



**PATIENT**

Papi Mello

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Male Intact

**AGE**

5.63 years

**WEIGHT**

62.5lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Pamela Harrigan,  
RDCS

**HOSPITAL NAME**

Mass Veterinary Services

**REFERRING VET**

Dr. Masloski

**INVOICE**

25278

**DATE**

7/12/22

**PRESENTING CLINICAL SIGNS**

History: Recheck echo. History chronic valvular disease - Stage C. History CHF; collapse episodes, Current presentation: Papi has been doing well with no seizures but does cough, especially after exercise. The family has been limiting his exercise. Good appetite. On exam: NSR, grade IV/VI murmur with PMI left apical area radiating to right with grade II/VI tricuspid murmur, PSS, lung fields clear, no cough with tracheal palpation. BP: 180 mmHg. Current medications: 1) Pimobendan/vetmedin 1.25mg 3/4 tab twice a day 2) Lasix/furosemide 12.5mg 1/4 tab twice a day 3) Spironolactone 12.5mg 1/4 tab twice a day 4) Hydrocodone with homatropine/hycodan 5mg 1/4 tab twice a day \*No sedation for study.  
-Pertinent previous echo findings (1/12/22 Meghan Allen, DVM, DACVIM-Cardiology): LA 2.82 cm; LA:Ao 2.56; LV 2.46 cm; severe LAE; moderate LVE; severe MR; moderate-severe TR (2.98 m/s; 36 mmHg); small pericardial effusion.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and Doppler imaging is available.  
**Left ventricle:** Significant LV dilation with hyperdynamic myocardial function. Decreased LV wall thickness.

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

**Mitral valve:** Severe diffuse thickening of mitral valve leaflets with marked prolapse into the left atrial lumen. Severe eccentric mitral regurgitation. 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:** Moderate RV dilation.

**Right atrium:** Moderate right atrial dilation.

**Tricuspid valve:** The tricuspid valve appears thickened with significant septal prolapse, and moderate tricuspid regurgitation. Elevated velocity consistent with moderate pulmonary hypertension.

**Pulmonic valve/Pulmonary artery:** The pulmonic valve is normal in morphology and mobility. The MPA appears mildly dilated. Normal pulmonic outflow velocities with laminar flow. No PI.

**Pericardium/other:** No pericardial or pleural effusion noted. No obvious cardiac masses.

**Heart rhythm:** ECG reveals a sinus rhythm with an average HR of 150bpm.

**2-Dimensional Measurements**

Ao diam (cm)	1.1
LA diam (cm)	2.9
LA:Ao (Swe)	2.6
IVS thickness (cm)	0.6
LVID diastole (cm)	2.8
PW thickness (cm)	0.5
LVID systole (cm)	1.2
FS (%)	57

**Doppler Measurements**

PV Vmax (m/s)	0.65
AoV Vmax (m/s)	0.73
MR Vmax (m/s)	4.6
TR Vmax (m/s)	4.2
TR PG (mmHg)	72

**INTERPRETATION OF THE FINDINGS**

Chronic degenerative valve disease persists with evidence of progression. Severe mitral and moderate tricuspid regurgitation are present with four chamber enlargement. This indicates the risk for spontaneous congestive heart failure is elevated. Moderate pulmonary hypertension has developed, which was not noted previously. This is likely



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secondary to a combination of chronic LA pressure elevation and potentially some degree of primary airway disease in this predisposed breed. No additional issues are identified.

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In light of severity of disease on echocardiogram, certainly continued life-long medications are warranted as below. Sildenafil is not clearly indicated as the patient is not experiencing clinical signs (such as syncope); however, should any exertional dyspnea or collapse develop in the future I would not hesitate to institute it. Additionally, an ACE-I is warranted given the reported blood pressure. If the cough persists despite therapy Hydrocodone should be utilized for quality of life.

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Chihuahua

The average survival time of canine patients with active pulmonary edema is 8-9 months on medications, however they generally are able to maintain a good quality of life for that period. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

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**RECOMMENDATIONS**

- Continue Lasix, Spironolactone, Pimobendan and Hydrocodone as prescribed.
- Consider ACE-I 0.5mg/kg PO q12h.
- If any exertional dyspnea/collapse develops in the future, institute Sildenafil 1-2mg/kg PO q8-12h.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.
- Monitoring of sleeping respiratory rates will be paramount to screen for congestive heart failure at home.
- Elective anesthesia is not advised.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.

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Maggie Machen  
Lamy, DVM  
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**PLAN**

- Monitor renal values and BP every 3-4 months lifelong.
- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

**IMAGING PERFORMED BY**  
Pamela Harrigan,  
RDCS

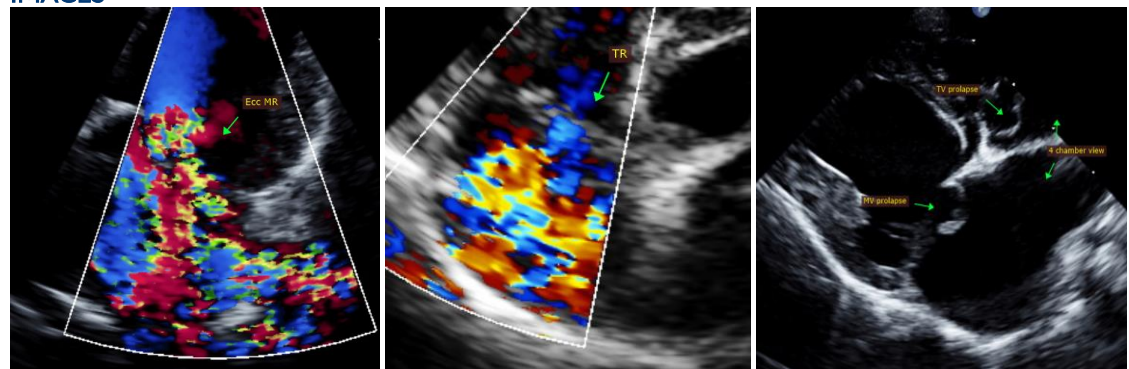
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**IMAGES**





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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.

**BREED**

Chihuahua

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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