


PATIENT

Murphy Farlow

PRESENTING CLINICAL SIGNS

 History: Gallop rhythm noted on exam, decreased appetite. On buprenorphine
 Abnormal PE/Chem/CBC/UA Results: Elevated pro BNP

SPECIES

Feline

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; 50mm/s, 20mm/mV. The average heart rate is 188bpm with an underlying sinus rhythm. The P and QRS morphologies are positive. Isolated VPCs throughout; singles only, polymorphic. No supraventricular ectopic beats, pauses or other dysrhythmias observed.

BREED

DSH

ECG diagnosis: Normal sinus rhythm with isolated polymorphic VPCs.

SEX

Male Neutered

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular walls are asymmetric, with a moderately hypertrophied free wall and a normal septum. There is a diffusely hyperechoic endocardium consistent with fibrosis. Mild papillary muscle hypertrophy. The endocardium also appears remodeled. Adequate systolic function. The left atrium is not significantly enlarged. No significant mitral regurgitation. No tricuspid regurgitation. The right atrium is normal in size. The right ventricle appears normal (subjective). The mitral valve is normal in structure and mobility. Blood flow through both the LVOT and RVOT are normal in velocity. No AI. No PI. No obvious cardiac tumors identified. No effusions.

AGE

11 years

WEIGHT

4 kgs

INTERPRETED BY

 Maggie Machen Lamy,
 DVM DACVIM
 (Cardiology)

CARDIAC CHART
IMAGING PERFORMED BY

Kelly Reschny, CVT

HOSPITAL NAME

 Wellington Animal
 Hospital

REFERRING VET

Dr. Dennis

INVOICE

24152

DATE

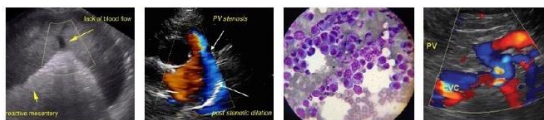
5/11/22

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LVWd (cm) (Moise, Pipers)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	4	180	0.47	1.4	0.75	37	71
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	1.2	1.2	1.2		1.2	1.1	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

Hypertrophic cardiomyopathy is a rule out diagnosis once a patient is deemed euthyroid and normotensive. Both should be ruled out as contributing issues. Regardless, the degree of abnormality is mild with only focal septal thickening noted and no left atrial enlargement. This would indicate low risk for complication at this time and no cardiac medications are clearly indicated.



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The ECG does confirm an arrhythmia, with single ventricular premature contractions (VPCs) noted. VPCs are generated from abnormal conductive or fibrotic tissue in the ventricles of the heart muscle, and even frequent single VPCs will often cause no clinical signs. When sustained however, ventricular tachycardia can lead to symptoms such as lethargy and collapse.

SPECIES

Feline

VPCs are a very non-specific finding. They can be primary in origin (a rule out dx), secondary to significant cardiac disease (mild in this study), or be extra-cardiac in origin, i.e., due to pain, stress, inflammation, cancer, GI disease, DIC/sepsis, etc. In a geriatric cat, all differentials should be ruled out. An abdominal ultrasound to monitor for any underlying abnormalities, in addition to full screening lab work.

BREED

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When assessing VPCs, we must not only consider why they are happening, but if we should treat them. Markers of malignancy are assessed, in addition to patient history and signalment. Based upon what is seen here in addition to the highly sensitive nature of cats to anti-arrhythmic medications, I would not institute therapy at this time. Assuming the patient remains asymptomatic, reassessing the finding periodically through auscultation/ECG monitoring is a reasonable approach.

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Anesthetic risk is considered moderately elevated due to the arrhythmia, and 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 ketamine, telazol, alpha 2 agonists. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance. Monitor ECG intra and post-operatively, with careful intervention if ventricular arrhythmias worsen (i.e., sustained VT) and lead to hemodynamic compromise.

INTERPRETED BY

Maggie Machen Lamy,
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PLAN

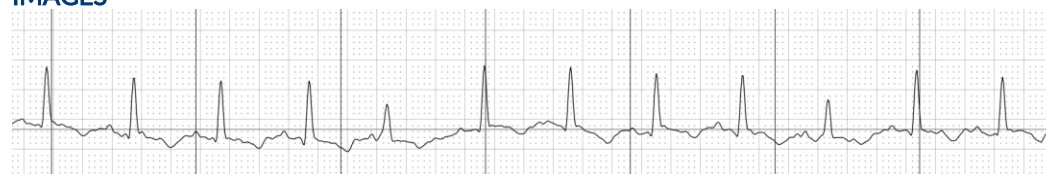
Monitor BP and T4 every 6 months. Full systemic evaluation as discussed.

IMAGING PERFORMED BY

Kelly Reschny, CVT

A recheck echocardiogram and ECG are recommended in 6 months to monitor for progression, sooner if any issues arise in the interim.

IMAGES



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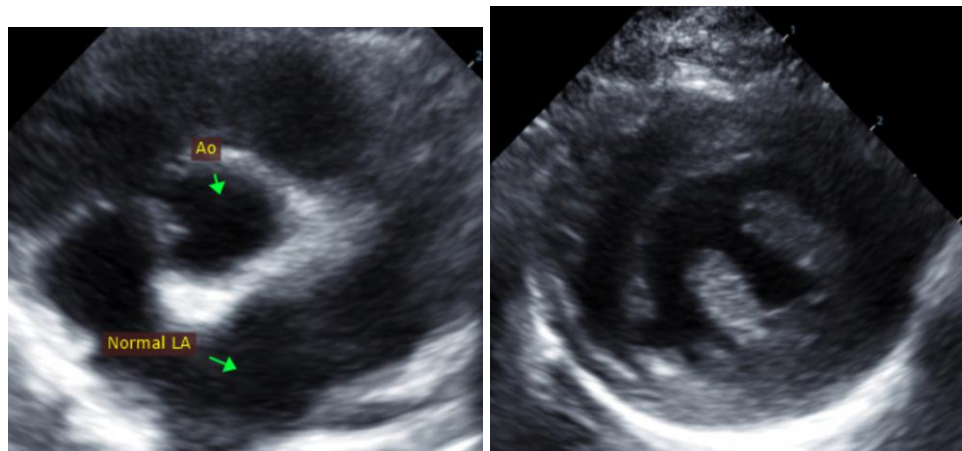
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. 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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