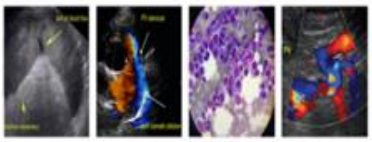
Mass Veterinary Services



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Mayzee Sherman

SPECIES
Canine

BREED
Spaniel Mix

SEX
Female Spayed

AGE
12 years

WEIGHT
35.5lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
31334

DATE
6/14/23

PRESENTING CLINICAL SIGNS

History: Recheck echo. History chronic valvular disease - Stage B1. Presently, Mayzee has been coughing so hard she has been falling over. The owner stopped the diphenoxylate since it was felt it was not working. Per family rDVM wanted to start another medication but owner read it can cause seizures, so they restarted enalapril for the cough which has not improved. She has been coughing several times a day. Mayzee also has had collapse events with the last one a few days ago. The family feels Mayzee is collapsing frequently so they are trying to keep her calm at home. Her last seizure event was 6 weeks to 2 months ago. Mayzee's appetite and activity level remain good. On exam: NSR, grade IV/VI murmur with PMI left apical area, PSS, lung fields clear, mm pink, moist, CRT<2. BP: 150mmHg x 2. Current medications: 1) Keppra 800mg three times a day 2) Stramonium ---when has seizures 3) Probiotic 4) Diphenoxylate with atropine 2.5mg 5) Enalapril 5mg 1 tab daily *No sedation for study.
-Pertinent previous echo findings (11/22/22 MML): LA 2.7 cm; LA:Ao 1.5; LV 4.0 cm; mild-moderate LAE, normal LV size, mild MR, trace TR (2 m/s; 16 mmHg)

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is increased with hyperdynamic myocardial function. Septal flattening in end systole. LV wall thicknesses are decreased.
Left atrium: The left atrium is severely dilated.
Mitral valve: Diffuse thickening of mitral valve leaflets with prolapse into the left atrial lumen. Lack of coaptation in systole. Severe eccentric mitral regurgitation, normal velocity.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. Trace aortic insufficiency.
Right ventricle: Moderate RV dilation.
Right atrium: Mild RA dilation.
Tricuspid valve: The tricuspid valve appears mildly thickened with moderate tricuspid regurgitation. TR velocity is elevated consistent with severe pulmonary hypertension.
Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. Mild MPA dilation. Normal pulmonic outflow velocities. Trace 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 150bpm.

2-Dimensional Measurements

Ao diam (cm)	1.6
LA diam (cm)	4.2
LA:Ao (Swe)	2.6
IVS thickness (cm)	0.9
LVID diastole (cm)	4.3
PW thickness (cm)	0.9
LVID systole (cm)	2.2
FS (%)	50

Doppler Measurements

PV Vmax (m/s)	0.7
AoV Vmax (m/s)	1.3
MR Vmax (m/s)	5.0
TR Vmax (m/s)	4.9
TR PG (mmHg)	97

INTERPRETATION OF THE FINDINGS

Unusual case. This study shows severe left and right heart disease with development of severe pulmonary hypertension. Given the timeframe, progression from mild to severe disease is unexpected, particular without any PAH being seen previously. Regardless, severe left atrial enlargement indicates the risk for spontaneous congestive heart failure is

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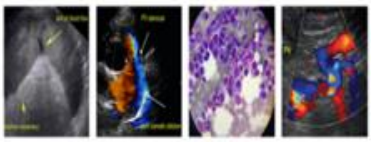

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elevated. Severe pulmonary hypertension is likely secondary to a cough and results in syncopal episodes. This also puts the patient at risk for right-sided decompensation as well. No additional issues are identified.

Given the degree of disease seen here and a reported cough with frequent syncope, recommend full cardiac supportive medications as below including low dose Lasix. Baseline chest radiographs are highly recommended to determine if CHF is present; however, I would utilize Lasix regardless. Additionally, severe PAH certainly warrants Sildenafil therapy, given the clinical picture.

Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home. Monitoring for symptoms of PAH is suggested, including exertional syncope or dyspnea. Adequate cough suppression is also of the upmost importance, utilizing hydrocodone PRN.

Long term prognosis is guarded to poor; 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.

RECOMMENDATIONS

- Baseline chest radiographs are highly recommended.
- Institute Lasix 1-2mg/kg PO q12h.
- Continue ACE 0.5mg/kg PO q12h.
- Institute Pimobendan 0.3mg/kg PO q12h.
- Institute Spironolactone 1-2mg/kg PO q12h.
- Institute Sildenafil 1-2mg/kg PO q12h.
- Consider hydrocodone with homatropine instead of cough tabs for QOL if needed (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).
- Reassess BP as discussed.
- 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.

PLAN

- A recheck echocardiogram is recommended in 6 months to screen for progression, sooner if clinical signs arise.

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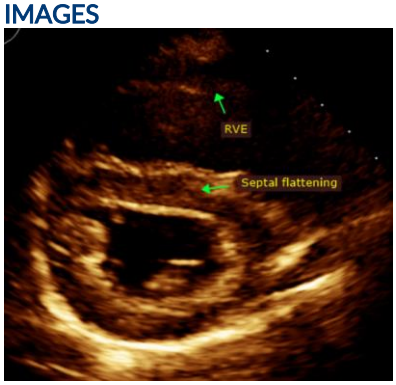
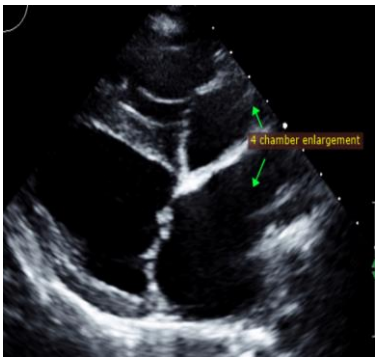
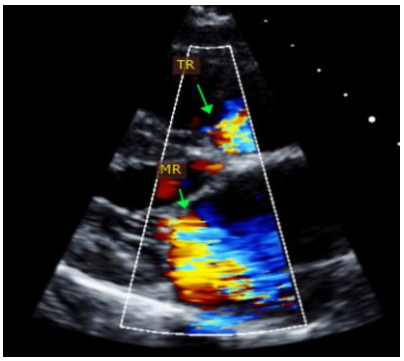
IMAGES







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
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

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