



**PATIENT PRESENTING CLINICAL SIGNS**

**Ammo Benoit**

History: Recheck echo. History chronic valvular disease, advanced. Current presentation: Ammo is presently doing well at home with only an occasional cough. He is eating well with normal activity for a canine of his years. On exam: NSR, grade IV-V/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear. BP: 120-130 mmHg. Current medications: 1) Pimobendan/vetmedin 2.5mg 1 capsule twice a day 2) Lasix/furosemide 12.5mg 1 tab twice a day 3) Plavix/clopidogrel 75mg 1/4 tab daily 4) Fish oils 5) Spironolactone 25mg 1/2 tab twice a day 6) Amlodipine 2.5mg 1 tab daily 7) Optix care \*Sedated with propofol for study. -Pertinent previous echo findings (1/20/21 Maggie Machen Lamy, DVM, DACVIM-Cardiology): LA 3.4 cm; LA:Ao 1.8; LV 3.27 cm; severe LAE; mild LVE; severe MR; mild TR (2.3 m/s). \*Sedated with propofol for study.

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Male Neutered

**AGE**

14 years

**WEIGHT**

20.1lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Pamela Harrigan,  
RDCS

**HOSPITAL NAME**

Mass Veterinary Services

**REFERRING VET**

Dr. Masloski

**INVOICE**

25685

**DATE**

8/10/22

**ELECTROCARDIOGRAPHIC FINDINGS** \*Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 25mm/s, 10mm/mV. The average heart rate is 150bpm with a largely regular rhythm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. P and QRS morphologies are positive. Isolated APCs are seen throughout; singles only. No ventricular premature beats, pauses or other dysrhythmias observed.  
ECG diagnosis: Normal sinus rhythm with isolated APCs.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and Doppler imaging is available.  
**Left ventricle:** No LV dilation with adequate myocardial function.  
**Left atrium:** The left atrium is moderately dilated with a horizontal component not captured in LA/AO.  
**Mitral valve:** Marked diffuse thickening of mitral valve leaflets with prolapse into the left atrial lumen. Lack of coaptation in systole. Severe anterior-directed 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:** Mild RV dilation.  
**Right atrium:** No right atrial dilation.  
**Tricuspid valve:** The tricuspid valve appears thickened, with mild to moderate tricuspid regurgitation. Normal velocity.  
**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.

**2-Dimensional Measurements**

Ao diam (cm)	1.8
LA diam (cm)	2.9
LA:Ao (Swe)	1.6
IVS thickness (cm)	0.9
LVID diastole (cm)	2.5
PW thickness (cm)	0.9
LVID systole (cm)	1.1
FS (%)	56

**Doppler Measurements**

PV Vmax (m/s)	0.75
AoV Vmax (m/s)	1.2
MR Vmax (m/s)	NM
TR Vmax (m/s)	2.3
TR PG (mmHg)	21



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**INTERPRETATION OF THE FINDINGS**

Chronic degenerative valve disease persists with overall stability. Severe mitral and mild to moderate tricuspid regurgitation are largely unchanged. The left atrium shows horizontal dilation, which is uncommon to see that is not captured in LA/AO. Overall, the size of morphology is similar to previous. Finally, the LV is no longer dilated, which is unusual as well. Consider baseline lab work in this patient if not recently assessed, to screen for dehydration. No additional issues are identified.

The ECG shows occasional single APCs. These are likely due to a combination of atrial enlargement and stress. Given only single beats and a lack of clinical signs (such as syncope), no treatment is warranted. Monitoring is advised going forward.

Given these findings, continue cardiac support is recommended as prescribed pending assessment of lab work. Hydrocodone can be utilized if needed for quality of life.

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.

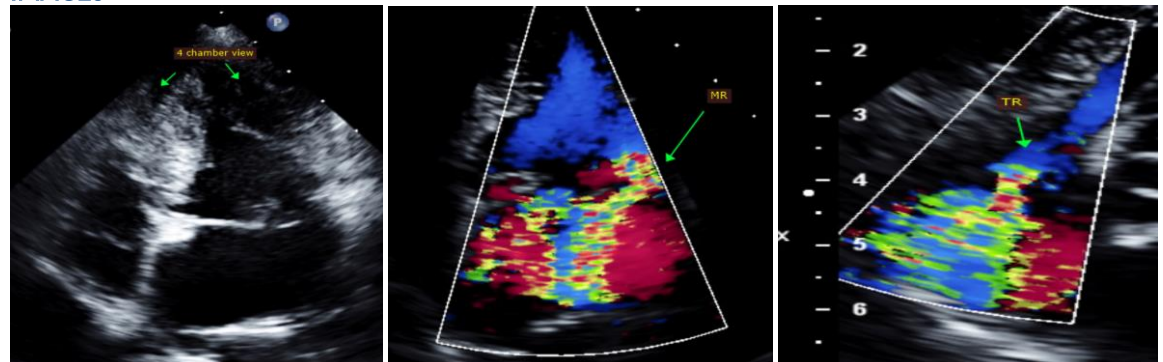
**RECOMMENDATIONS**

- Continue all medications as prescribed.
- Baseline lab work strongly recommended.
- 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.

**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.

**IMAGES**





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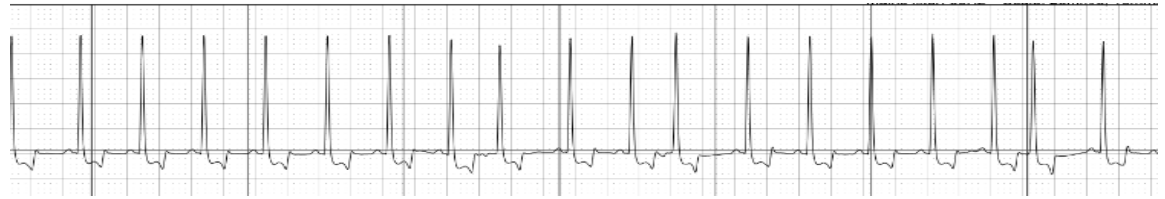
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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