



**PATIENT**

Maggie Minutello

**SPECIES**

Canine

**BREED**

Shetland Sheepdog

**SEX**

Female Spayed

**AGE**

12 years

**WEIGHT**

23.6lbs

**INTERPRETED BY**

Maggie Machen Lamy, DVM  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Pamela Harrigan, RDCS

**HOSPITAL NAME**

Norfolk County Veterinary Service

**REFERRING VET**

Dr. Leoni

**INVOICE**

25878

**DATE**

8/18/22

**PRESENTING CLINICAL SIGNS**

History: Recheck echo. History chronic valvular disease - Stage B1. Currently, recently presented for cough. Radiographs c/w CHF. Murmur increased from grade II to grade III. Started Salix 12.5mg, 1.5 TID and Pimobendan 12.5mg, 1.5 BID. Repeat Radiographs showed marked improvement in lung fields and improved cough. BP: 147, 149, 150, 151mmHg. -Pertinent previous echo findings (7/8/21 Maggie Machen Lamy, DVM, DACVIM-Cardiology): LA 2.68 cm; LA: Ao1.5; LV 2.8 cm; mild LAE, mild MR, mild TR (2.6 m/s). \*Sedated with alfaxalone for study.

**ECHOCARDIOGRAM FINDINGS**

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

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

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

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

**Tricuspid valve:** The tricuspid valve appears mildly thickened, with moderate tricuspid regurgitation. Mildly elevated velocity consistent with mild pulmonary hypertension.

**Pulmonic valve/Pulmonary artery:** The pulmonic valve is normal with normal pulmonic outflow velocity. Mild MPA dilation. 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 80bpm.

**2-Dimensional Measurements**

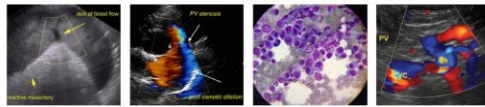
Ao diam (cm)	1.6
LA diam (cm)	2.9
LA:Ao (Swe)	1.9
IVS thickness (cm)	0.8
LVID diastole (cm)	3.5
PW thickness (cm)	0.8
LVID systole (cm)	1.4
FS (%)	59

**Doppler Measurements**

PV Vmax (m/s)	0.72
AoV Vmax (m/s)	1.7
MR Vmax (m/s)	5.5
TR Vmax (m/s)	2.8
TR PG (mmHg)	32

**INTERPRETATION OF THE FINDINGS**

Chronic degenerative valve disease persists with severe mitral and moderate tricuspid regurgitation. Compared to the prior study, there is progression in both left heart dimensions with development of severe disease. While unusual to go from mild to severe, this is not entirely surprising given the time frame. Severe left atrial enlargement indicates the risk for spontaneous congestive heart failure is elevated. Moderate TR is also noted, with evidence of mild pulmonary hypertension and mild right heart dilation. No additional issues such as systolic dysfunction is identified.



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Given these findings, the prior diagnosis for congestive heart failure is supported and continued medical support is recommended as below. Hydrocodone can be utilized if needed for quality of life. Careful discussion with the owner on monitoring of breathing rates is the best way to determine a mechanical cough from recurrent CHF in the future is advised. Regardless, full lifelong cardiac support is also recommended given the severity of disease and high risk for decompensation.

The average survival of canine patients once Lasix becomes necessary 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.

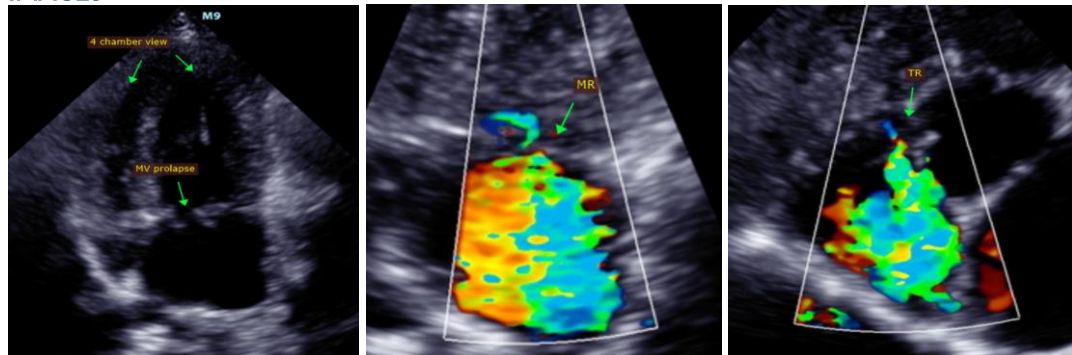
**RECOMMENDATIONS**

- Continue Lasix; however, decrease to BID dosing is reasonable. Administer 1-2mg/kg PO q12h.
- Continue Pimobendan as prescribed.
- Institute Spironolactone, 1-2mg/kg PO q12h.
- Institute ACE-I 0.5mg/kg PO q12h.
- Utilize 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). Start with q6 hours and wean to lowest effective dosage.
- 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**

- Monitor renal values and BP in 1-2 weeks and then every 3-4 months on medications.
- A recheck echocardiogram is recommended in 6 months to screen for progression, sooner if clinical signs arise/persist.

**IMAGES**





**PATIENT**

Maggie Minutello

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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Shetland Sheepdog

Maggie Machen Lamy, DVM  
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info@sonopath.com

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