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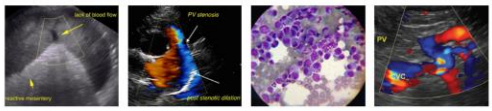
Pet Animal Ultrasound Service
4paus.com 781-635-5677



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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PATIENT
Lucky Smith

SPECIES
Canine

BREED
Labrador Retriever

SEX
Male Neutered

AGE
11 years

WEIGHT
75.6lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Wood River Animal Hospital

REFERRING VET
Dr. Fischer

INVOICE
24476

DATE
5/30/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. History dilated cardiomyopathy; aortic insufficiency; mild pulmonary hypertension; bradycardia with premature atrial contractions on echocardiogram 1/21/22 (Scott Forney, DVM, DACVIM-Cardiology): LA 3.95 cm; LA:Ao 1.95; LV 5.73 cm; TR 3.16 m/s; 40 mmHg). BP: 155mmHg. Current medications: Pimobendan 10mg PO BID.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 25mm/s, 10mm/mV. The average heart rate is 100bpm (range 65-150bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. P and QRS morphologies are positive. Occasional APCs are seen throughout; singles only, brief period of bigeminy. No ventricular premature beats, pauses or other dysrhythmias observed.
ECG diagnosis: Sinus bradycardia with isolated APCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is increased with severe systolic dysfunction. LV wall thicknesses are decreased. Increased LV sphericity.
Left atrium: The left atrium is moderately dilated.
Mitral valve: The mitral valve is mildly thickened with no prolapse into the left atrial lumen. Mild eccentric mitral regurgitation**.** Normal velocity.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. Mild aortic insufficiency.
Right ventricle: Moderate right ventricular dilation.
Right atrium: Moderate RA dilation.
Tricuspid valve: The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. Normal velocity.
Pulmonary valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity, laminar flow.
Pericardium/other: Scant pericardial effusion is seen in some views. No pleural effusion noted. No obvious cardiac masses.

2-Dimensional Measurements

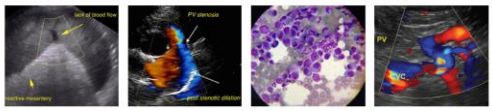
Ao diam (cm)	2.7
LA diam (cm)	3.9
LA:Ao (Swe)	1.4
IVS thickness (cm)	1.0
LVID diastole (cm)	4.8
PW thickness (cm)	0.8
LVID systole (cm)	4.0
FS (%)	16

Doppler Measurements

PV Vmax (m/s)	0.4
AoV Vmax (m/s)	1.4
MR Vmax (m/s)	5.1
TR Vmax (m/s)	2.6
TR PG (mmHg)	26

INTERPRETATION OF THE FINDINGS

Unfortunately, 4 chamber dilation and dysfunction persists. Compared to the prior study, interestingly the LA and LV dimension are improved; however, there is suspicion for scant pericardial effusion. This is most consistent with early congestion with moderate right



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heart enlargement. A small aortic leak is noted and lifelong BP monitoring is advised (reasonable on exam). No additional issues such as PAH are identified in this study.

The ECG is similar to what is reported previously with an overall bradycardia and isolated APCs. This is likely secondary to structural abnormalities, although bradycardia is atypical. Regardless, what is seen here does not warranted therapy at this time in an asymptomatic patient, and simple follow up is advised.

Dilation and dysfunction can be primary in nature (primary DCM) or develop secondary to taurine or thyroid deficiency, myocarditis, tachycardia-induced cardiomyopathy, or infiltrative disease such as lymphoma. A full diet history is recommended with a Taurine supplement regardless of findings. Additionally, full systemic evaluation/thyroid status can be investigated if not already performed.

Given these findings and development of scant pericardial effusion, recommend addition of both Spironolactone and an ACE-I. No obvious indication for Lasix in an asymptomatic patient, although close monitoring at home is advised.

Prognosis remains poor at this stage with most dogs succumbing to CHF in less than 6 months. There is high risk for recurrent congestive heart failure, malignant arrhythmias (AF, VT), collapse and/or sudden death in the future even on medications.

RECOMMENDATIONS

- Continue Pimobendan as prescribed.
- Institute Spironolactone 1-2mg/kg PO q12h (available in 25 and 50mg tablets).
- Institute ACE-I 0.5mg/kg PO q12h.
- Monitor breathing rates closely at home to assess need for Lasix therapy.
- Full diet history, thyroid status, etc. as discussed.
- Institute taurine supplement 1000mg PO q12h.
- Consider hydrocodone with homatropine if needed for quality of life, 0.2 – 0.4 mg/kg PO up to q4-6 hours PRN for cough (available in 5/1.5mg tablets or 5mg/5ml solution).
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Elective anesthesia is not advised.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF going forward.

PLAN

- Monitor renal values and BP in 1-2 weeks then every 3-4 months lifelong.
- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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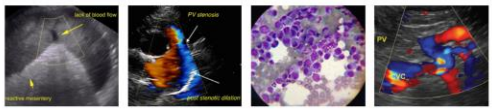

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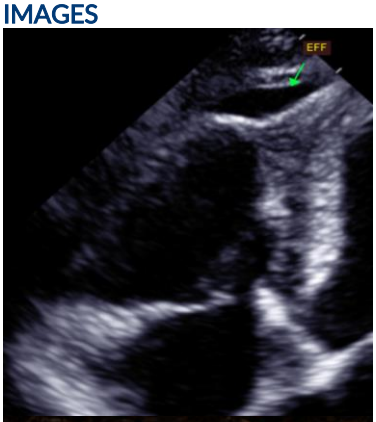
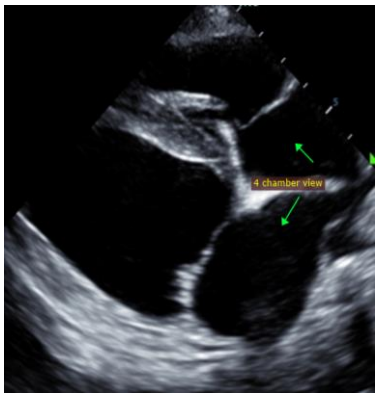
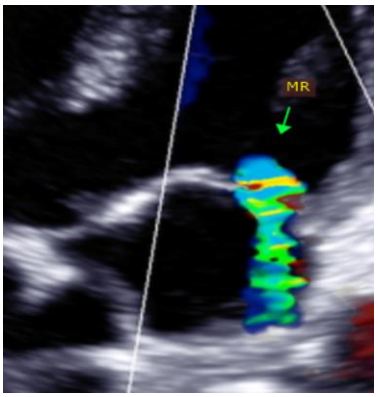
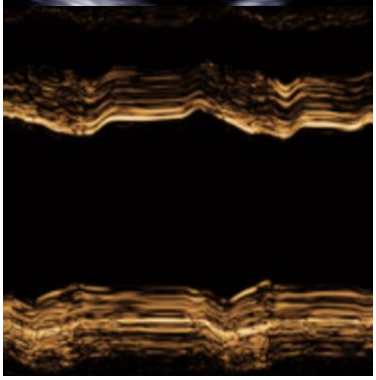
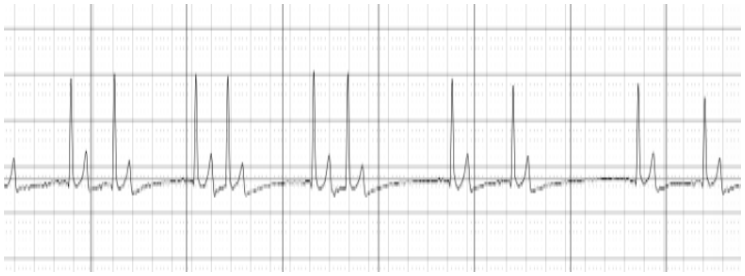
IMAGES











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