



**PATIENT**

Koda Caney

**SPECIES**

Canine

**BREED**

Pomeranian Mix

**SEX**

Male Neutered

**AGE**

7 years

**WEIGHT**

14.88lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**PRESENTING CLINICAL SIGNS**

History: Last week, Koda had not returned to the house after being let out - he was found lying on the ground under a bush. He had some trouble getting up and his tongue appeared pale. Otherwise, he has been doing well since that time with no further episodes. He presented to his primary 1/6 for a cyanotic tongue and lameness of his RH limb. A heart murmur was noted at that time. He is presently eating well with normal activity. On exam: NSR, grade III/VI murmur with PMI left apical area, PSS, lung fields clear, mm pink, moist, CRT<2. BP: 160mmHg x 4. Current medications: 1) Cosequin 2) Fish oil \*No sedation for study.

**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 mildly dilated.

**Mitral valve:** The mitral valve is diffusely thickened with minimal 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. Uniform echogenicity mass associated with the aortic root; 2.1 x 1.4cm in best viewed cross section. The mass is well encapsulated. No obstruction to blood flow or imposition on cardiac chambers is seen at this time.

**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 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.

**Heart rhythm:** ECG reveals a sinus rhythm with an average HR of 180bpm.

**IMAGING**

**PERFORMED BY**

Pamela Harrigan,  
RDMS

**HOSPITAL NAME**

Mass Veterinary  
Services

**REFERRING VET**

Dr. Masloski

**INVOICE**

28237

**DATE**

1/11/23

**2-Dimensional Measurements**

Ao diam (cm)	1.3
LA diam (cm)	2.0
LA:Ao (Swe)	1.5
IVS thickness (cm)	0.7
LVID diastole (cm)	2.4
PW thickness (cm)	0.7
LVID systole (cm)	1.3
FS (%)	45

**Doppler Measurements**

PV Vmax (m/s)	1.0
AoV Vmax (m/s)	1.7
MR Vmax (m/s)	6.3
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

**INTERPRETATION OF THE FINDINGS**

The murmur is due to chronic degenerative valve disease causing mild mitral regurgitation. Mild left atrial enlargement indicates the current risk for complication is low. No concurrent issues such as systolic dysfunction is noted in this study.

There is also suspect cardiac neoplasia associated with the heart base/aortic root. The most likely tumor type given this location is a chemodectoma, however other more malignant differentials cannot be ruled out. Chemodectomas are often incidental findings



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as is suspected to be the case here, only causing clinical signs if blood flow is obstructed, pericardial effusion occurs, or a metastatic lesion causing systemic issues. The prognosis with cardiac chemodectomas is fair. The limiting factor is often hemorrhage into the pericardium, impingement of cardiac blood flow secondary to tumor growth, or metastasis to the thorax or abdomen. Chemotherapy and/or radiation therapy can also be discussed with an Oncologist.

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These findings do not clearly explain the recent episode. If the episodes recur, further evaluation is strongly recommended. The mass is unlikely to be related; however, an acute bleed that has since resolved cannot be entirely ruled out.

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**RECOMMENDATIONS**

- No cardiac medications are clearly indicated.
- Consider full systemic evaluation, consultation with an Oncologist, etc.
- Reevaluation is recommended if the episodes recur in the future.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- 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.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

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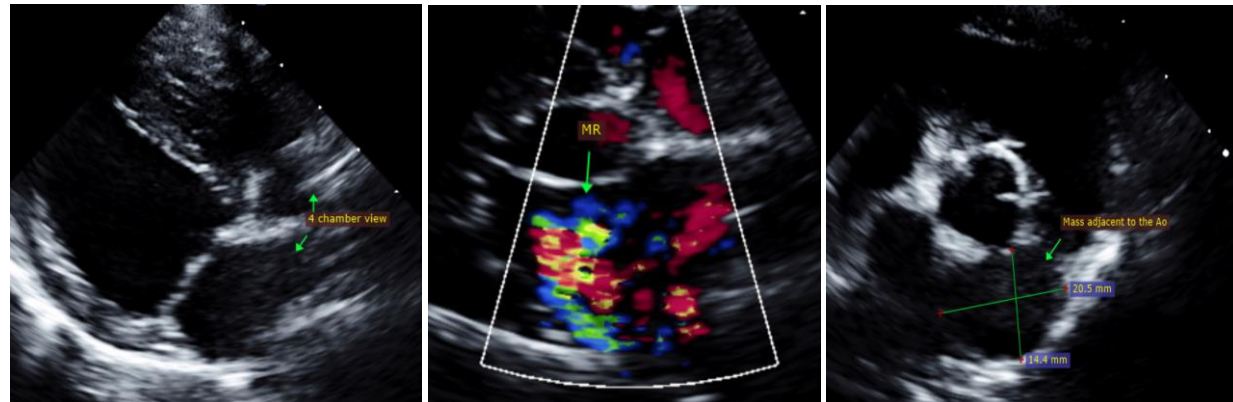
**PLAN**

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

**IMAGING PERFORMED BY**  
Pamela Harrigan,  
RDMS

**IMAGES**

**HOSPITAL NAME**  
Mass Veterinary Services



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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**

Pomeranian Mix

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

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

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