



**PATIENT**

Houdini Robert

**SPECIES**

Canine

**BREED**

Shih Tzu Mix

**SEX**

Male Neutered

**AGE**

8 years

**WEIGHT**

28.63lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**IMAGING  
PERFORMED BY**

Pamela Harrigan,  
RDCS

**HOSPITAL NAME**

Mass Veterinary  
Specialty Services

**REFERRING VET**

Dr. Masloski

**INVOICE**

21158

**DATE**

9/22/21

**PRESENTING CLINICAL SIGNS**

History: Recheck echo. Houdini was noted to have a heart murmur in July , 2020 and had an echocardiogram that revealed mild MR/LAE. He was started on Pimobendan at that time. Occasional cough at home. He is eating well. He tires a bit on walks but has been breathing normally. CV/RESP: NSR ,grade III/VI murmur with PMI left apical area, PSS, lung fields clear. BP: 130mmHg x 5.

-Current medications: Pimobendan/vetmedin 2.5mg/ml 1ml twice a day \*No sedation.  
-Pertinent previous echo findings (7/28/2020): LA 2.5 cm; LA:Ao 1.6; LV 3.0 cm.

**ECHOCARDIOGRAM FINDINGS**

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

**Left ventricle:** Minimal LV enlargement with adequate function. LV wall thicknesses are normal.

**Left atrium:** The left atrium is moderately dilated.

**Mitral valve:** The mitral valve is diffusely thickened with mild 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. 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 septal prolapse and 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 100bpm.

**2-Dimensional Measurements**

Ao diam (cm)	1.4
LA diam (cm)	2.5
LA:Ao (Swe)	1.8
IVS thickness (cm)	0.7
LVID diastole (cm)	3.3
PW thickness (cm)	0.7
LVID systole (cm)	1.9
FS (%)	42

**Doppler Measurements**

PV Vmax (m/s)	1.0
AoV Vmax (m/s)	1.5
MR Vmax (m/s)	5.8
TR Vmax (m/s)	2.6
TR PG (mmHg)	27

**INTERPRETATION OF THE FINDINGS**

Chronic degenerative valve disease causing moderate mitral and mild tricuspid regurgitation persists. Compared to what is described in the prior study, there is no evidence of progression with similar left heart dimensions. No pulmonary hypertension or ancillary issues noted at this time. No additional issues are identified.

Given these findings, continued Pimobendan is recommended. The dose is low for this body size, and a slight adjustment is suggested as below. No additional medications are indicated at this time. Assessment of progression in the future will help predict long term outcome, however prognosis is guarded at this stage (B2).



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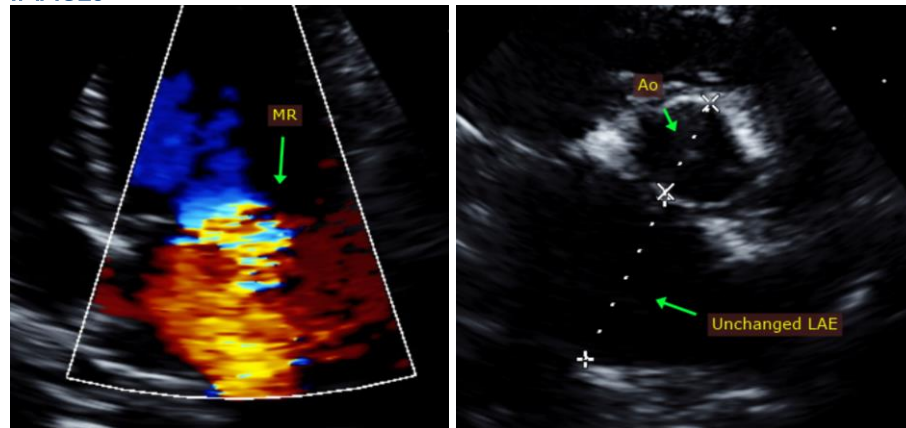
**RECOMMENDATIONS**

- Continue Pimobendan 2.5mg/ml; Give 1.25ml (3.1mg) PO q12h.
- 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.

**IMAGES**



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