



PATIENT

Buddy Boldt

PRESENTING CLINICAL SIGNS

History: Chronic diarrhea. Seizure vs syncope.

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

17 years

WEIGHT

9.96lbs

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 188bpm with largely regular rhythm. The QRS complexes are low-voltage and P waves are not identified; however, a sinus origin is suspected. Isolated VPCs are identified six in a 30 second tracing. The VPCs appear monomorphic and singles only. No supraventricular ectopic beats, pauses or other dysrhythmias observed.

ECG diagnosis: Normal sinus rhythm with isolated VPCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular walls are normal in diameter. There is a diffusely hyperechoic endocardium consistent with fibrosis. The endocardium also appears remodeled. The left atrium is normal in size. No mitral or 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 obvious PI or AI. No obvious cardiac tumors identified. No effusions.

CARDIAC CHART

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Dana Alterman,
RDCS, LVT

HOSPITAL NAME

Eubank Animal Clinic

REFERRING VET

Dr. Garb

INVOICE

20680

DATE

8/23/21

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	4.5	NM	0.48	1.7	0.47	72	
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	1.5	1.2	1.1		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.



PATIENT	<u>INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS</u>
Buddy Boldt	Overtly normal geriatric cardiac structure and function with normal LV wall measurements and diffuse remodeling/fibrosis. A normal LA dimension is documented which indicates low risk for complication at this time. No additional issues are identified.
SPECIES	
Feline	The ECG does confirm an arrhythmia, with single ventricular premature contractions (VPCs). 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.
BREED	
DSH	
SEX	VPCs are a very non-specific finding. They can be primary in origin (a rule out dx), secondary to significant cardiac disease (not present 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 with chronic diarrhea, all differentials should be ruled out. An abdominal ultrasound to monitor for any underlying abnormalities.
Male Neutered	
AGE	
17 years	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. It is worth noting that syncope versus seizure like episodes are noted in the history, further historical information should be obtained to determine which is more likely. While it is possible for sustained VT to lead to syncopal episodes, this is quite uncommon in a cat, particularly in the absence of structural disease. My assumption in this case is that the cause the VPCs is what is also causing the episodes rather than vice versa, although this is not definitive. Follow up is dictated by the clinical picture.
WEIGHT	
9.96lbs	
INTERPRETED BY	
Maggie Machen Lamy, DVM, DACVIM (Cardiology)	
IMAGING PERFORMED BY	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). 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.
Dana Alterman, RDCS, LVT	
HOSPITAL NAME	Monitor for any development of additional clinical signs at home, including labored breathing, cough or signs of a blood clot (paralysis, neurologic change).
Eubank Animal Clinic	
REFERRING VET	PLAN
Dr. Garb	Full systemic evaluation is advised. Further historical information on the episodes to determine index of suspicion for syncope versus seizures.
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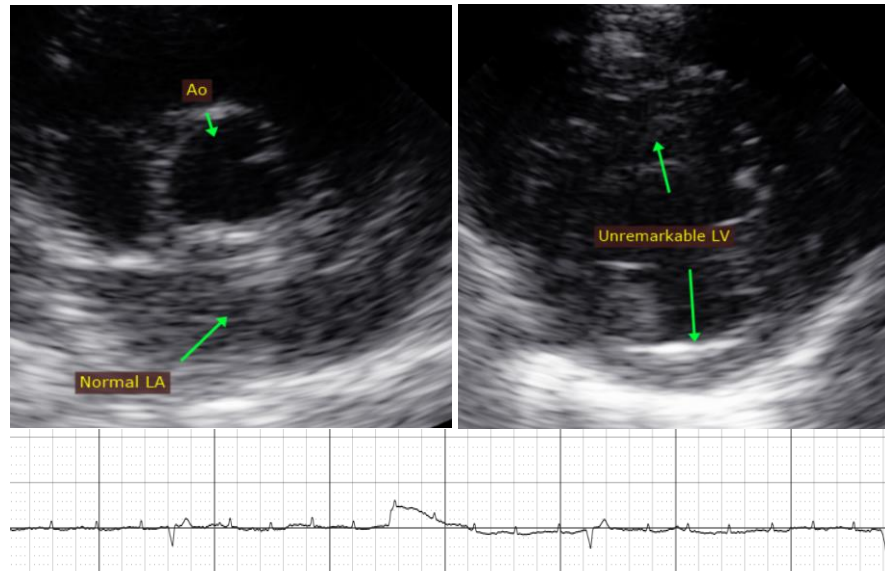
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IMAGES



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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