



**PATIENT**

Diego Rodriguez

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Male Intact

**AGE**

8 years

**WEIGHT**

11.2lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Pamela Harrigan,  
RDCS

**HOSPITAL NAME**

Mass Veterinary  
Services

**REFERRING VET**

Dr. Masloski

**INVOICE**

22774

**DATE**

2/23/22

**PRESENTING CLINICAL SIGNS**

History: Presents today with a distended abdomen (tapped 450mls fluid off abdomen). History chronic valvular disease - Stage C (hx. CHF). Echocardiogram 8/2/21 (Jessica Solomon DVM DACVIM): LA 3.2 cm; LA:Ao 2.9; LV 3.57 cm; severe LAE; severe MR; moderate-severe TR (4.7 m/s); severe PAH. Current presentation: Increased coughing; good appetite. He is presently wearing diapers since he is urinating everywhere. On auscultation: NSR, grade IV-V/VI murmur with PMI left apical area radiating to right with grade II/VI murmur noted on right, PSS, lung fields clear. BP: 100mmHg x 4.

-Current medications: 1) Pimobendan/vetmedin 1.25mg 1 tab three times a day 2) Enalapril 2.5mg 1 tab twice a day 3) Lasix/furosemide 12.5mg 1 tab three times a day 4) Spironolactone 25mg 1/2 tab twice a day 5) Hydrocodone with homatropine/hycodan 5/1.5mg 1/4 tab three times a day.

**ECHOCARDIOGRAM FINDINGS**

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

**Left ventricle:** LV dilation with hyperdynamic myocardial function. Septal flattening in systole. LV wall thicknesses are normal.

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

**Mitral valve:** The mitral valve is diffusely thickened with mild prolapse into the left atrial lumen. A primary ruptured chordae tendineae is visualized. Severe eccentric mitral regurgitation.

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

**Right ventricle:** Severe right ventricular enlargement with RV hypertrophy.

**Right atrium:** Severe RA enlargement.

**Tricuspid valve:** The tricuspid valve appears normal with severe tricuspid regurgitation. Velocity consistent with severe pulmonary hypertension.

**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 188bpm.

**2-Dimensional Measurements**

Ao diam (cm)	1.0
LA diam (cm)	3.8
LA:Ao (Swe)	3.8
IVS thickness (cm)	0.6
LVID diastole (cm)	3.6
PW thickness (cm)	0.6
LVID systole (cm)	1.2
FS (%)	66

**Doppler Measurements**

PV Vmax (m/s)	NM
AoV Vmax (m/s)	NM
MR Vmax (m/s)	NM
TR Vmax (m/s)	5.8
TR PG (mmHg)	134

**INTERPRETATION OF THE FINDINGS**

Chronic degenerative valve disease persists with marked mitral and tricuspid regurgitation. Compared to the prior report, there is progression in left heart dimensions and PAH. Marked left atrial enlargement indicates the risk is elevated and a ruptured chordae tendineae raises this risk as well. It is unknown if this is a new finding or a chronic issue. Additionally, there is severe pulmonary hypertension, which puts the patient at risk for right-sided CHF. Given these findings, the ascites is most likely cardiogenic in origin and warrants continued lifelong cardiac supportive medications going forward.



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It is important to note that this patient is considered end-stage and quality of life must be assessed. Increasing the diuretic dose will certainly worsen urinary issues at home and must be done carefully. Sildenafil is not listed in the medications which is certainly indicated in this case. Addition of this medication alone may help improve fluid retention (ie without an increase in diuretic). The blood pressure is relatively low for a patient in hospital and the Enalapril dose should be adjusted.

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The prognosis with this degree of disease is poor to grave and our goal is to maintain quality of life for the short-term. Patient is at high risk for right or left-sided CHF, malignant arrhythmias, and/or sudden death in the future.

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**RECOMMENDATIONS**

- Therapeutic abdominocentesis when indicated (inappetance or discomfort).
- Continue Spironolactone, Pimobendan, and Lasix as prescribed. Increase Lasix if effusion is refractory or pulmonary edema suspected.
- Utilize Hydrocodone as needed for quality of life.
- Decrease Enalapril to SID.
- Institute Sildenafil 10mg PO q8h.
- 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.

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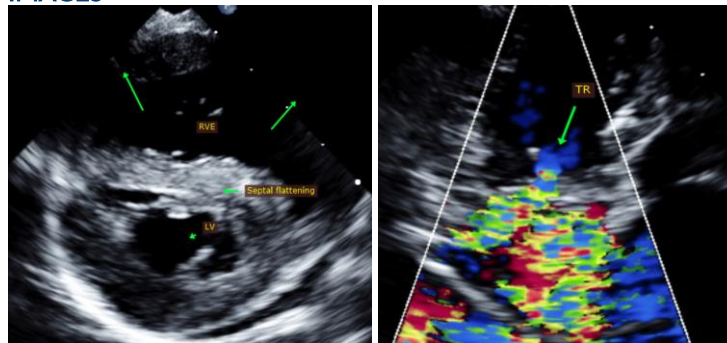
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**PLAN**

- Recheck 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

**IMAGES**

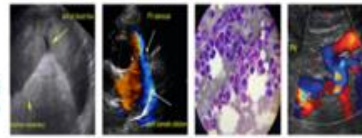


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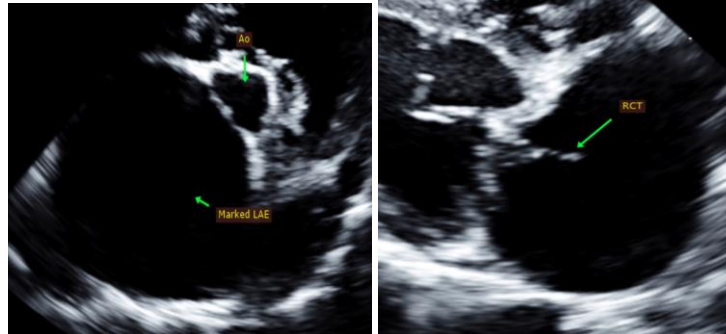
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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.

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11.2lbs

Maggie Machen Lamy, DVM  
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info@sonopath.com

**Echocardiogram performed by:**

Pamela Harrigan, RDCS  
Pet Animal Ultrasound Service (4paus.com)

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