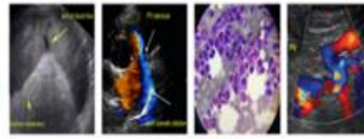
Mass Veterinary Services



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

PATIENT
Leanie Pagan

SPECIES
Canine

BREED
Yorkshire Terrier

SEX
Female Intact

AGE
9 years

WEIGHT
6lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
23346

DATE
3/30/22

PRESENTING CLINICAL SIGNS

History: Referred for recent episode of CHF. Seen at ER for a syncopal/seizure type event. Started on medications: Pimobendan 1.25mg, 1/2-tab BID; Furosemide 12.5mg, 1/2-tab BID. She has been doing well since - no coughing or exercise intolerance. She will be switching to a cardiac diet. On exam: grade IV/VI systolic murmur radiating to right with a grade II/VI murmur noted on right, PSS, lung fields clear. *No sedation for study.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: Significant LV dilation with hyperdynamic myocardial function. Decreased LV wall thickness.
Left atrium: The left atrium is severely dilated.
Mitral valve: Severe diffuse thickening of mitral valve leaflets with prolapse into the left atrial lumen. Flail anterior leaflet. Severe eccentric mitral regurgitation. 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: Mild RV dilation.
Right atrium: Mild right atrial dilation.
Tricuspid valve: The tricuspid valve appears mildly thickened with trace tricuspid regurgitation. Elevated 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 220bpm.

2-Dimensional Measurements

Measurement	Value
Ao diam (cm)	0.9
LA diam (cm)	2.4
LA:Ao (Swe)	2.7
IVS thickness (cm)	0.6
LVID diastole (cm)	3.1
PW thickness (cm)	0.6
LVID systole (cm)	1.3
FS (%)	58

Doppler Measurements

Measurement	Value
PV Vmax (m/s)	0.64
AoV Vmax (m/s)	0.8
MR Vmax (m/s)	4.55
TR Vmax (m/s)	4.0
TR PG (mmHg)	64

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease causing severe mitral and trace tricuspid regurgitation. Four chamber dilation indicates the risk for spontaneous congestive heart failure is elevated. Mild to moderate pulmonary hypertension is noted, which is likely secondary to a combination of chronic LA pressure elevation and potentially some degree of primary airway disease in this predisposed breed. No additional issues are identified.

In light of severity of disease on echocardiogram, the prior diagnosis of congestive heart failure is supported and continued lifelong cardiac supportive medications are recommended as below. Syncope associated with early decompensation is common and suspected here. That being said, PAH is also present and may contribute as well. Sildenafil is not clearly warranted at this time, however, should syncope develop again in the future

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I would not hesitate to institute it. If the cough persists despite therapy Hydrocodone should be utilized for quality of life.

The average survival time of canine patients with active pulmonary edema is 8-9 months on medications, however they generally are able to maintain a good quality of life for that period. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

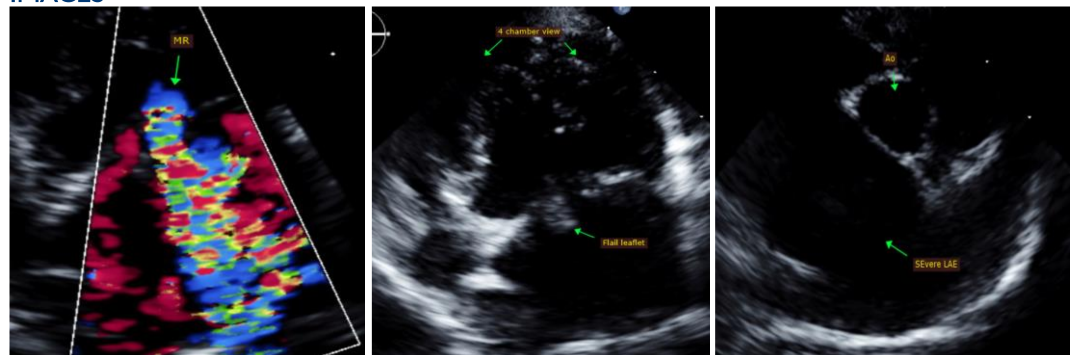
RECOMMENDATIONS

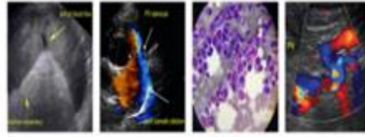
- Administer furosemide 1-2mg/kg PO q12h.
- Institute spironolactone 1-2mg/kg PO q12h.
- Administer Pimobendan 0.3mg/kg PO q12h.
- Once BP is documented >130mmHg, institute ACE-I 0.5mg/kg PO q12h.
- Pending response, consider hydrocodone with homatropine 0.2-0.4mg/kg up to q4-6 hours PRN for any residual mechanical cough in the face of normal sleeping respiratory rates.
- If any exertional dyspnea/collapse develops in the future, institute Sildenafil 1-2mg/kg PO q8-12h.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.
- Monitoring of sleeping respiratory rates will be paramount to screen for congestive heart failure at home.
- Elective anesthesia is not advised.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.

PLAN

- Monitor renal values and BP every 3-4 months lifelong.
- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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.

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)