



PATIENT

Aliyah Macksound

SPECIES

Canine

BREED

Miniature Australian Shepherd

SEX

Female Spayed

AGE

10 years

WEIGHT

10.9lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

Norfolk County
Veterinary Service

REFERRING VET

Dr. Ragon

INVOICE

31695

DATE

7/6/23

PRESENTING CLINICAL SIGNS

History: Diagnosed with CHF (DMVD) at ER vet, came to us for follow-up 10 days later. Doing well at home on medication, decreased energy back in 3/17/2023. Patient recently had increased respiratory rate 6/3/2023 and presented to ER. ER increased Lasix dosage from BID to TID. It was recommended they follow-up with an Echocardiogram. Patient is coughing. BP: 198, 206, 208mmHg. On 1) Furosemide 12.5mg TID, 2) Pimobendan 1.25mg BID, 3) Enalapril 2.5mg SID.

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 severely dilated.

Mitral valve: Diffuse thickening of mitral valve leaflets with severe prolapse into the left atrial lumen. Ruptured chordae tendineae is visualized (see below). Severe eccentric mitral regurgitation. Normal velocity.

Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. Mild aortic insufficiency.

Right ventricle: Normal RV.

Right atrium: Normal right atrium.

Tricuspid valve: The tricuspid valve appears thickened, with mild tricuspid regurgitation. Velocity consistent with mild pulmonary hypertension.

Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. The MPA is normal. 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 130bpm.

2-Dimensional Measurements

Ao diam (cm)	1.2
LA diam (cm)	1.6
LA:Ao (Swe)	1.3
IVS thickness (cm)	0.8
LVID diastole (cm)	2.6
PW thickness (cm)	0.8
LVID systole (cm)	0.9
FS (%)	65

Doppler Measurements

PV Vmax (m/s)	0.92
AoV Vmax (m/s)	1.5
MR Vmax (m/s)	5.0
TR Vmax (m/s)	3.0
TR PG (mmHg)	36

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease causing severe mitral and mild tricuspid regurgitation. A ruptured chord is visualized, which explains a recent recurrent episode. Mild pulmonary hypertension is noted, which is likely secondary to chronic LA pressure elevation. Finally, a mild aortic insufficiency is present and further BP evaluation is recommended as below. No additional issues identified.

Given these findings, continued cardiac support is certainly recommended as below. The dose of Lasix is quite high; however, if the patient is doing well this should be continued with addition of Spironolactone. Additionally, increasing the ACE-I to BID is recommended based upon BP.



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Reassess the BP once the medications in 1-2 weeks, if persistently >160mmHg in hospital, use of Amlodipine and full systemic evaluation is recommended.

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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 and Pimobendan as prescribed.
- Increase Enalapril 2.5mg BID.
- Institute Spironolactone 1-2mg/kg PO q12h.
- Reassess the BP in 1-2 weeks, if persistently elevated, addition of Amlodipine and systemic evaluation is recommended.
- Utilize cough suppression as needed for QOL (hydrocodone, 0.2-0.4mg/kg up to q4-6h PRN) for any residual mechanical cough in the face of normal sleeping respiratory rates.
- 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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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.

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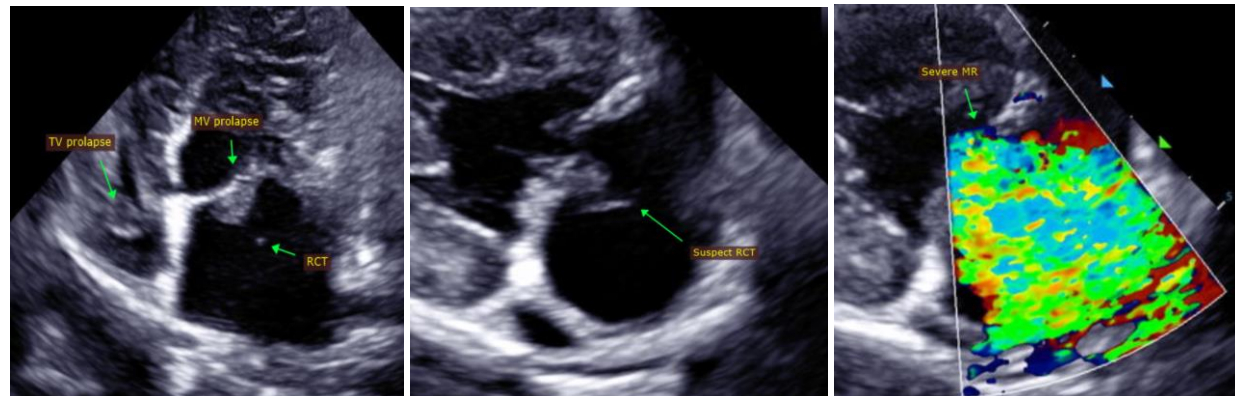
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IMAGES





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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.

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Shepherd

Maggie Machen Lamy, DVM
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Echocardiogram performed by: Pamela Harrigan, RDCS
Pet Animal Ultrasound Service (4paus.com)

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