

PATIENT

Callie Baker

SPECIES

Feline

BREED

DSH

SEX

Female Spayed

AGE

15 years

WEIGHT

7.4lbs; 3.4kgs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Loetitia St-Jacques,
LVT/RVT

HOSPITAL NAME

VCA Feline Animal
Hospital

REFERRING VET

Dr. Fleming

INVOICE

20593

DATE

8/17/21

PRESENTING CLINICAL SIGNS

History: Arrhythmia on exam. Seizures. CKD.

-Abnormal lab results: Urinalysis - USG 1.025 protein 1+ occult blood 3+ WBC 2-3 RBC 21-50 coccobacilli > 100 else unremarkable; CBC - Neuts 11778 Mono 755 else unremarkable; Chemistry profile - BUN 47 Creat 2.4 else unremarkable; Thyroid hormones - T4 = 1.5.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at 50mm/s; 10mm/mV. The average heart rate is 180bpm; however, there is frequent blocked P waves throughout. Two competing QRS morphologies are noted; however, the P wave morphology and PR interval are consistent suggesting a sinus origin. Every third P wave is non-conducted throughout the majority of the tracing, although brief periods of 1:1 conduction are seen throughout. No obvious ventricular arrhythmias or other abnormalities appreciated. The MEA is shifted left consistent with a left bundle branch block. ECG diagnosis: Sinus rhythm with frequent low-grade 2nd degree AV block.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is highly irregular with significant basilar wall thickening and contrasting apical thinning. There is a diffusely hyperechoic endocardium consistent with fibrosis. The systolic function is adequate. The papillary muscles are remodeled. The left atrium is normal. The right atrium is normal. The right ventricle is normal. The mitral valve is normal with no MR. Blood flow through both the LVOT and RVOT is normal in velocity. No obvious pericardial effusion seen. No pleural effusion. No obvious cardiac tumors.

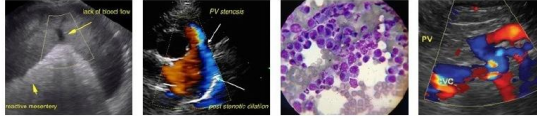
CARDIAC CHART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) <small>(Moise, Pipers)</small>	LVIDd (cm) <small>(Moise, Pipers)</small>	LVWd (cm) <small>(Moise, Pipers)</small>	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	3.4	NM	0.76	1.0	0.75	50	92
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	NM	1.1	1.0		0.8	0.7	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

The finding of an irregular LV morphology with regions of significant hypertrophy is most consistent with Hypertrophic Cardiomyopathy (HCM). Systolic hypertension should be ruled out,



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particularly given the history of renal disease. Regardless, the degree of disease is mild despite significant LV morphology changes with no left atrial enlargement. No additional structural issues are identified.

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The ECG does confirm a significant arrhythmia with frequent 2nd degree AV block. My suspicion is this may deteriorate to 3rd degree or complete AV block in the future and likely reflects AV nodal disease in a senior cat. Fortunately, most cats with complete AV block will remain asymptomatic indefinitely; however, monitoring for any associated clinical signs such as exercise intolerance or syncope is recommended. If these are noted, an ECG should be repeated as an Epicardial pacemaker implantation may become necessary. Additionally, a chronic bradycardia can lead to worsening cardiac dilation as well. Any cat with complex arrhythmias should consider referral for a Cardiologist evaluation independent of clinical signs. Discussion with the owner is advised.

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Seizures are noted in the history; however, it is difficult to know without more information if these are syncopal or neurologic in origin. Further historical information is needed. If syncope is suspected, recommend referral to a local Cardiologist for extended ECG monitoring, etc.

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No medications are warranted due to lack of left atrial enlargement. Prognosis is guarded long-term given the complexity of the issues.

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Maggie Machen Lamy,
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(Cardiology)

Anesthesia is not advised due to the arrhythmia. This patient may be at risk for fluid or steroid intolerance and close monitoring is advised should they be needed in the future.

PLAN

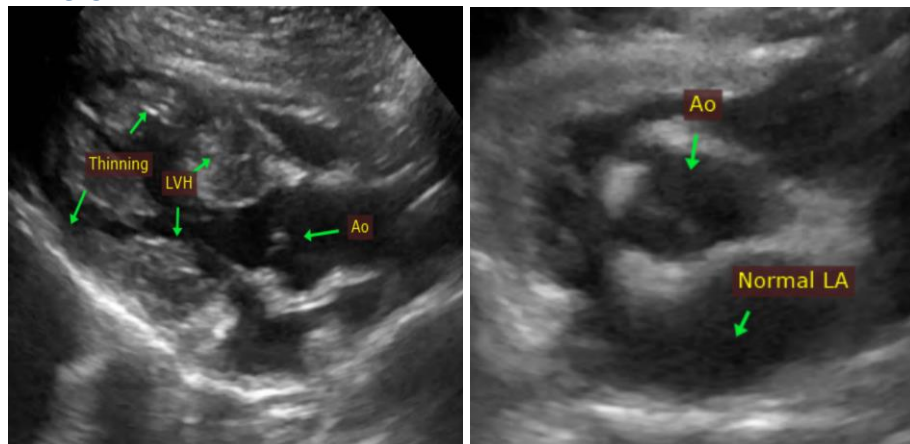
Consider referral as discussed. Screening BP recommended. No medications are indicated.

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LVT/RVT

If the patient remains asymptomatic, a recheck echocardiogram and ECG are recommended in 6 months to assess progression.

IMAGES



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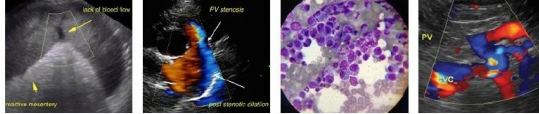
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Portable Animal Western Sonography, Inc.

IMAGING PERFORMED BY

pawsonography@gmail.com 530-786-8340

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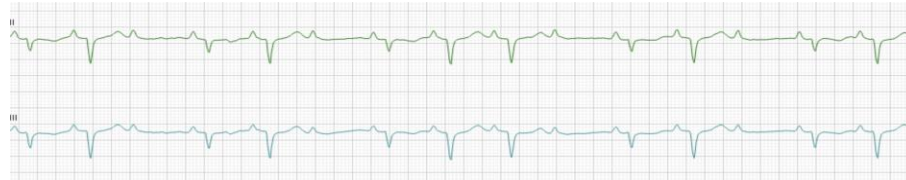
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com