



**PATIENT**

Horatio Sofinowski

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Male Neutered

**AGE**

1.10.10

**WEIGHT**

16.5lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**HOSPITAL NAME**

Eastern Animal  
Hospital

**REFERRING VET**

Dr. Haviland

**INVOICE**

23167

**DATE**

3.17

**PRESENTING CLINICAL SIGNS**

History: Presented for a dental cleaning and extractions. Irregularly irregular rhythm heard with grade 1 parasternal holosystolic murmur.

-Pertinent abnormal PE/Chem/CBC/UA Results: Elevated ProBNP 663, CBC/Chem/T4 WNL.

-Current medications: None.

-Blood pressure: Doppler #3 cuff on RTL 130mmHg, 138mmHg & 126mmHg

-Sedation used: Not required to complete full diagnostic ultrasound.

-Pertinent previous ultrasound results: No previous.

-STAT: Not requested

-Imaging performed by: Andi Parkinson, RDMS.

**ELECTROCARDIOGRAPHIC FINDINGS**

A three lead ECG is included; mm/s, 10mm/mV. The underlying rhythm is sinus in origin with low-voltage QRS complexes. The average sinus rate is 214bpm. Frequent ventricular arrhythmias are noted throughout. Single and couplet VPCs with occasional fusion beats. The VPCs appear monomorphic in origin. No runs of VT appreciated. No obvious supraventricular premature beats seen.

ECG diagnosis: Sinus rhythm with malignant ventricular arrhythmias.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is largely normal in dimension with regions of remodeling. Adequate systolic function. There is a diffusely hyperechoic endocardium consistent with fibrosis. The papillary muscles are hyperechoic. The mitral valve is normal with trace MR. The left atrium is mild to moderately dilated and bulbous in appearance. No obvious smoke. The right atrium is normal. Tricuspid valve is normal with no TR. The right ventricle appears normal. Blood flow through both the LVOT and RVOT is normal in velocity. No 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>	LWVd (cm) <small>(Moise, Pipers)</small>	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	3.5-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	7.5	205	0.53	2.2	0.54	41	76
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	1.5	1.6		0.8	0.6	NM
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 left atrial enlargement in the face of normal LV wall thickness is most consistent with Unclassified Cardiomyopathy (UCM). Mild to moderate left atrial dilation is present in addition to significant LV remodeling and fibrosis which indicates diastolic dysfunction. No additional structural issues are identified.

The ECG confirms a frequent ventricular arrhythmia with single and couplet VPCs noted throughout. The frequency and complexity of the rhythm is highly concerning for development of malignant ventricular tachycardia and associated clinical signs in the future. Based upon the frequency of what is seen here, anti-arrhythmic therapy is warranted. That being said, anti-arrhythmics can be difficult to utilize in cats and referral to a local Cardiologist should be offered in this case. If declined, consider a low dose sotalol with careful monitoring of heart rate and blood pressure once initiated. There is not enough structural disease seen here to fully explain this quantity of arrhythmia and full systemic evaluation is advised in search of underlying issues.

Regardless of categorical classification, the finding of atrial dilation and arrhythmic disease confers risk for progression in the future and supportive medications should be considered. One might consider use of an ACE-I for potential antifibrotic benefit pending BP assessment. Additionally, Pimobendan can be considered if easily medicated. Discussion with the owner is advised. An alternative approach would be simply utilizing Sotalol and following up on the structural changes going forward.

The long-term prognosis given the totality of the findings is guarded; however, there is a highly variable rate of progression in cats with sub-clinical disease. There will always remain risk for progression to CHF and development of blood clots in the future. Monitoring is certainly advised, particularly should any respiratory signs, collapse or significant lethargy be noted in the future.

Anesthesia should be avoided in this patient due to the presence of significant ventricular arrhythmias. If necessary, this should not be considered until the arrhythmias is controlled and referral to a facility with an Anesthesiologist considered.

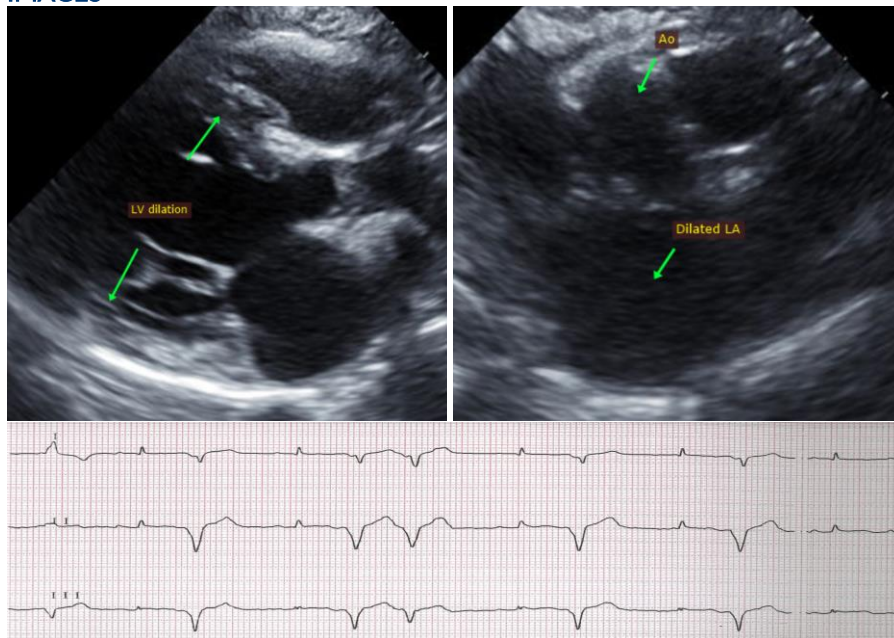
## PLAN

Consider referral as discussed. If declined, institute Sotalol 0.2mg/kg PO q12h in a compounded liquid. Consider institute Pimobendan (off label use) 1.25mg PO q12h. Pending BP >130mmHg, consider ACE-I 0.5mg/kg PO q12h.

Recheck ECG and BP in 1-2 weeks to assess response, then every 4-6 months lifelong.

A recheck echocardiogram is recommended in 6 months, sooner if clinical signs arise.

## 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.

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