



PATIENT

Edison Mynes

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

15 years

WEIGHT

7.9lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

Mass Veterinary Services

REFERRING VET

Dr. Masloski

INVOICE

23792

DATE

4/20/22

PRESENTING CLINICAL SIGNS

History: Edison was noted to have an arrhythmia in March 2021. A thyroid level done in January was within normal limits. Edison is doing well at home but has started urinating outside the cat box which is a new behavior. He is eating well with normal activity level. On exam today: pronounced arrhythmia, no murmurs noted, PSS, lung fields clear. BP: 180mmHg x 5. *No sedation for study.

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, 20mm/mV. The average heart rate is 220bpm (range 150-300bpm). P waves are unable to be visualized throughout. The rhythm is highly irregular with primarily supraventricular QRS morphology. Occasional VPCs are suspected.

ECG diagnosis: Suspect atrial fibrillation; however, a sinus rhythm with frequent supraventricular arrhythmias cannot be ruled out. Occasional VPCs suspected.

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 irregular, with regions of mild and moderate hypertrophy and regions of thinning. The LV myocardium appears remodeled with heterogeneous echogenicity. The papillary muscles are hypertrophied and asymmetric, with regions of remodeling.

Left atrium: The left atrium and auricle are moderate to severely dilated. Spontaneous contrast is seen. No obvious organized thrombus.

Mitral valve: The mitral valve is normal in structure and mobility. No systolic anterior motion is seen. Trace central mitral regurgitation.

Aortic valve/Aorta: Aortic valve is normal. Decreased outflow velocity, laminar flow. No AI.

Right ventricle: Right ventricular diameter is mildly increased. The right ventricular wall appears mildly hypertrophied as well.

Right atrium: The right atrium is mildly dilated.

Tricuspid valve: Tricuspid valve is normal with mild TR. Normal velocity.

Pulmonic valve/Pulmonary artery: The pulmonic valve appears normal in morphology and mobility. Decreased pulmonic outflow velocities with laminar flow. No PI.

Pericardium/other: No pericardial effusion. No obvious pleural effusion. No obvious cardiac tumors.

2-Dimensional Measurements

Ao diam (cm)	1.0
LA diam (cm)	1.9
LA:Ao (Swe)	1.9
IVS thickness (cm)	0.66
LVID diastole (cm)	1.6
PW thickness (cm)	0.68
LVID systole (cm)	0.7
FS (%)	56

Doppler Measurements

PV Vmax (m/s)	0.77
AoV Vmax (m/s)	1.1
MR Vmax (m/s)	NA
TR Vmax (m/s)	2.0
TR PG (mmHg)	16



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INTERPRETATION OF THE FINDINGS

Irregular LV wall dimensions are identified, with mild to moderate hypertrophy. This is most consistent with) hypertrophic cardiomyopathy (HCM). An alternative explanation, such as UCM, is also possible. Primary disease is suspected in this euthyroid patient. The blood pressure is mildly elevated, which certainly should be monitored going forward. The left atrium is moderate to severely enlarged with evidence of smoke, indicating risk for spontaneous CHF and/or blood clot events. MR and TR are secondary to annular stretch. Even without symptoms, based upon the degree of disease full cardiac supportive medications are recommended as below due to exceedingly high risk for life-threatening complications.

Secondary to structural disease and atrial dilation, an arrhythmia has also developed. The ECG is most consistent with atrial fibrillation; however, due to the intensity of a single lead tracing a sinus rhythm with frequent supraventricular arrhythmias is also a possibility. Occasional VPC may also be present. Given what is seen here, AF is concerning for more malignant arrhythmias and sudden death in the future. Most cats are asymptomatic with AF and do not require medications (as is the case here). Given that tachycardia is present however, a low dose of Atenolol is recommended.

Even if without associated symptoms, the mean survival time for cats at this stage of disease is <8-12 months. Patient will always be at high risk for recurrent episodes of CHF, development of blood clots, malignant arrhythmias and/or sudden death in the future.

RECOMMENDATIONS

- Institute Furosemide 1mg/kg PO q12h.
- Institute anti-coagulant Plavix/Clopidogrel 75mg tabs; Give ¼ tab by mouth every 24 hours (NOTE: bitter along cut edge, may cause foaming at the mouth; coat in entirety).
- Institute Pimobendan (off label use) 1.25mg PO q12h.
- Institute Atenolol 6.25mg PO q24h. Up titrate to effect (an average stressed heart rate <160bpm).
- Monitoring of sleeping breathing rates at home is recommended as the best way to screen for recurrent CHF at home. Avoid steroids and fluid therapy unless absolutely necessary in the future.

PLAN

- Monitor renal values/BP in 1-2 weeks, then every 3-4 months lifelong.
- A recheck echocardiogram is recommended in 4-6 months to assess for progression, sooner if issues arise in the interim.



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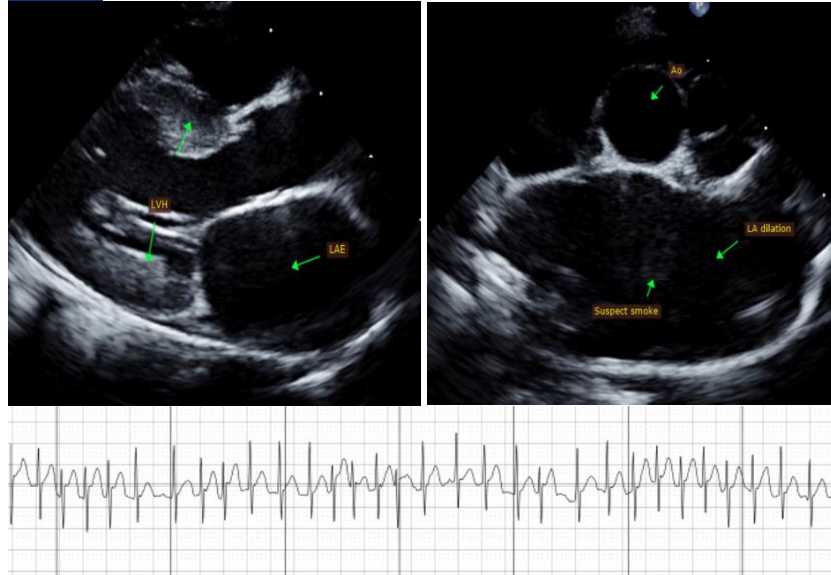
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IMAGES



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.

Maggie Machen Lamy, DVM
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Echocardiogram performed by:

Pamela Harrigan, RDCS
Pet Animal Ultrasound Service (4paus.com)