



**PATIENT**

**Buddy Caney**

**SPECIES**

Canine

**BREED**

Yorkshire Terrier

**SEX**

Male Neutered

**AGE**

12 years

**WEIGHT**

6.69lbs

**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**

20841

**DATE**

9/1/21

**PRESENTING CLINICAL SIGNS**

History: Recheck echo. History chronic valvular disease, advanced. Current presentation: Buddy continues to have a mild cough 1-2 times a day and after drinking, although it is improved. He is appetite and activity level continue to be normal. CV/RESP: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear, no cough with tracheal palpation. BP: 90-100mmHg.

-Current medications: 1) Pimobendan/vetmedin 1.25mg 1/2 tab twice a day 2) Enalapril 2.5mg 1/2 tab twice a day 3) Lasix/furosemide 12.5mg 1/2 tab twice a day 4) Spironolactone 12.5mg 1/4 tab twice a day 5) Hydrocodone with homatropine/hycodan 5mg 1/4 tab prn with 1/2 tab daily the past few weeks to control cough \*No sedation.

-Pertinent previous echo findings (4/1/21): LA 2.68 cm; LA:Ao 2.05; LV 2.79 cm; severe LAE: 3+ MR; trace TR.

**ECHOCARDIOGRAM FINDINGS**

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

**Left ventricle:** LV dilation with hyperdynamic myocardial function. LV wall thicknesses are normal.

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

**Mitral valve:** Diffuse thickening of mitral valve leaflets (anterior > posterior) with significant prolapse into the left atrial lumen. Severe 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.

**Right ventricle:** No significant RV dilation.

**Right atrium:** No significant right atrial dilation.

**Tricuspid valve:** The tricuspid valve appears mildly thickened, with trace/mild tricuspid regurgitation. Borderline TR velocity.

**Pulmonic valve/Pulmonary artery:** The pulmonic valve is normal with normal pulmonic outflow velocity. No pulmonic insufficiency.

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

**Heart rhythm:** ECG reveals a sinus rhythm with an average HR of 160bpm.

**2-Dimensional Measurements**

Ao diam (cm)	1.1
LA diam (cm)	2.6
LA:Ao (Swe)	2.2
IVS thickness (cm)	0.56
LVID diastole (cm)	3.0
PW thickness (cm)	0.60
LVID systole (cm)	0.85
FS (%)	73

**Doppler Measurements**

PV Vmax (m/s)	0.9
AoV Vmax (m/s)	1.4
MR Vmax (m/s)	5.6
TR Vmax (m/s)	2.7
TR PG (mmHg)	30



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**INTERPRETATION OF THE FINDINGS**

Chronic degenerative valve disease causing severe mitral and trace/mild tricuspid regurgitation persists. Compared to what is described previously, these findings are similar without evidence of significant progression. Regardless, severe left atrial enlargement indicates the risk for spontaneous congestive heart failure is elevated. No additional issues such as systolic dysfunction is identified.

Given the severity of disease seen here, full lifelong cardiac support should be continued as below with minor dose alterations. The ACEI should be discontinued due to relative hypotension.

The described cough is likely mechanical in origin given the described nature of the symptom, as this patient likely has significant mainstem bronchi compression. Hydrocodone can be used if needed for quality of life. That being said, close monitoring of breathing rates is recommended to determine a mechanical cough from recurrent pulmonary edema.

The average survival 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. Monitoring of renal values is recommended lifelong.

**RECOMMENDATIONS**

- Discontinue ACEI due to hypotension.
- Dose increase: Administer Pimobendan 1.25mg am, 0.625mg pm.
- Continue Lasix and Spironolactone as prescribed.
- Continue Hydrocodone as needed, 0.2 – 0.4 mg/kg PO up to q4-6 hours PRN for cough (available in 5/1.5mg tablets or 5mg/5ml solution).
- Reassess blood pressure in 2-3 months.
- Elective anesthesia is not advised.
- Monitor for development of a cough, collapse episodes, significant lethargy in the future. Monitoring of sleeping breathing rates is recommended best way to screen for CHF in the future.

**PLAN**

- A recheck echocardiogram is recommended in 6 months to screen for progression, sooner if clinical signs arise/persist.



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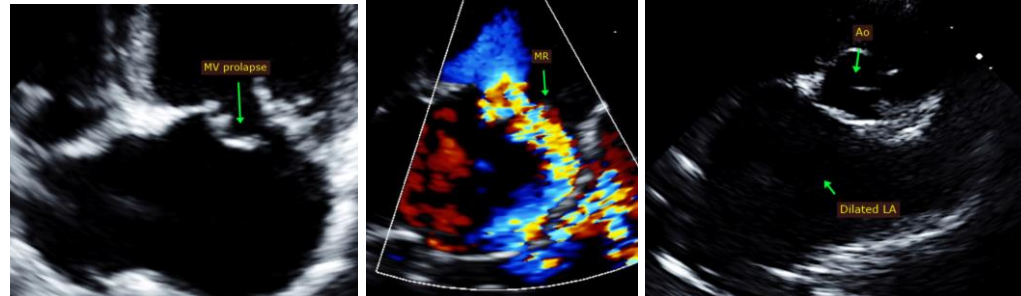
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**IMAGES**



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)