



**PATIENT**

Holly Widergren

**SPECIES**

Canine

**BREED**

Cavalier King Charles

**SEX**

Female Spayed

**AGE**

8 years

**WEIGHT**

28.6lbs

**PRESENTING CLINICAL SIGNS**

History: Grade III-IV/VI heart murmur. Bladder stones - cystotomy recommended. BP: 169, 175, 179, 183, 193mmHg.

**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. Moderate 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. Mild to moderate 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 normal with mild 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.

**Heart rhythm:** ECG reveals a sinus rhythm with an average HR of 120bpm.

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**2-Dimensional Measurements**

Ao diam (cm)	2.0
LA diam (cm)	2.4
LA:Ao (Swe)	1.2
IVS thickness (cm)	0.9
LVID diastole (cm)	3.0
PW thickness (cm)	0.9
LVID systole (cm)	1.6
FS (%)	47

**Doppler Measurements**

PV Vmax (m/s)	0.5
AoV Vmax (m/s)	1.5
MR Vmax (m/s)	5.9
TR Vmax (m/s)	2.5
TR PG (mmHg)	25

**IMAGING**

**PERFORMED BY**

Pamela Harrigan,  
RDCS

**HOSPITAL NAME**

Rhode Island Animal  
Medical Center

**REFERRING VET**

Dr. Rogoff

**INVOICE**

31735

**DATE**

7/7/23

**INTERPRETATION OF THE FINDINGS**

The cause of the murmur is chronic degenerative valve disease causing moderate mitral and mild tricuspid regurgitation. Lack of significant left atrial enlargement indicates the current risk for complication is low. A significant aortic valve insufficiency is noted, and lifelong BP monitoring is advised. No concurrent issues such as systolic dysfunction or pulmonary hypertension are noted in this study. Assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage (B1).

Assuming the readings were thought to be accurate, there is concern for systemic hypertension in this case. Based upon significant AI in addition to the reported blood pressure, recommend institute Amlodipine to effect. Target BP <160mmHg. Screening for underlying causes of high blood pressure is recommended (renal disease, adrenal tumor, etc.) as primary SHT is uncommon.



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**RECOMMENDATIONS**

- In an asymptomatic dog without significant left atrial enlargement, no cardiac medications are clearly indicated.
- Institute Amlodipine 2.5mg tabs; 1/4 tab PO q12h. Reassess BP in 1-2 weeks; up-titrate to effect (target BP <160mmHg stressed); reassess q6mo.
- Screen for underlying causes of SHT as discussed.
- 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.

**PLAN**

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

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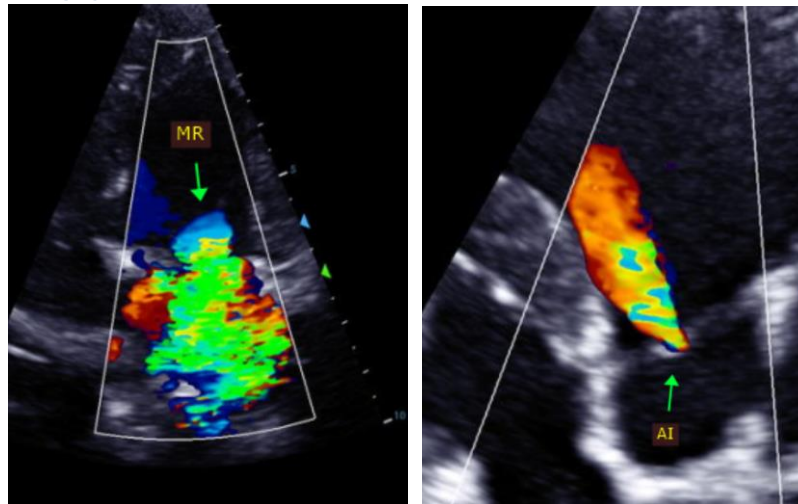
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**IMAGES**





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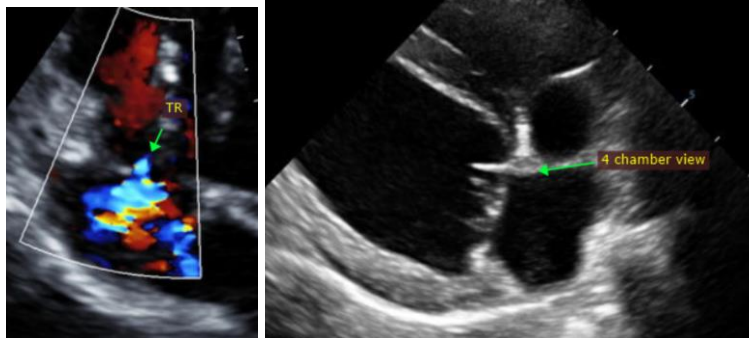
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)  
info@sonopath.com

Echocardiogram performed by: Pamela Harrigan, RDCS  
Pet Animal Ultrasound Service ([4paus.com](http://4paus.com))