



PATIENT

Anna Morin

SPECIES

Canine

BREED

Pitbull Mix

SEX

Female Spayed

AGE

12 years

WEIGHT

64.1lbs

INTERPRETED BY

Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan, RDCS

HOSPITAL NAME

Mass Veterinary Services

REFERRING VET

Dr. Masloski

INVOICE

26454

DATE

9/20/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. History chronic valvular disease - Stage B1; history rare VPCs. Currently, she is doing well other than slowing a bit with her age. Her appetite remains good. On exam today: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear. BP: 140mmHg. -Pertinent previous echo findings (7/16/21 Tai Casagrande, DVM, DACVIM-Cardiology): LA 3.61 cm; LA:Ao 1.45; LV 3.92 cm; normal LA size; moderate-severe MR; mild TR (2.42 m/s) *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 125bpm (range 100-150bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. P and QRS morphologies are positive. A single VPC is identified. No supraventricular premature beats, pauses or other dysrhythmias observed. ECG diagnosis: Normal sinus rhythm with rare isolated VPCs.

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 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:** Normal RA dimension. **Tricuspid valve:** The tricuspid valve appears mildly thickened with wild tricuspid regurgitation; velocity consistent with early PAH. **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) | 2.6 |
| LA diam (cm) | 2.7 |
| LA:Ao (Swe) | 1.1 |
| IVS thickness (cm) | 0.8 |
| LVID diastole (cm) | 4.2 |
| PW thickness (cm) | 0.8 |
| LVID systole (cm) | 2.7 |
| FS (%) | 36 |

Doppler Measurements

| | |
|----------------|------|
| PV Vmax (m/s) | 0.93 |
| AoV Vmax (m/s) | 1.1 |
| MR Vmax (m/s) | 5.9 |
| TR Vmax (m/s) | 2.9 |
| TR PG (mmHg) | 33 |

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease persists with evidence of stability. Mild mitral and tricuspid regurgitation is identified without obvious evidence of progression or chamber enlargement. Lack of significant left atrial enlargement indicates the current risk for



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complication is low. Early pulmonary hypertension has developed, which is of unknown significance in an asymptomatic dog. No concurrent issues such as systolic dysfunction are noted in this study. Prognosis remains highly variable at this stage (B1).

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The ECG does confirm a single ventricular premature contractions (VPC) as has been noted previously. VPCs are ectopic beats generated from abnormal conductive or fibrotic tissue in the ventricles of the heart muscle, and even frequent single VPCs will often cause no clinical signs in dogs. When sustained however, ventricular tachycardia can lead to symptoms such as lethargy and collapse.

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VPCs are a very non-specific finding. They can be primary in origin such as ARVC, be secondary to significant cardiac disease (mild in this study), or be extra-cardiac in origin; i.e., due to pain, stress, inflammation, cancer, GI disease, DIC/sepsis, etc. In a senior large breed dog, all possibilities should be considered through systemic work up. That being said, the rarity of the finding is likely relatively benign and simple monitoring is also reasonable. No treatment is warranted. Monitor for signs of sustained arrhythmias, such as syncope

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RECOMMENDATIONS

- No cardiac medications are clearly indicated.
- Consider full systemic evaluation if desired as discussed.
- Fish oil supplementation is recommended for dogs with arrhythmias (1000mg of omega 3 and 6 once to twice daily).
- Monitor at home for collapse, exercise intolerance, and/or lethargy.
- Anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

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INTERPRETED BY
Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

PLAN

- Recommend conservative monitoring with a recheck echocardiogram in 6-12 months, sooner if any development of clinical signs.

IMAGING PERFORMED BY
Pamela Harrigan,
RDCS

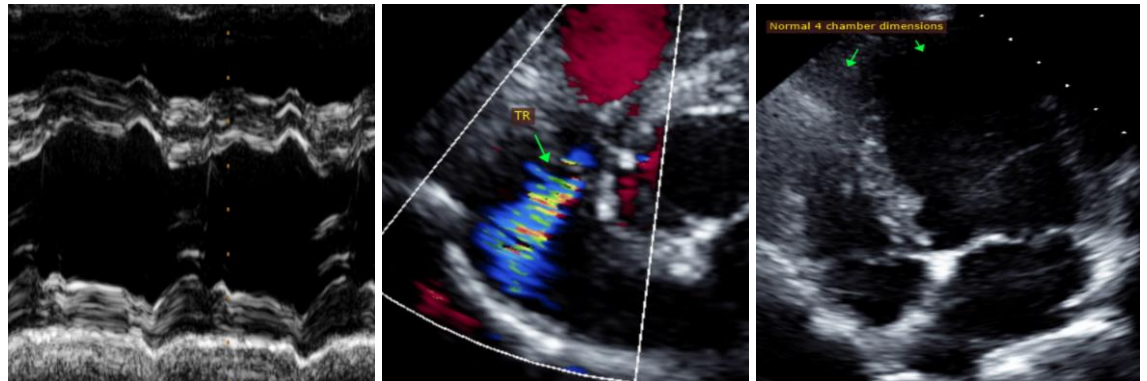
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IMAGES





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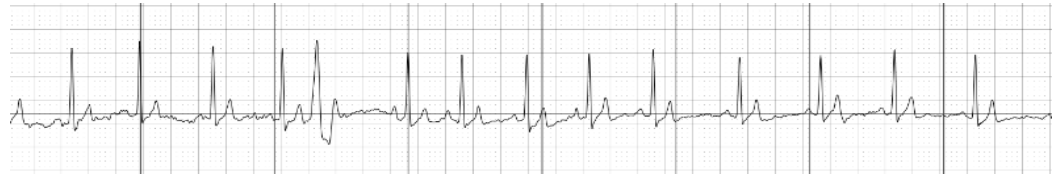
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
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Echocardiogram performed by: Pamela Harrigan, RDCS
Pet Animal Ultrasound Service (4paus.com)