



PATIENT

Isabella Levinson

SPECIES

Canine

BREED

Shih Tzu

SEX

Female Spayed

AGE

12 years

WEIGHT

22.19lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

PRESENTING CLINICAL SIGNS

History: Recheck echo. History chronic valvular disease - Stage B2. Presently, Isabelle is doing well at home---she is eating well with normal activity for her years. However, the coughing fits continue, worse with excitement or exercise. On exam: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, mild inspiratory crackles noted right hemithorax, mm pink, moist, CRT<2. BP: 160mmHg x 4. Current medications: 1) Pimobendan/vetmedin 7.5mg 1/3 tab twice a day 2) Diphenoxylate with atropine 2.5mg 1/2 tab in am with 1 tab in pm *Sedated with propofol for study.

-Pertinent previous echo findings (10/4/22 MML): LA 2.5 cm; LA:Ao 1.78, LV 3.5 cm; moderate LAE, moderate MR, mild-moderate TR (3.5 m/s; 50 mmHg); mild-moderate pulmonary hypertension.

ECHOCARDIOGRAM FINDINGS

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

Left ventricle: The LV diameter is mildly increased with hyperdynamic function. LV wall thicknesses are normal.

Left atrium: The left atrium is severely dilated.

Mitral valve: The mitral valve is diffusely thickened with mild prolapse into the left atrial lumen. Severe eccentric 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: Normal right ventricular diameter and morphology.

Right atrium: Normal RA dimension.

Tricuspid valve: The tricuspid valve appears mildly thickened with trace tricuspid regurgitation.

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 130bpm.

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

Mass Veterinary Services

REFERRING VET

Dr. Masloski

INVOICE

30037

DATE

4/4/23

2-Dimensional Measurements

Ao diam (cm)	1.6
LA diam (cm)	3.5
LA:Ao (Swe)	2.2
IVS thickness (cm)	0.8
LVID diastole (cm)	3.6
PW thickness (cm)	0.8
LVID systole (cm)	1.1
FS (%)	65

Doppler Measurements

PV Vmax (m/s)	0.7
AoV Vmax (m/s)	1.1
MR Vmax (m/s)	5.3
TR Vmax (m/s)	NM
TR PG (mmHg)	NA

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease persists with severe mitral and trace tricuspid regurgitation. Severe left atrial enlargement indicates the risk for spontaneous congestive heart failure is elevated going forward. No additional issues are identified. Overall, this certainly does reflect progression from moderate to severe disease.

A cough in this patient with this degree of heart disease is likely multi-factorial in origin, including mainstem bronchi compression and/or potentially some degree of upper or lower airway disease given the breed. Early CHF/pulmonary edema should also be



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considered; however, this is less likely based upon the chronic history. Recommend addition of Spironolactone and an ACE-I to current Pimobendan therapy for potential long-term benefit. Close monitoring at home for need for Lasix therapy in addition to baseline CXR. Pending response, cough suppression (up to q4-6 hours) may also be helpful for mechanical cough. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home.

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Long term prognosis is guarded; however, I am hopeful we can stabilize the patient for some time on medications. Once CHF develops, they are generally able to maintain a good quality of life for an average of 8-12 months. Patient will always be at risk for progression to CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

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RECOMMENDATIONS

- Institute ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h.
- Continue Pimobendan 0.3mg/kg PO q12h.
- Institute Spironolactone 1-2mg/kg PO q12h.
- Consider hydrocodone with homatropine for QOL (0.2-0.4mg/kg PO up to q4-6 hours PRN for cough; available in 5/1.5mg tabs and 5mg/5ml liquid suspension).
- Consider a course of Baytril depending on severity of the cough.
- Elective anesthesia is not advised.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes. Monitoring of sleeping breathing rates is the best way to screen for progression to CHF at home.

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PLAN

- A renal panel is recommended in 1-2 weeks, then every 3-4 months lifelong.
- A recheck echocardiogram is recommended in 4-6 months to screen for progression, sooner if clinical signs arise.

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

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