


**PATIENT**

Theo Stephan

**SPECIES**

Feline

**BREED**

Siamese

**SEX**

Male Neutered

**AGE**

11 years

**WEIGHT**

12lbs

**INTERPRETED BY**

 Maggie Machen Lamy,  
 DVM, DACVIM  
 (Cardiology)

**IMAGING PERFORMED BY**

Jennifer Todd, DVM

**HOSPITAL NAME**

 Lambs Gap Animal  
 Hospital

**REFERRING VET**

Dr. Campbell

**INVOICE**

21135

**DATE**

9/21/21

**PRESENTING CLINICAL SIGNS**

History: Cardiac ProBNP has been normal on yearly blood screening. Theo was presented to our local ER on 9/19/21 for sudden onset labored breathing, vomiting, vocalizing and discomfort. Radiographs showed air in stomach mild bronchial lung pattern and slight effusion vs. congestion in left middle lung lobe according to ER notes. There was concern for thromboembolic event and clopidogrel was started. BP: 234/96, 227/101, 225/102mmHg.

**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, 40mm/mV. The average heart rate is 188bpm with a largely regular rhythm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P and QRS morphologies are positive. A single ventricular premature contraction is identified. No supraventricular premature beats, pauses or other dysrhythmias observed. ECG diagnosis: Normal sinus tachycardia with a single VPC.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension. There is a diffusely hyperechoic irregular endocardium consistent with mild fibrosis. The left atrium is normal in size. The right atrium is normal in size. The right ventricle appears normal. The mitral valve is normal in structure and mobility. No MR. Trace TR. Blood flow through the RVOT is normal in velocity. Blood flow through the LVOT is normal in velocity. Normal aortic and pulmonic valves. The aortic root is normal in dimension; however, the ascending segment appears dilated. No evidence of cardiac tumors or metastatic lesions on this scan. No effusions seen.

**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	5.4	NM	0.46	1.5	0.43	62	93
FELINE CARDIAC PARAMETERS	LA/AO <small>(Boon)</small>	LA/AO HEART BASE (Swe) <small>(Abbott)</small>	LA 2D short axis Base view (cm) <small>(Abbott)</small>	LVOT VEL  <small>(m/s)</small>	RVOT VEL  <small>(m/s)</small>	E max  <small>(m/s)</small>	
NORMAL	<1.5	<1.3	<1.2	<1.6	<1.3	<0.9	
PATIENT	1.2	0.9	0.9	1.0	0.88	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**

Essentially normal geriatric cardiac structure and function. There is mild remodeling and fibrosis of the left ventricular wall, which may be an age-related finding. The ascending aorta does appear dilated which may support reported systemic hypertension. No evidence of chronic hypertension is seen however, with normal LV wall dimensions.



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The reported blood pressure is severely elevated and may be enough to explain a potential vascular event as a cause of the recent clinical signs. Immediate institution of vasodilator therapy using Amlodpine is recommended. Additionally, screening for underlying causes of systemic hypertension, such as an adrenal tumor, etc. Full systemic evaluation is advised and potential consultation with an Internal Medicine Specialist.

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The ECG is largely normal with a single VPC identified. VPCs in this case are not surprising given a combination of stress and markedly elevated blood pressure. No treatment is advised for an isolated abnormal beat; however, monitoring for sustained arrhythmias is advised (acute collapse/lethargy).

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Given these findings, no cardiac specific medications are indicated. The prior clinical signs were certainly non-cardiac in origin without left atrial enlargement predisposing to a cardiogenic clot. This does not rule out non-cardiac thrombus formation, vascular event due to systemic hypertension, etc. Further evaluation may be necessary as discussed. With this degree of remodeling and diastolic stiffening there is an elevated risk for fluid overload and judicious IV fluid use is recommended if needed.

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## PLAN

Immediate institution of vasodilator therapy to effect. Consider discontinue versus continue Plavix as indicated by clinical picture. Screen for proteinuria and underlying causes of systemic hypertension. Consider addition of an ACE-I, IM consultation, etc.

## INTERPRETED BY

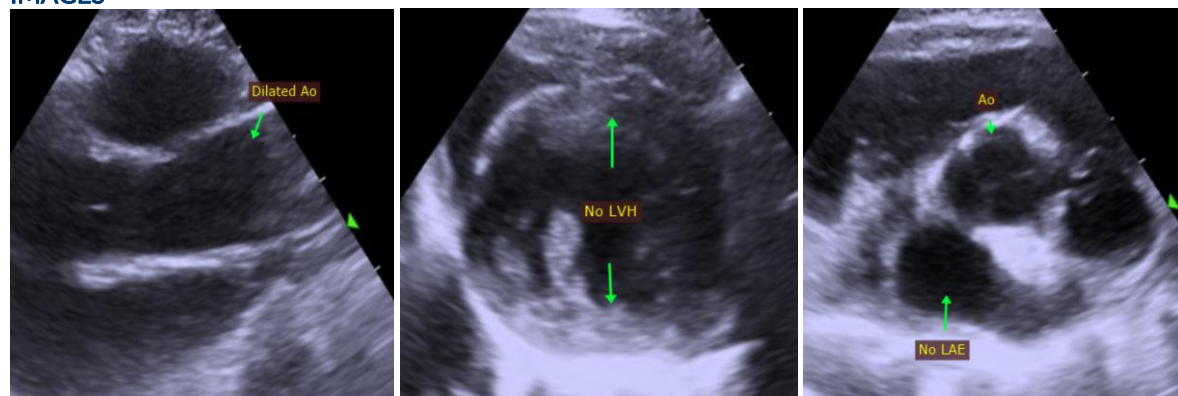
Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

Recommend recheck echocardiogram in 12 months to assess for progression.

## IMAGING PERFORMED BY

Jennifer Todd, DVM

## IMAGES

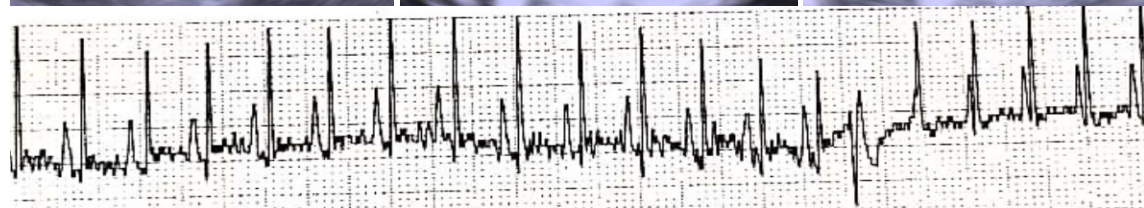


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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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.

**BREED**

Siamese

Maggie Machen Lamy, DVM  
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)  
info@sonopath.com

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