



**PATIENT**  
Theon Wallace

**SPECIES**  
Canine

**BREED**  
Boxer

**SEX**  
Male Neutered

**AGE**  
6 years

**WEIGHT**  
93.6lbs

**INTERPRETED BY**  
Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**  
Pamela Harrigan,  
RDCS

**HOSPITAL NAME**  
Mass Veterinary Services

**REFERRING VET**  
Dr. Masloski

**INVOICE**  
24015

**DATE**  
5/4/22

**PRESENTING CLINICAL SIGNS**

History: Theon has been on a grain free diet. On the 26th April, he was outside playing and had a collapse episode. He presented to his primary - EKG revealed ventricular tachycardia. Treated with lidocaine which resolved the tachycardia with occasional VPC's noted. He was started on sotalol and mexiletine. No coughing at this point and no further collapse episodes. On exam today: transient arrhythmia, no murmurs noted, PSS, lung fields clear. BP: 200-220 mmHg (stressed). Current medications: 1) Sotalol 80mg 1 tab twice a day 2) Mexiletine 250mg 1 capsule three times a day Plan: 1) echocardiogram 2) EKG 3) blood for CBC, chem, TT4 4) disp snip tips 5) disp taurine 1000mg 1 tab twice a day \*No sedation for study.

**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 80bpm (range 68-94bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. P and QRS morphologies are positive. No ectopic beats, pauses or dysrhythmias observed. ECG diagnosis: Normal sinus rhythm with respiratory variation.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and Doppler imaging is available.  
**Left ventricle:** The LV is normal in dimension with moderately decreased systolic function. Mildly increased LV sphericity.  
**Left atrium:** The left atrium is mildly dilated.  
**Mitral valve:** The mitral valve is mildly thickened with no prolapse into the left atrial lumen. Trace mitral regurgitation.  
**Aortic valve/aorta:** The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency.  
**Right ventricle:** Right ventricular is prominent.  
**Right atrium:** RA is prominent.  
**Tricuspid valve:** The tricuspid valve appears normal with no tricuspid regurgitation.  
**Pulmonic valve/pulmonary artery:** The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity; laminar flow.  
**Pericardium/other:** No pericardial or pleural effusion noted. No obvious cardiac masses.

**2-Dimensional Measurements**

Ao diam (cm)	2.0
LA diam (cm)	3.1
LA:Ao (Swe)	1.5
IVS thickness (cm)	1.1
LVID diastole (cm)	4.5
PW thickness (cm)	1.1
LVID systole (cm)	3.7
FS (%)	18

**Doppler Measurements**

PV Vmax (m/s)	0.7
AoV Vmax (m/s)	1.4
MR Vmax (m/s)	NA
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

**INTERPRETATION OF THE FINDINGS**

Mild structural changes are identified. While the LV is not significant dilated, there is a moderate decline in systolic function with mild left atrial enlargement. While systolic function can be impacted by Sotalol therapy, at least mild primary abnormalities are suspected. In a 6-year-old boxer with a history of VT, ARVC is suspected as the primary



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issue (Arrhythmogenic RV Cardiomyopathy); however, a primary DCM is certainly possible. ARVC can have 2 forms; the strictly arrhythmic form with normal cardiac structure/function, or the DCM form with both the arrhythmia and ventricular dilation/dysfunction. The latter is suspected in this case, given the signalment, echo and ECG findings.

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While historical VT is of great concern, the included ECG shows no persistent ventricular arrhythmias. The dose of Sotalol is quite high for this body size and a slight decrease is recommended as below given a low resting heart rate. Reasonable to continue Mexiletine as well, assuming the patient is doing well at home. Even with good control, this patient is at extremely high risk for recurrent VT and sudden death, and this should be expressed to the owner. A holter monitor is recommended, particularly once the Sotalol dose is changed, to ensure adequate arrhythmic control.

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**RECOMMENDATIONS**

- Decrease Sotalol to 40mg PO q12h.
- Continue Mexiletine as prescribed.
- Institute Pimobendan 0.3mg/kg PO q12h.
- Continue Taurine supplement as prescribed.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Mild lifelong activity restriction is advised.
- Monitoring of sleeping breathing rates is recommended to screen for CHF at home.
- Monitor at home for cough, lethargy, inappetance, collapse/fainting episodes, abdominal distention or increase in respiratory rate or effort.

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**PLAN**

- Recheck HR/ECG or ideally a holter monitor in 2-4 weeks, sooner if any recurrent clinical signs at home.
- Monitor ECG or holter monitor every 6 months.
- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

**IMAGING PERFORMED BY**

Pamela Harrigan,  
RDCS

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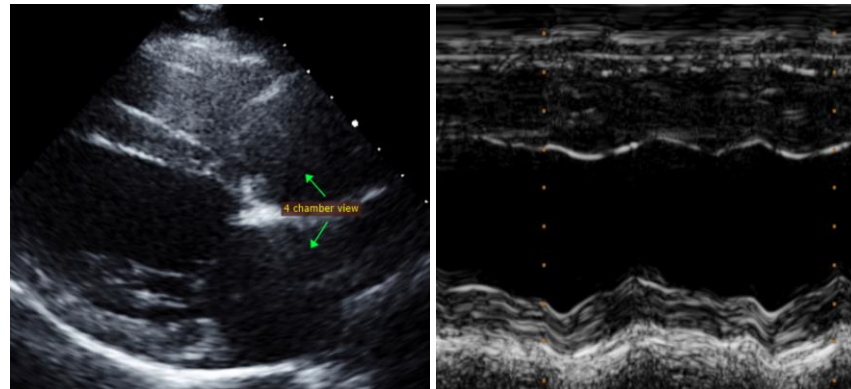
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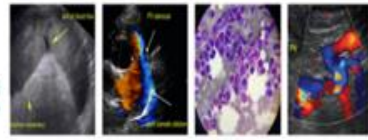
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**IMAGES**





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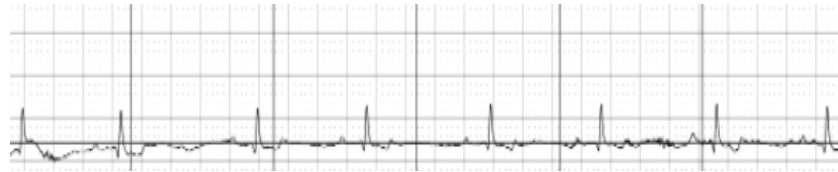
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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**Echocardiogram performed by:** Pamela Harrigan, RDCS  
Pet Animal Ultrasound Service (4paus.com)