



PATIENT
Cinnamon Sandler

SPECIES
Feline

BREED
DSH

SEX
Female Spayed

AGE
14 years

WEIGHT
9.13lbs

INTERPRETED BY
Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan,
RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
28822

DATE
2/7/23

PRESENTING CLINICAL SIGNS

History: Cinnamon is a hyperthyroid feline who is well controlled. Her recent lab work revealed an elevated ProBNP of 1438 in January. She was noted to have a heart murmur approximately one year ago. Cinnamon is presently doing well with a good appetite and normal activity. On exam: NSR, grade II/VI parasternal murmur, PSS, lung fields clear, compressible thorax, mm pink, moist, CRT<2.j BP: unable to obtain. Current medications: 1) Felimazole/methimazole 2.5mg 2 tabs in morning, 1 tab in pm with once a week 2 tabs twice a day 2) Gabapentin 100mg as needed for vet visits---dosed this morning *Sedated with propofol 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 included; 25mm/s, 10mm/mV. The diagnosis is 3rd degree AV block. P waves can be seen independent of QRS complexes. The sinus-P wave rate is 150bpm. The ventricular rate is 80bpm. The ECG diagnosis: Complete/3rd degree AV block.

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 mildly increased symmetrically. There is a mildly hyperechoic endocardium consistent with fibrosis. The papillary muscles are mildly remodeled and hyperechoic. False tendon.

Left atrium: The left atrium is mildly dilated. No obvious spontaneous contrast or thrombi seen.

Mitral valve: The mitral valve is normal in structure and mobility. No obvious systolic anterior motion is seen. Trivial MR.

Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. Trivial 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.

Pulmonic 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.

2-Dimensional Measurements

Ao diam (cm)	0.9
LA diam (cm)	1.5
LA:Ao (Swe)	1.6
IVS thickness (cm)	0.54
LVID diastole (cm)	1.2
PW thickness (cm)	0.63
LVID systole (cm)	0.6
FS (%)	50

Doppler Measurements

PV Vmax (m/s)	0.87
AoV Vmax (m/s)	1.2
MR Vmax (m/s)	NA
TR Vmax (m/s)	1.5
TR PG (mmHg)	8

INTERPRETATION OF THE FINDINGS

HCM is a rule out diagnosis, once hypertension and hyperthyroid disease are ruled out. In this reportedly well controlled hyperthyroid cat, hypertension should be considered.



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Regardless, the degree of disease is mild, with mild LVH and mild LA dilation. Prognosis is guarded, due to the highly variable rates of progression with subclinical feline cardiomyopathy.

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Of some concern, the ECG does show a significant bradyarrhythmia with third degree (or complete) AV block. A ventricular escape rhythm is present, with a HR of 80bpm. While AV block is often a progressive arrhythmic disease, it must be taken into account that this cat was heavily sedated for the exam. This may be related as bradyarrhythmia's can certainly develop simply due to sedatives and reassessment when the cat awake is strongly recommended. The reported heart rate on intake was 140bpm, which may suggest this is simply an anesthetic reaction. If AV block persists without sedation, full systemic evaluation is recommended to screen for possible underlying causes. Most cats with AV block are asymptomatic, only developing clinical signs if the heart rate continues to deteriorate. Anesthesia is certainly not recommended until further ECG evaluation is performed.

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RECOMMENDATIONS

- Given these findings, no medications are indicated.
- Monitor BP and T4 every 6 months.
- Reassess HR/ECG without sedation. If AV block persists, consider full systemic evaluation as discussed.
- Pending a normal ECG, 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 necessary (glycopyrrolate, atropine). A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance.
- Risk for complication with steroid use typically follows LA dilation, which in this case is low. That being said, any cat can experience unexpected signs of intolerance and monitoring of RR/RE is advised particularly in the initiation phase.
- Monitor for any clinical evidence of cardiac compromise, including respiratory changes and/or signs of a blood clot event (paralysis, neurologic changes, etc.).

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

PLAN

- Recommend recheck echocardiogram in 6-12 months to screen for progression, sooner if any clinical signs arise in the interim.

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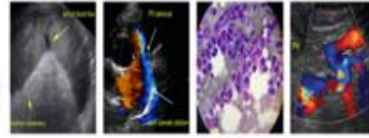
2/7/23

IMAGES





Mass Veterinary
Services



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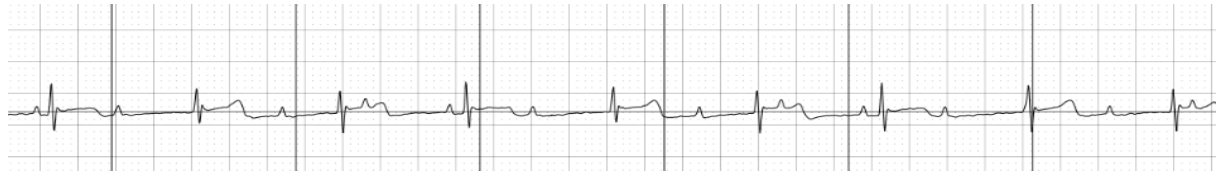
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)