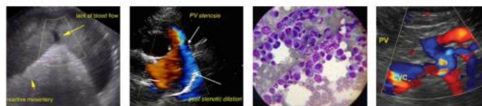

PATIENT
Papi Pizarro

SPECIES
Canine

BREED
Shih Tzu

SEX
Male Neutered

AGE
10 years

WEIGHT
16.6lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Airport Animal Hospital

REFERRING VET
Dr. Gudluru

INVOICE
27040

DATE
10/21/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. History chronic valvular disease - Stage B2. Currently, increased coughing. Another vet dispensed Lomotil for the cough, which seems to have helped. Owner reports he had difficulty breathing last night. BP: 170, 180, 180mmHg.
-Pertinent previous echo findings (8/10/21 MML): LA 2.6 cm, LA: Ao 1.7, LV 2.75 cm, moderate LAE, mild LVE, moderate MR. mild TR (2.7 m/s).

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is moderately increased with hyperdynamic function. LV wall thicknesses are normal.
Left atrium: The left atrium is moderately dilated.
Mitral valve: The mitral valve is diffusely thickened with significant prolapse into the left atrial lumen. Suspicion of a ruptured chord (see below). Moderate to 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: No RV enlargement.
Right atrium: No RA enlargement.
Tricuspid valve: The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. Velocity consistent with mild pulmonary hypertension.
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 140bpm.

2-Dimensional Measurements

Measurement	Value
Ao diam (cm)	1.5
LA diam (cm)	2.8
LA:Ao (Swe)	1.8
IVS thickness (cm)	0.6
LVID diastole (cm)	3.4
PW thickness (cm)	0.6
LVID systole (cm)	1.5
FS (%)	57

Doppler Measurements

Measurement	Value
PV Vmax (m/s)	0.81
AoV Vmax (m/s)	0.83
MR Vmax (m/s)	5.5
TR Vmax (m/s)	3.0
TR PG (mmHg)	36

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease persists with mitral and tricuspid regurgitation. Unfortunately, there is significant progression compared to the prior study, with progressive LV enlargement and concern for a ruptured chord. This likely explains recent coughing and labored breathing. Repeat chest radiographs are recommended. The pulmonary hypertension is mild, and no additional issues are noted.

These findings and reported clinical signs are concerning for early congestive heart failure and full lifelong medications are recommended as below. A cough in this patient may also have a mechanical component and Hydrocodone can be utilized if needed for quality of life in the face of normal breathing rates.

With this degree of left heart changes, the risk for recurrent congestive heart failure is elevated going forward. Assessment of progression in the future will help predict long

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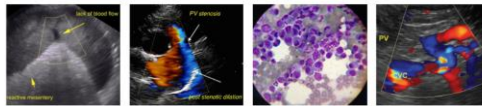

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term outcome, however prognosis is guarded to poor once on diuretic therapy (stage C). Unfortunately, the patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

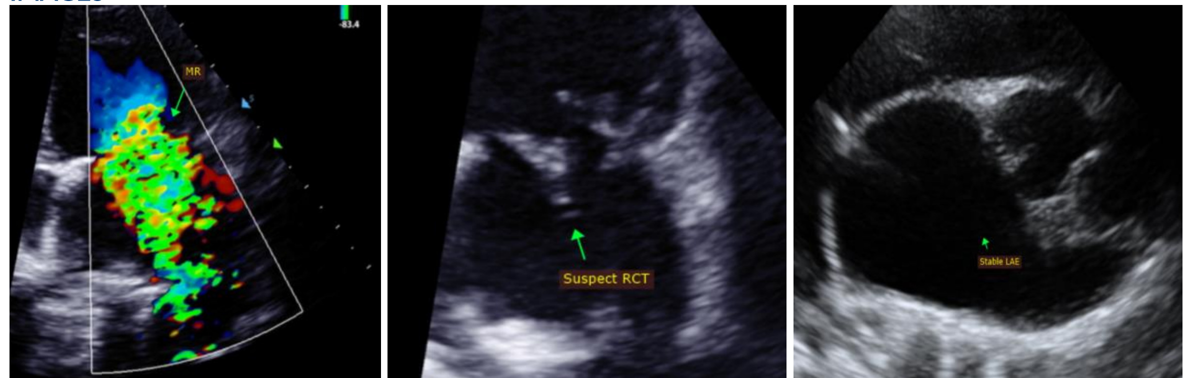
RECOMMENDATIONS

- Baseline CXR recommended.
- Institute Furosemide 1mg/kg PO q12h.
- Institute Spironolactone 1-2mg/kg PO q12h.
- Continue Pimobendan as prescribed.
- Consider Hydrocodone if needed for quality of life.
- Close monitoring for development of associated clinical signs (development of a cough, labored breathing, exercise intolerance or worsening collapse episodes) is recommended.
- Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Mild activity restriction is advised.
- Elective anesthesia is not advised.

PLAN

- A renal panel and BP are recommended in 1-2 weeks, if BP is >130mmHg, institute ACE-I 0.5mg/kg PO q12h.
- Recommend recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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
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