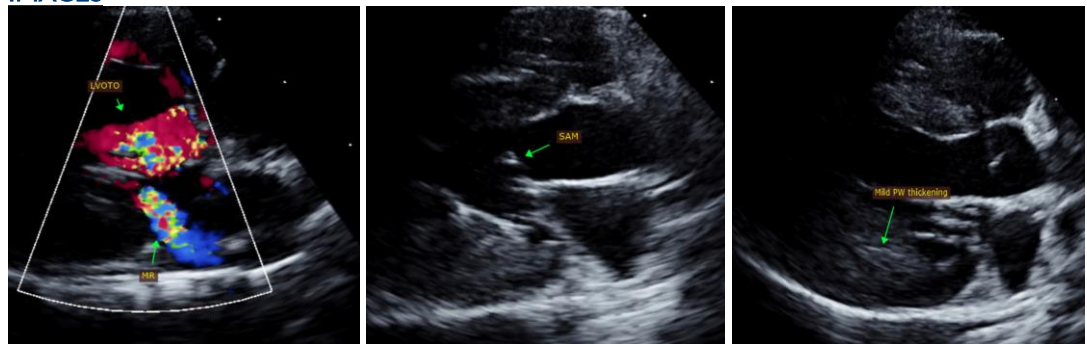
**PLAN**

- Recommend recheck echocardiogram in 6 months to assess for progression/regression, sooner if clinical signs arise in the interim.

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8.81lbs

**IMAGES**

**INTERPRETED BY**  
Maggie Machen Lamy, DVM  
DACVIM (Cardiology)



**IMAGING PERFORMED BY**  
Pamela Harrigan, RDCS

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.

**HOSPITAL NAME**  
Mass Veterinary Services

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.

**REFERRING VET**  
Dr. Masloski

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25802

Echocardiogram performed by: Pamela Harrigan, RDCS  
Pet Animal Ultrasound Service (4paus.com)

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8/16/22