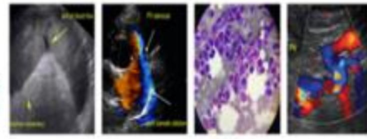
Mass Veterinary Services



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

PATIENT
Leo Morell

SPECIES
Canine

BREED
Toy Fox Terrier

SEX
Male

AGE
14 years

WEIGHT
7.63lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
28409

DATE
1/18/23

PRESENTING CLINICAL SIGNS

History: Recheck echo. History chronic valvular disease - Stage C (CHF, June 2022). Presently, Leo has been coughing when getting up after lying down. The cough has not improved with temaril p. Owner notes the breathing has been a bit more labored. He continues to eat well with normal activity. On exam: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear, mm pink, tacky, CRT<2. BP: 120mmHg x 4. Current medications: 1) Torsemide 5mg 1/4 tab twice a day. 2) Pimobendan/vetmedin 0.94mg 1 capsule twice a day 3) Spironolactone 25mg 1/4 tab twice a day. 4) Hydrocodone with homatropine/hycodan 5mg 1.5 tabs three times a day. *Sedated with propofol for study.
-Pertinent previous echo findings 97/20/22 MML): LA 2.5 cm, LA:Ao 1.9, LV 2.7 cm; severe LAE, mild LVE; severe MR, trivial TR.

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 moderate to severely dilated.
Mitral valve: The mitral valve is diffusely thickened with prolapse into the left atrial lumen. Flail leaflet. Severe eccentric mitral regurgitation with an elevated normal velocity.
Aortic valve/Aorta: The aortic valve appears thickened with normal outflow velocity; laminar flow. Trace aortic insufficiency.
Right ventricle: Normal right ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension.
Right atrium: Normal RA dimension.
Tricuspid valve: The tricuspid valve appears mildly thickened with septal prolapse and mild to moderate tricuspid regurgitation. Velocity consistent with early PAH.
Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. Trace 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 150bpm.

2-Dimensional Measurements

Ao diam (cm)	1.3
LA diam (cm)	2.4
LA:Ao (Swe)	1.8
IVS thickness (cm)	0.6
LVID diastole (cm)	2.6
PW thickness (cm)	0.7
LVID systole (cm)	1.0
FS (%)	62

Doppler Measurements

PV Vmax (m/s)	0.9
AoV Vmax (m/s)	1.0
MR Vmax (m/s)	5.6
TR Vmax (m/s)	3.1
TR PG (mmHg)	40

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease persists with continued stability. The overall left heart dimensions are stable with severe MR. Mild to moderate TR is unchanged with development of early pulmonary hypertension. No additional issues are identified.

Given a cough that persists despite Torsemide therapy, **this likely reflects primary airway disease with mainstem bronchi compression.** More aggressive Hydrocodone may be beneficial and/or a course of Baytril if there was acute worsening of the symptom.

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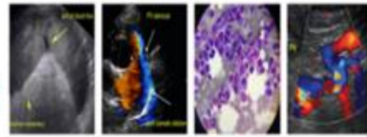

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No change to the current medications at this time prior to further evaluation. Prognosis remains poor long-term with end-stage disease. Patient will always be at risk for recurrent CHF, syncope and/or sudden death in the future.

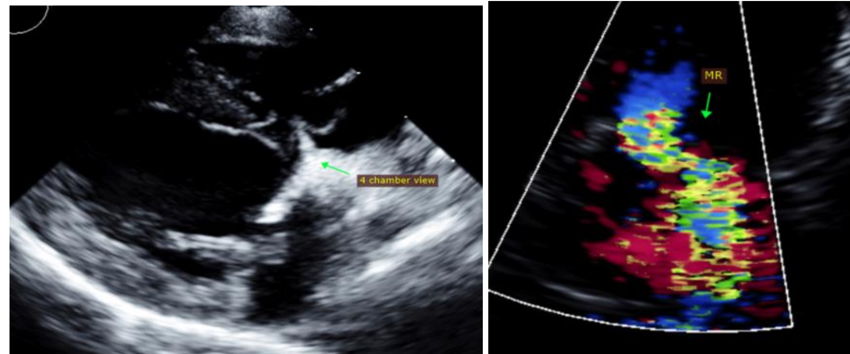
RECOMMENDATIONS

- Continue Pimobendan, Spironolactone, Torsemide, and Hydrocodone as prescribed.
- Consider a repeat CXR, respiratory therapy as discussed.
- Monitor BP every 6 months.
- Close monitoring for development of associated clinical signs (development of a progressive 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

- Recheck renal panel and BP every 4-6 months lifelong.
- Recommend conservative monitoring with a 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
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)