



**PATIENT**

Tucker Slack

**SPECIES**

Canine

**BREED**

Boxer

**SEX**

Neutered Male

**AGE**

6 Years

**WEIGHT**

66 Pounds

**INTERPRETED BY**

Sara Brethel DVM,  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Dr. Andrea Nason

**HOSPITAL NAME**

Caravan Vet

**REFERRING VET**

Dr. Andrea Nason

**INVOICE**

36498

**DATE**

4/8/26

**PRESENTING CLINICAL SIGNS**

History: Tucker presented to an ER ~ 1 week ago for dizziness, collapse, vomiting, and diarrhea. His baseline CBC, Chem was normal. Chest Radiographs suggestive of enlarged vena cava. Since his visit, he has been normal at home. On exam this morning, normal heart rate and rhythm, strong synchronous pulses. Echocardiogram and ECG to evaluate for underlying cardiac issue. ECG attached. Abnormal PE/Chem/CBC/UA Results: Blood pressure 168 systolic.

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
<b>PATIENT</b>	--	--	NM	1.6	43.39	NM	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LAD LA MAX 4 Chamber	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>	NM	~2.0	~1.0	30	3.4	3.18	1.8

**ECG Interpretation**

Sinus rhythm with occasional isolated monomorphic ventricular premature complexes.

**Cardiac Presentation**

The mitral valve leaflets are normal and there is no mitral regurgitation. There is no prolapse of the mitral valve leaflets. The left atrial size is normal; however, the LA/AO ratio is skewed due to the small aortic root. Left ventricular systolic and diastolic function is within normal limits. There is normal right atrial size without evidence of tricuspid regurgitation. There is no prolapse of the tricuspid valve leaflets and no evidence of pulmonary hypertension on today's evaluation. The right ventricle subjectively appears normal in structure and function. The aortic and pulmonic valves have normal morphology and the corresponding outflow velocities are within normal limits. There is no evidence of pulmonic or aortic insufficiency. The aorta appears normal. The pulmonary artery and associated branches appear normal. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses.



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## ULTRASONOGRAPHIC FINDINGS

- Small aortic root- rule out breed variant
- Ventricular premature complexes

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The patient is having occasional isolated monomorphic ventricular premature complexes. Based upon the ECG provided, medication does not appear to be indicated, however given the history of collapse, there is concern that an arrhythmia could have caused the collapse. Given the patient's breed and history, I would recommend performing a Holter monitor based upon the overall number of ventricular premature complexes. This would further help determine if antiarrhythmic therapy is indicated. Pending that Holter monitor, if an insignificant amount of arrhythmias are identified. Other diagnostics to consider included ensuring full blood work is normal and performing an abdominal ultrasound to ensure no other reasons for collapse are identified. If a Holter monitor cannot be performed and the patient had a history of collapse, I would initiate therapy of Sotalol at a dose of 1.5 - 2.0 mg/kg twice daily. Other cardiac medications are not indicated. Again, ideally this patient has a Holter monitor prior to initiating therapy. If starting therapy without a Holter monitor, options include performing one 3-4 weeks after starting therapy or doing an additional ECG again 34 weeks after starting therapy. Unfortunately, with boxers that have arrhythmogenic cardiomyopathy, patients are at risk of sudden cardiac death. Fish oil supplementation is recommended (40 mg/kg EPA, 25 mg/kg DHA). Other causes of collapse cannot be ruled out at this time.



**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. 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.

Sara Brethel DVM, DACVIM (Cardiology)

[info@SonoPath.com](mailto:info@SonoPath.com)



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