



PATIENT

Cleo Lewis

SPECIES

Canine

BREED

Labradoodle

SEX

Female Intact

AGE

5 months

WEIGHT

11.2lbs

PRESENTING CLINICAL SIGNS

History: Purchased as puppy with known heart murmur. Right base, grade I/VI. Radiographs show right sided cardiomegaly. Asymptomatic. Echocardiogram prior to anesthesia for spay.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.

Left ventricle: The LV diameter is increased with increased sphericity. Adequate myocardial function with evidence of volume overload. LV wall thicknesses are normal.

Left atrium: The left atrium is mild to moderately dilated

Mitral valve: The mitral valve is normal with no mitral regurgitation.

Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Mildly elevated aortic outflow velocity; laminar flow. No 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 normal with trace tricuspid regurgitation. Normal velocity.

Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity; laminar flow. Continuous flow detected with color Doppler in the distal pulmonary artery in the region of the ductus arteriosus. A PDA is visualized on 2D imaging. High velocity shunt; L-R (4.5m/s). 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 140bpm.

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

2-Dimensional Measurements

Ao diam (cm)	1.6
LA diam (cm)	2.7
LA:Ao (Swe)	1.7
IVS thickness (cm)	0.6
LVID diastole (cm)	3.8
PW thickness (cm)	0.6
LVID systole (cm)	2.4
FS (%)	35

Doppler Measurements

PV Vmax (m/s)	1.1
AoV Vmax (m/s)	1.8
MR Vmax (m/s)	NA
TR Vmax (m/s)	2.2
TR PG (mmHg)	20

IMAGING

PERFORMED BY

Pamela Harrigan,
RDCS

INTERPRETATION OF THE FINDINGS

The cause of the murmur is a patent ductus arteriosus (PDA). This is a congenital condition where a blood vessel present in the fetus remains open after birth. When patent, this allows blood to recirculate through the lungs inappropriately and volume overloads the left heart chambers as is seen here. No additional issues are seen. The LA is moderately dilated indicating relatively low risk for imminent complication; however, this degree of volume overload at such a young age is certainly concerning.

HOSPITAL NAME

Falmouth Animal
Hospital

REFERRING VET

Dr. Hauser

INVOICE

26432

DATE

9/19/22

If left open, this condition will shorten lifespan, with risk for progression to CHF in the future. Even without symptoms, cardiac support with Pimobendan is recommended regardless of if surgical closure is an option as below. Gold standard therapy includes medical support and ASAP referral for surgical closure of the vessel. This can be done interventionally or through a thoracotomy, and consultation with a local Cardiologist is recommended ASAP. Success rates for the procedure are generally high and will help give



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the best prognosis possible. Whether the LV dilation resolves with closure or persists to some degree cannot be predicted, however I am hopeful given the mild nature that the former would be the case.

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Going forward the patient will be at risk for progression to CHF, development of arrhythmias, PDA reversal due to development of pulmonary hypertension, exertional syncope, and/or sudden death at home.

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RECOMMENDATIONS

- Institute Pimobendan 0.2-0.3mg/kg PO q12h.
- Referral for surgical consultation ASAP.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Mild activity restriction is advised.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

AGE

5 months

PLAN

- If surgery is not an option, recommend recheck exam and echocardiogram in 4-6 months to screen for progression and need for additional medications, sooner if clinical signs arise (progressive cough, labored breathing, syncope, etc.).
- If surgical closure is performed, recheck as dictated by the surgical report (typically 2-3 months following closure to determine if medication can be discontinued).

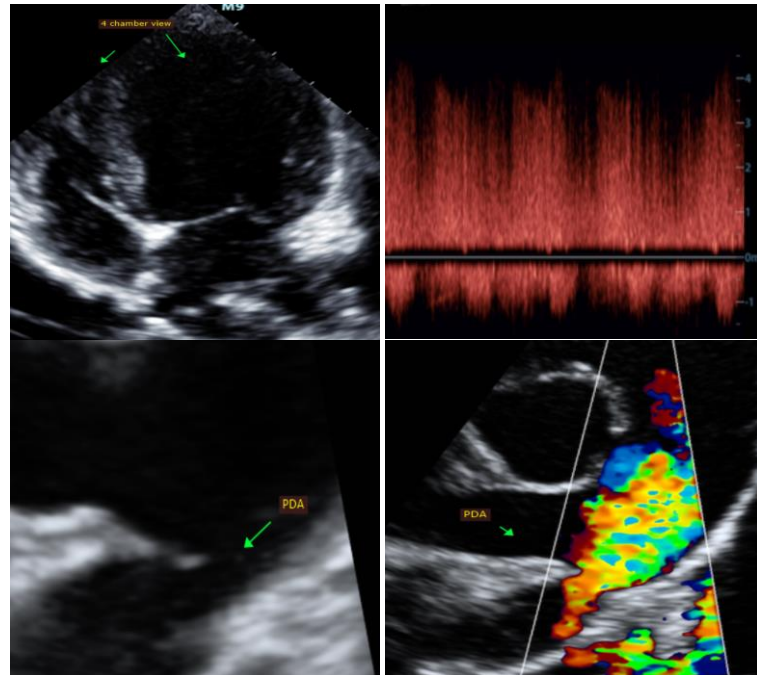
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IMAGES



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Pamela Harrigan,
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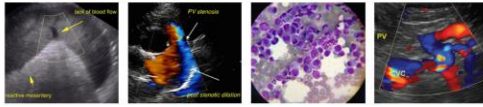
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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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Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

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