



**PATIENT**  
Pumpkin Kowalczyk

**SPECIES**  
Feline

**BREED**  
DSH

**SEX**  
Male Neutered

**AGE**  
13 years

**WEIGHT**  
16lbs

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

**IMAGING PERFORMED BY**  
Pamela Harrigan,  
RDCS

**HOSPITAL NAME**  
Mass Veterinary  
Services

**REFERRING VET**  
Dr. Masloski

**INVOICE**  
31575

**DATE**  
6/27/23

**PRESENTING CLINICAL SIGNS**

History: Recheck echo. History HOCM with severe LAE on prior echocardiogram. Presently, Pumpkin is doing well with a good appetite and normal activity level. Last week, he was noted to be breathing rapidly but has been doing well since. On exam: arrhythmia noted, grade II/VI parasternal murmur, PSS, lung fields clear, compressible thorax, mm pink, moist, CRT < 2j BP: 90 mmHg (sedated). Current medications: 1) Plavix/clopidrogel 75mg 1/4 tab daily 2) Atenolol 25mg 1/4 tab daily 3) Lasix/furosemide 12.5mg 1/2 tab twice a day 4) Prednisone 5mg 1/2 tab twice a day \*Sedated with propofol for study.

-Pertinent previous echo findings (12/15/22 MML): LA 2.4 cm, LA:Ao 2.2 cm; IVS 0.70 cm; PW 0.70 cm; severe LAE, mild MR, moderate LCVH with endocardial fibrosis and remodeling.

**ELECTROCARDIOGRAPHIC FINDINGS**

A six lead ECG is available at 25mm/s; 10mm/mV. The average heart rate is 140bpm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. MEA is normal. APCs seen throughout; primarily singles with periods of atrial bigeminy. Occasional couplets. No ventricular ectopic beats, pauses or other dysrhythmias observed.

ECG diagnosis: Normal sinus rhythm with atrial premature contractions.

**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 moderately increased with regions of irregularity. There is a diffusely hyperechoic endocardium consistent with mild fibrosis. The endocardium appears remodeled. The papillary muscles are hypertrophied.

**Left atrium:** The left atrium is severely dilated. Subtle smoke and an auricular thrombus is seen.

**Mitral valve:** The anterior leaflet of the mitral valve is mildly thickened. The tip of the mitral valve is visible in the LVOT during systole. Mild eccentric mitral regurgitation is noted secondary to SAM.

**Aortic valve/Aorta:** The aortic valve is normal in morphology and mobility. Aortic outflow velocities are mildly elevated 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 normal in dimension.

**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 with a dynamic profile

**Pericardium/other:** Scant PCE. No pleural effusion noted. No obvious cardiac masses.

**2-Dimensional Measurements**

**Doppler Measurements**

Ao diam (cm)	1.3
LA diam (cm)	2.6
LA:Ao (Swe)	2.0
IVS thickness (cm)	0.63
LVID diastole (cm)	1.4
PW thickness (cm)	0.65
LVID systole (cm)	0.5
FS (%)	64

PV Vmax (m/s)	0.6
AoV Vmax (m/s)	3.5
MR Vmax (m/s)	NA
TR Vmax (m/s)	NA
TR PG (mmHg)	NA



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**INTERPRETATION OF THE FINDINGS**

Compared to the prior study, the most striking finding is an auricular thrombus has developed. The LA is similar in size to previous; however, smoke is now seen as well. The LV findings are similar to previous, with significant hypertrophic Obstructive Cardiomyopathy (HOCM). The ECG is also concerning, with frequent APCs. An irregular rhythm was noted previously, and this may be a chronic issue. The good news is the overall HR is well controlled, and further anti-arrhythmic therapy is not advised.

Given these findings, continue all medications as previously recommended. The finding of a thrombus is of grave concern, and dislodgement could lead to acute sudden death or paralysis. Should this develop, euthanasia is recommended in this case. If elected, can consider addition of Xarelto in hopes of dissolving the thrombus; however, this is often financially limiting.

This patient is considered end-stage; however, it is encouraging the patient continues to do well at home. There will always be risk for recurrent CHF, acute syncope and/or sudden death going forward.

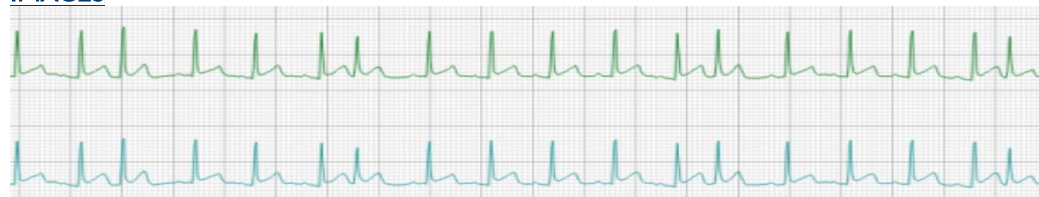
**RECOMMENDATIONS**

- Continue Atenolol, Plavix, and Lasix as prescribed.
- If elected, consider addition of Xarelto 2.5mg PO q24h.
- Monitor for syncope or acute lethargy and reassess ECG in this instance.
- Elective anesthesia is not advised.
- Monitor for any clinical evidence of cardiac compromise, including respiratory changes and/or signs of a blood clot event (paralysis, neurologic changes, etc.).

**PLAN**

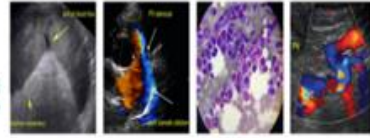
- Monitor renal values and BP every 3-4 months life-long
- Recommend recheck echocardiogram and ECG in six months to assess for progression, sooner if clinical signs arise in the interim.

**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.

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Feline

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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DSH

Maggie Machen Lamy, DVM  
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)  
info@sonopath.com

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Male Neutered

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

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