



PATIENT

Harley Alger

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

Male Neutered

AGE

13 years

WEIGHT

12.5lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

Wood River Animal
Hospital

REFERRING VET

Dr. Schuelke

INVOICE

21668

DATE

10/22/21

PRESENTING CLINICAL SIGNS

History: Recheck echo. History chronic valvular disease- stage B1. Currently doing well; on no medications. BP: 150mmHg.

-Pertinent previous echo findings(4/12/21 MML): LA 1.3 cm; LA:Ao 1.0; LV 1.95cm; normal LA size; mild MR; mild TR (2.3 m/s). HR 180bpm on prior exam.

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, 10mm/mV. The average heart rate is highly variable, ranging from 25-150bpm. The underlying rhythm is sinus in origin, although p waves are difficult to visualize throughout (r/o device insensitivity v escape foci). P and QRS morphologies are positive. Extended pause with a ventricular escape focus firing (2.4s). ECG diagnosis: Bradycardia with pauses and escape beats; r/o high vagal tone v sinus node dysfunction.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.

Left ventricle: The LV diameter is normal with adequate myocardial function. LV wall thicknesses are normal.

Left atrium: The left atrium is normal.

Mitral valve: The mitral valve is mildly thickened with no prolapse into the left atrial lumen. Mild eccentric mitral regurgitation with a normal velocity.

Aortic valve/aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency.

Right ventricle: Normal right ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension.

Right atrium: Mild RA dilation.

Tricuspid valve: The tricuspid valve appears mildly thickened with mild septal prolapse. Mild to moderate double jet of tricuspid regurgitation; normal velocity.

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)	1.3
LA diam (cm)	1.3
LA:Ao (Swe)	1.0
IVS thickness (cm)	0.6
LVID diastole (cm)	2.4
PW thickness (cm)	0.6
LVID systole (cm)	1.3
FS (%)	47

Doppler Measurements

PV Vmax (m/s)	0.64
AoV Vmax (m/s)	1.1
MR Vmax (m/s)	5.6
TR Vmax (m/s)	2.7
TR PG (mmHg)	30

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease persists with evidence of relative stability. The left heart is unchanged, with a mild hemodynamically insignificant mitral regurgitation. The TR is quantitatively increased with mild RA dilation; however, the overall changes remain mild. Lack of significant atrial enlargement indicates the current risk for complication is low. No concurrent issues such as systolic dysfunction or pulmonary hypertension are



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noted in this study. Continued assessment of progression in the future will help predict long term prognosis, which remains highly variable at this stage (B1).

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The ECG is concerning, with a significant bradycardia compared to the prior 2020 evaluation. The findings of sinus pauses, escape foci and potentially intermittent sinus node dysfunction may be consistent with a profound **sinus arrhythmia due to high vagal tone; however, there is concern for sinus node dysfunction (SSS)**. The only way to know the difference is to assess response to exercise (does the heart rate/rhythm have a normal response?) or an atropine challenge (0.04mg/kg IV or IM), ideally with a 6 lead ECG to follow. If the rate does not stimulate appropriately (should develop a regular sinus tachycardia and maintain for 10-15 minutes with atropine), consider a **holter monitor or referral as the next step in evaluation**.

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RECOMMENDATIONS

- In an asymptomatic dog without significant left atrial enlargement, no cardiac medications are clearly indicated.
- Omega fatty acid supplementation and mild salt restriction may be of some long term benefit.
- Consider an exercise response test and/or atropine challenge as discussed.
- No cardiac contraindication for general anesthesia **pending a normal atropine response. If the response is abnormal, referral is advised and anesthesia is high risk.**
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

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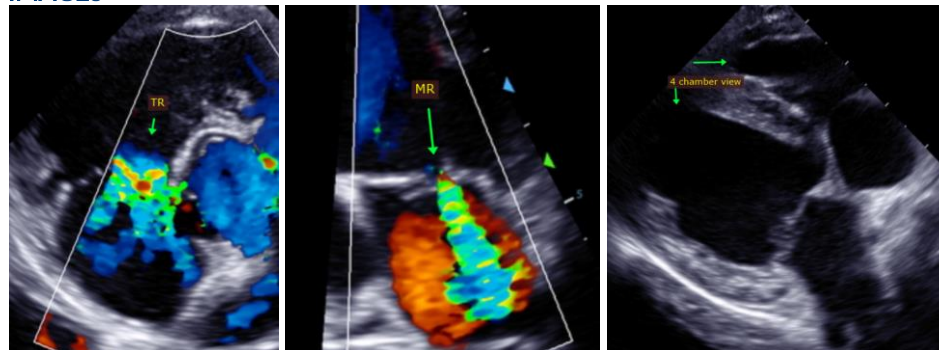
PLAN

- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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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.

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info@sonopath.com

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