



PATIENT
Zoey Brown

SPECIES
Canine

BREED
Chihuahua

SEX
Female Spayed

AGE
15 years

WEIGHT
9.75lbs

INTERPRETED BY
Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan,
RDCS

HOSPITAL NAME
Mass Veterinary
Specialty Services

REFERRING VET
Dr. Masloski

INVOICE
21031

DATE
9/15/21

PRESENTING CLINICAL SIGNS

History: Recheck echo. History chronic valvular disease (MV/TV) in combination with valvular aortic stenosis/insufficiency. Current presentation: Zoey continues to have a cough which has changed character to be more constricted and more frequent. Last month, she had some increased respiratory noises. She continues to eat well with a diet of Fresh Pet which seems to be helping her GI issues. CV/RESP: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear. BOP: 140-150mmHg.
-Current medications: 1) Pimobendan 1.25mg 1 tab am with 1/2 tab pm 2) Prilosec 1/8 tab daily 3) Enalapril 2.5mg 1/4 tab daily 4) Tylan powder 1/8 tsp daily *No sedation.
-Pertinent previous echo findings (9/22/20 MML): LA 1.7 cm; LA:Ao 1.4; LV 2.87 cm; IVS 0.52 cm; PW 0.52 cm; LVOT 4.1 m/s; mild LAE; mild MR; mild TR.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: LV diameter is moderately increased with hyperdynamic myocardial function. LV wall thicknesses are normal.
Left atrium: The left atrium is severely dilated.
Mitral valve: Marked thickening of mitral valve leaflets with prolapse into the left atrial lumen. Moderate to severe eccentric mitral regurgitation with a normal velocity. Evidence of mitral stenosis on mitral in flows and color flow imaging (see below).
Aortic valve/Aorta: The aortic valve appears thickened with decreased excursion in systole. Velocity through the valve is moderately elevated. Mild aortic insufficiency.
Right ventricle: No significant RV dilation.
Right atrium: No significant right atrial dilation.
Tricuspid valve: The tricuspid valve appears mildly thickened, with mild double-jet of tricuspid regurgitation. Velocity consistent with mild to moderate pulmonary hypertension.
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.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 180bpm.

2-Dimensional Measurements

Ao diam (cm)	1.3
LA diam (cm)	2.7
LA:Ao (Swe)	2.0
IVS thickness (cm)	0.62
LVID diastole (cm)	2.65
PW thickness (cm)	0.65
LVID systole (cm)	1.2
FS (%)	56

Doppler Measurements

PV Vmax (m/s)	0.82
AoV Vmax (m/s)	3.9
MR Vmax (m/s)	6.0
TR Vmax (m/s)	3.5
TR PG (mmHg)	48

INTERPRETATION OF THE FINDINGS

This case continues to be unusual. Compared to prior study there is evidence of significant progression with mild left atrial dilation becoming severe and identification of mitral valve stenosis. Given the degree of valve degeneration, this is likely developing secondary to valve pathology which is unusual to see (ie acquired versus congenital). Regardless, this is likely leading to further atrial enlargement compared to the previous study. The pulmonary pressures are more consistent with the overall right heart appearance on this exam than previous, with mild to moderate elevation. Finally, the



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aortic stenosis is similar to the prior study without evidence of progression and a small aortic leak. No additional issues are identified.

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Given these findings, there is great concern comparatively for development of congestive heart failure and associated clinical signs in the future. Based upon significant progression, consider addition of both Spironolactone and low dose Lasix at this juncture. The patient will always be at risk for congestive heart failure, syncope and/or sudden death going forward. Prognosis is guarded long-term; however, it is encouraging the patient continues to do reasonably well despite these changes.

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RECOMMENDATIONS

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- Continue Pimobendan and Enalapril as prescribed.
- Institute low dose Lasix 1mg/kg PO q12h.
- Institute Spironolactone 1-2mg/kg PO q12h.
- Hydrocodone can be utilized if needed for quality of life.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Elective anesthesia is not advised at this time.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

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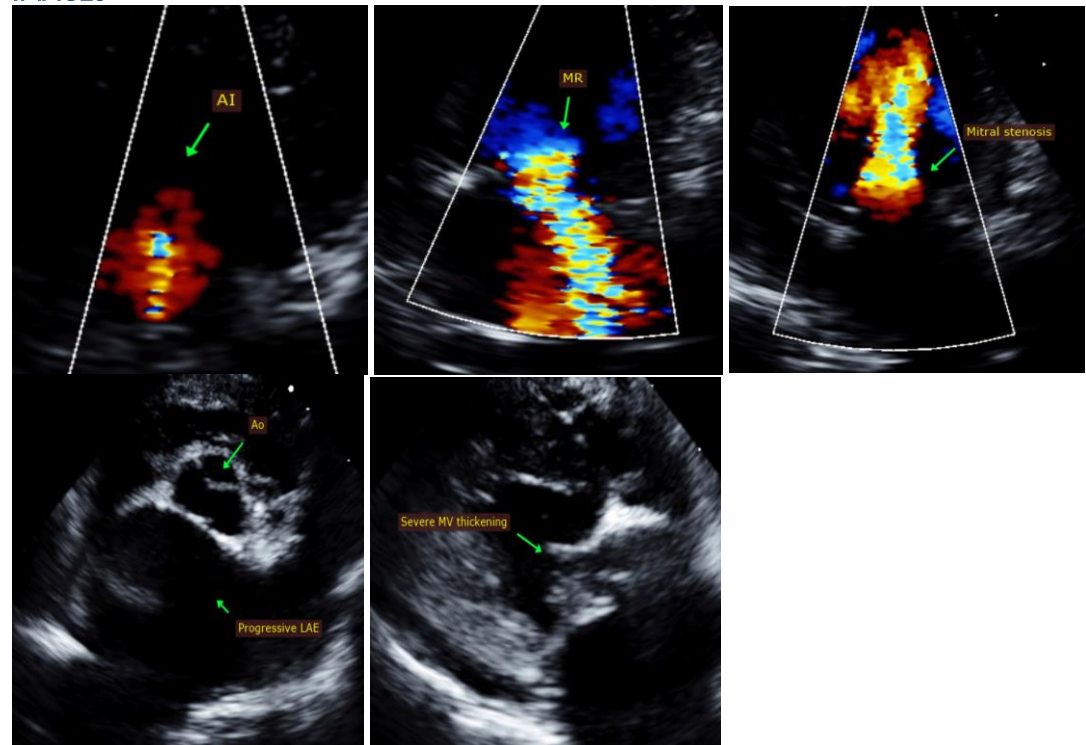
PLAN

- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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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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Chihuahua

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

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