



**PATIENT**

Hazel Warren

**SPECIES**

Canine

**BREED**

Pitbull

**SEX**

Female Spayed

**AGE**

9 years

**WEIGHT**

46lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Pamela Harrigan,  
RDCS

**HOSPITAL NAME**

East Boston Animal  
Hospital

**REFERRING VET**

Dr. Chopra

**INVOICE**

26917

**DATE**

10/15/22

**PRESENTING CLINICAL SIGNS**

History: Presented 2 weeks ago with abdominal distension. Grade II-III/VI murmur noted. Abdominocentesis removed 150mls straw colored fluid. Started Salix 40mg mg 1 tab BID, Pimobendan 5 mg 1 tab BID, Sildenafil 20mg 1/2-tab BID. Abdominocentesis performed after echo today (marked ascites).

**ECHOCARDIOGRAM FINDINGS**

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

**Left ventricle:** The LV diameter is markedly increased with marked systolic dysfunction. LV wall thicknesses are decreased. Increased LV sphericity.

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

**Mitral valve:** The mitral valve is mildly thickened with no prolapse into the left atrial lumen. Lack of coaptation in systole. Moderate to severe central mitral regurgitation with a decreased velocity.

**Aortic valve/Aorta:** The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency.

**Right ventricle:** Severe right ventricular dilation.

**Right atrium:** Severe RA dilation.

**Tricuspid valve:** The tricuspid valve appears mildly thickened with lack of coaptation in systole. Moderate to severe tricuspid regurgitation.

**Pulmonary valve/Pulmonary artery:** The pulmonic valve is normal in morphology and mobility. Trace pulmonic insufficiency. Decreased RVOT velocity, laminar flow.

**Pericardium/other:** No pericardial or pleural effusion noted. Significant ascites with hepatic congestion. No obvious cardiac masses.

**2-Dimensional Measurements**

|                    |     |
|--------------------|-----|
| Ao diam (cm)       | 2.0 |
| LA diam (cm)       | 4.8 |
| LA:Ao (Swe)        | 2.5 |
| IVS thickness (cm) | 0.7 |
| LVID diastole (cm) | 7.8 |
| PW thickness (cm)  | 0.7 |
| LVID systole (cm)  | 6.8 |
| FS (%)             | 12  |

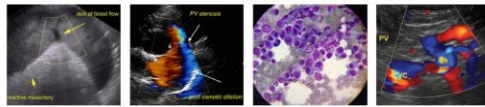
**Doppler Measurements**

|                |     |
|----------------|-----|
| PV Vmax (m/s)  | 0.4 |
| AoV Vmax (m/s) | 0.8 |
| MR Vmax (m/s)  | 0.4 |
| TR Vmax (m/s)  | 1.7 |
| TR PG (mmHg)   | 12  |

**INTERPRETATION OF THE FINDINGS**

Unfortunately, this patient has severe 4 chamber dilation with marked systolic dysfunction. Moderate to severe MR and TR are likely secondary to dilation; however, a concurrent valve issue may be contributing. Both atria are severely dilated indicating high risk for congestive heart failure. No additional issues are identified in this study.

Dilation and dysfunction can be primary in nature (primary DCM) or develop secondary to diet/taurine deficiency, myocarditis, tachycardia-induced cardiomyopathy, or infiltrative disease such as lymphoma. A thorough diet history should be obtained, with avoidance of non-traditional options. A taurine level may be helpful as well, although supplementing taurine regardless of systemic levels is recommended as below. Finally, further systemic evaluation for underlying infiltrative contribution such as neoplasia may also be reasonable (abdominal ultrasound, tick titers, etc.) although considered unlikely.



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Given these findings, the ascites is certainly consistent with CHF and immediate lifelong medications are recommended as below. If the patient appears unstable, 24 hours monitoring of the ECG in addition to oxygen support and diuretic therapy should be considered. Periodic abdominocentesis should be performed when the patient is uncomfortable or inappetent.

Prognosis is poor at this stage with most dogs succumbing to CHF in less than 6 months. There is high risk for recurrent congestive heart failure, malignant arrhythmias (AF, VT), collapse and/or sudden death in the future even on medications.

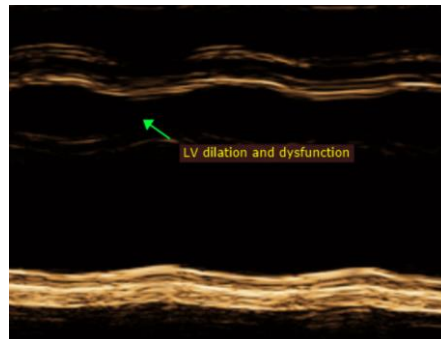
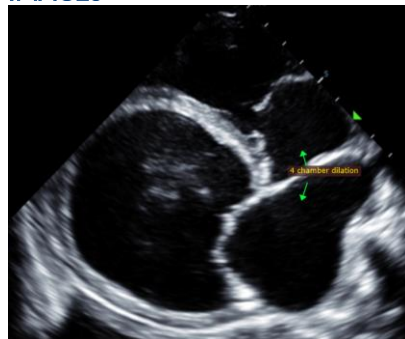
**RECOMMENDATIONS**

- Consider hospitalization for IV Lasix therapy, oxygen support, and ECG monitoring.
- If declined, an injection of Lasix is recommended with institution of 1-2mg/kg PO q8h for 3-5 days, then decrease to q12h at that time if doing well.
- Administer heart muscle support Pimobendan (Vetmedin) 0.3mg/kg PO q12h.
- Institute Spironolactone 1-2mg/kg PO q12h (available in 25 and 50mg tablets).
- Administer taurine supplement 1000mg PO q12h.
- Consider hydrocodone with homatropine if needed for quality of life, 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).
- Diet history, taurine levels, further systemic evaluation as discussed.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Elective anesthesia is not advised.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF going forward.

**PLAN**

- Monitor renal values, BP in 1-2 weeks. If doing well and BP is >130mmHg, consider ACE-I 0.5mg/kg PO q12h.
- 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.

**IMAGES**





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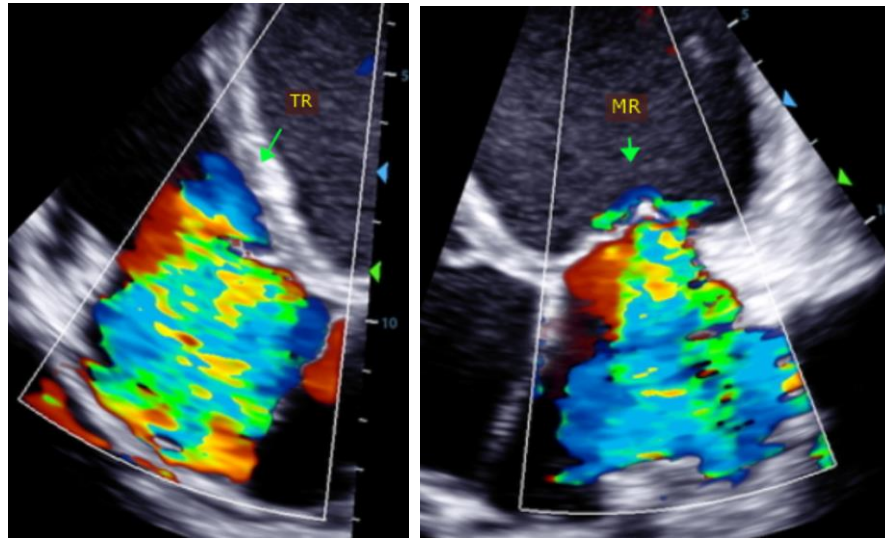
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

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