



**PATIENT PRESENTING CLINICAL SIGNS**

Daisy Phillips

Concern for congenital vs acquired cardiac disease. Current medications: furosemide, Enalapril, Diltiazem, Pimobendan, taurine supplementation. Considering holter monitor.

**SPECIES**

Abnormal PE/Chem/CBC/UA Results: Left sided systolic murmur 3/6 at apex. Cre. 3.0, BUN 56

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

**BREED**

The echocardiogram in this patient presented a severe, persistent volume overload of the left heart with arrhythmia. Mitral insufficiency was noted with complete filling of the left atrium on color flow assessment. Severe volume overload was noted in the left atrium. The right atrium was also enlarged. Tricuspid insufficiency was noted. The contractility appeared to be fairly adequate. The parameters for DCM are not present. There is no obvious congenital lesion as the pulmonic and aortic outflow velocities were normal. Mild pulmonic insufficiency was noted. The hepatic veins were not dilated.

Labrador Retriever

**SEX**

Intact Female

**AGE**

1 years

**WEIGHT**

28.9 lbs

**INTERPRETED BY**

Eric Lindquist, DMV DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Stegemoller

**HOSPITAL NAME**

North Idaho AH

**REFERRING VET**

Dr. Mehra

**INVOICE**

92738

**DATE**

10/28/21

| CANINE CARDIAC PARAMETERS | MR VMAX (m/s) | TR VMAX (m/s) | LA/AO (Boon method) | LA/AO (Heart Base; Swe) | FS (%)                            | EF (%)                                     | EPSS (cm)                                  |
|---------------------------|---------------|---------------|---------------------|-------------------------|-----------------------------------|--|--|
| NORMAL PARAMETER          | 4.5-5.5       | <2.7          | 1.3                 | <1.6                    | 28-40                             | 40-100                                     | <0.6                                       |
| PATIENT                   |               |               | 2.5                 | 3.0                     |                                   |  | 0.2  |
| CANINE CARDIAC PARAMETERS | HR (BPM)      | AV VMAX (m/s) | PV MAX (m/s)        | BODY WEIGHT             | LA (2D short axis Base view) (cm) | LVIDd (Avg; 2D and m-mode short axis) (cm) | LVIDs (Avg; 2D and m-mode short axis) (cm) |
| NORMAL PARAMETER          | 50-100        | 0.7-1.7       | 0.7-1.6             |                         |                                   |  |  |
| PATIENT                   |               | 1.3           | 1.0                 | 28.9 lbs                | 7.9                               |  |  |

**ULTRASONOGRAPHIC FINDINGS**

Volume overload of the left heart with arrhythmia.

Mitral and tricuspid insufficiency.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Endocarditis and myocarditis should be considered. Treatment for left-sided heart failure owing to valvular disease is warranted in the meantime. However, I cannot completely rule out congenital issue with the mitral valve. I recommend to add Spironolactone at 1-2 mg/kg b.i.d. and Lasix. Pimobendan can be increased to t.i.d. If pulmonic and aortic stenosis have been ruled out, I cannot completely rule out a PDA; however, the Doppler evaluation in the post pulmonic valve region of the pulmonary artery was unremarkable. I would expect for a large amount of turbulence in that area if PDA were present. Causes of myocarditis should be considered. Recheck echocardiograph is recommended in a month. Cardiology referral should be considered if available. The cardiac parameters have mildly improved on current



**PATIENT**

therapy; however, further refinement is necessary.

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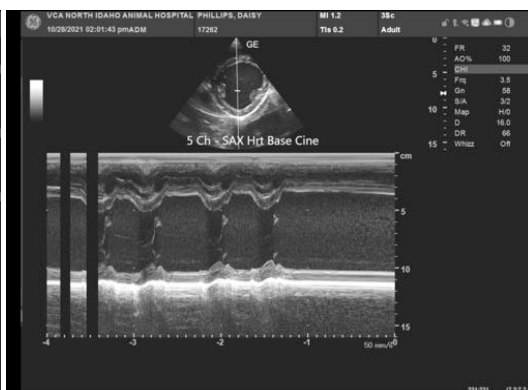
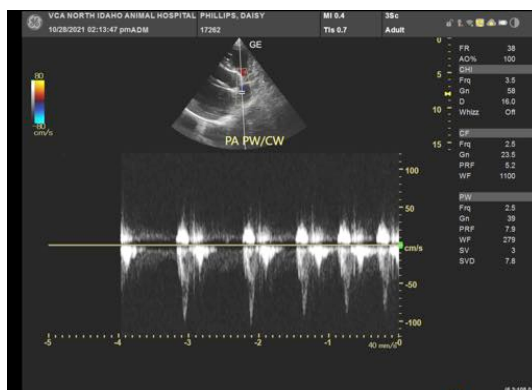
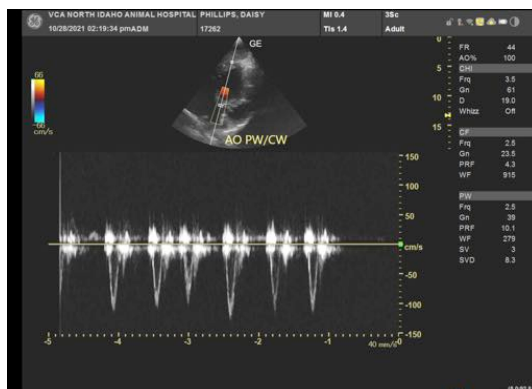
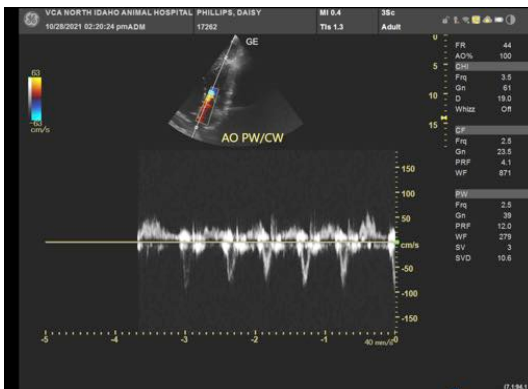
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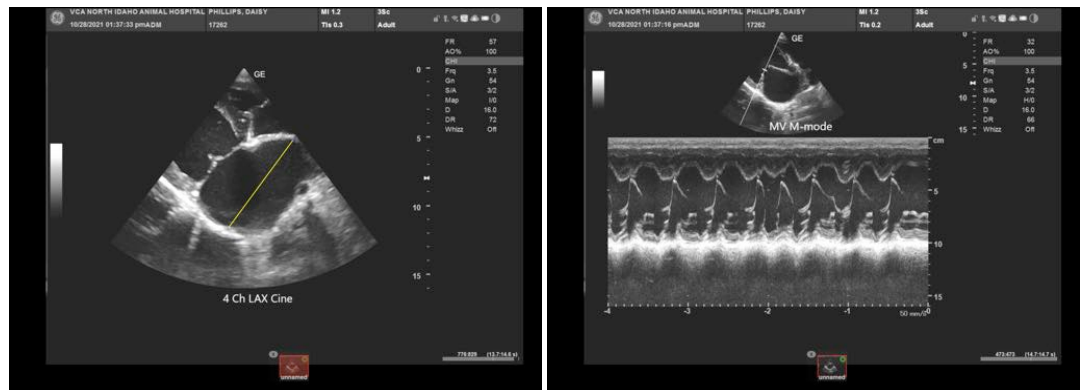
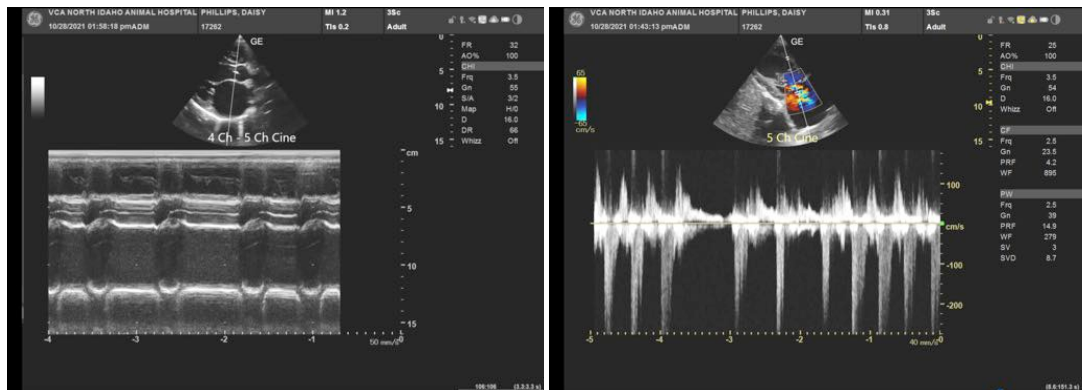
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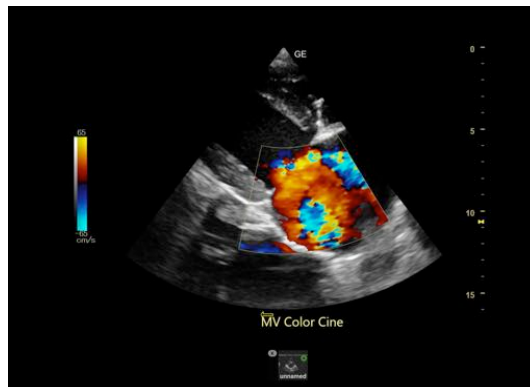
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
info@SonoPath.com